
1 Why this inquiry matters

1.1 The importance of telecommunications

This inquiry assesses the adequacy of the regulatory environment for competition in telecommunications. It centres on the telecommunications-specific provisions of the *Trade Practices Act 1974*, dealing with anti-competitive conduct and access. As well, it encompasses the competition provisions of the *Telecommunications Act 1997*. The Commission assesses whether these telecommunications-specific provisions should be augmented, modified or removed. The assessment takes account of the development of telecommunications competition in Australia over the past decade and future technological and market developments expected to affect competition.

Telecommunications has always been important for business and in providing social and economic benefits to households. But technological developments¹ have expanded opportunities. There is now a plethora of new services (messaging, email, videoconferencing) and platforms (mobile, satellite and cable) — and many other services and platforms are on the horizon. Separate sectors, such as broadcasting and telephony, are converging. Telecommunications is the fastest growing industry in Australia (chapter 3).

Content, data and mobile services will become increasingly important — and with a bigger economic role (box 1.1). It is predicted that from 1999 to 2005, global revenue from data and new communication services will grow by 18 per cent per annum and 68 per cent per annum respectively, whereas revenue from fixed voice services will decline by around 1 per cent per annum (Ernst and Young 2001, p. 7). If these estimates are broadly correct², then by 2005, revenues from orthodox fixed

¹ Technological developments include digitalisation, fibre optics, internet technologies, better compression techniques, mobile technologies and reduced component costs.

² Projections of this kind are often subject to error. For example, projections for the takeup of fixed wireless loops in Europe proved overly optimistic (McClune 2001, pp. 18-19), as have initial commercial and technological expectations for 'bluetooth' (Glover 2001, pp. 32-36). NECG (sub. DR80) indicate the considerable uncertainty about the evolving nature of telecommunications.

voice services will constitute less than half of the revenue from telecommunications services, contrasting with their currently predominant role.

Box 1.1 The role of Internet and data services in the ‘new’ economy

The internet and other digital services underpin the development of ‘new’ economy services by lowering the cost of transferring many types of information on a one-to-one, one-to-many or many-to-many basis. (SaskTel sub. DR90, p. 6; Borenstein and Saloner 2001). Amongst other things, these new services enable:

- reduced costs of transactions between businesses. For example, British Telecom estimates that by moving external procurement functions to e-commerce it has reduced costs from \$113 to \$8 per transaction (Lucking-Reiley and Spulber 2001, p. 57);
- more efficient searching (for services, goods and jobs). For example, Autor (2001) describes how internet-based job search engines increase search efficiency and decrease labour matching problems;
- lower cost financial transactions (for example, in banking, insurance, and share trading). For example, even back in 1998, on-line trading accounted for about 37 per cent of all non-institutional trading volume in equities and options in the US (Barber and Odean 2001, p. 41).
- the online acquisition of information and other services at a marginal cost that is low (as compared with the production and distribution charges associated with software and book production or the dispersal of information through conventional means through communities). With lowering bandwidth charges, this also allows new ways of distributing entertainment content. For example, in the UK, YesTV is using British Telecom's DSL service to stream over 1000 Hollywood movies to subscribers (Baines 2001, p. 21). Where people acquire broadband connections, demand for overall content services appear to increase by about 20 per cent (Ernst and Young 2001, p. 4);
- increased capabilities for customisation of goods or services for individuals, for example, allowing customers to ‘build’ their own computers through specifying the exact components to be assembled by the manufacturer (Bakos 2001, p. 72);
- far better capacities for communication at costs that are not time or distance-related (email, messaging, video conferencing). For example, Ernst and Young (2001, p. 7) estimate that, globally, messaging services will grow from around US \$1.2 billion in 2000 to US \$18.2 billion by 2005; and
- online education and health services. For example, the Massachusetts Institute of Technology plans to make the materials for nearly all its courses freely available on the Internet (OpenCourseWare@MIT). More than 500 courses are expected to be available by 2003 — and more than 2000 by 2011 (Hirst 2001).

However, all sorts of new services will develop that, as noted by Bar et al (2000), will come as a surprise.

It is now widely agreed that an efficient and innovative telecommunications sector is a key element in future economic growth. Because telecommunications is an ‘enabling’ technology for the economy more generally, the role and impacts of government policies affecting the sector deserve close scrutiny. This report is about just one arm of those policies — telecommunications-specific competition regulations.

1.2 The future of telecommunications in Australia

Central to the Commission’s inquiry is the need to establish a regulatory regime that will be relevant and robust for the future telecommunications environment and that will enhance overall community welfare. What is the vision that should underpin the policy settings? Paul Budde argued that there was a need for an affordable ubiquitous broadband network in Australia:

... broadband [is] a critical element in the development of our country, from both a community and economic perspective. Broadband provides convenient access to information, entertainment and communication. It empowers individuals to choose the services they want, rather than being restricted to what the media barons are prepared to dole out to them (sub. DR67, Attachment, p. 1).

Budde (2001b) has also drawn attention to Australia’s relatively low household uptake of broadband services. In part this uptake may reflect commercial realities, such as people’s preferences³, the availability of cheap narrowband services, historical accident⁴, less compact cities⁵, and the extent to which the internet produces benefits and commercial opportunities that are different in Australia to other countries.⁶ But it may also partly reflect current policy settings. In this context, the Commission concentrates on the *competition policy* obstacles to the economically efficient development and use of broadband and other new and

³ Even in the US, for example, the take up of broadband internet has been much lower than expected, notwithstanding the widespread deployment of networks designed to support it (McGeough 2001, p. 17).

⁴ Such as the widespread and long-standing deployment of cable TV in the US and some European countries relative to Australia’s more immature Pay TV market.

⁵ For example, a major contributor to South Korea’s very high broadband penetration rate is very high population densities (with the greater Seoul area representing half of the population) and the predominance of multi-dwelling units, which reduces the cost of network installation (Donegan 2001, p. 19).

⁶ There may be scale effects in national markets that affect the development of certain types of e-commerce (for example, online auctions of specific commodities may require big local markets to make them efficient (Lucking-Reiley and Spulber 2001, p. 61)) or particular content providers may be concentrated in some countries (eg the US — providing more incentives for developing infrastructure for its distribution).

existing telecommunications services in Australia.⁷ Once those and other policy settings are right, then it is up to business and consumers to determine the pace and direction of market development of broadband or other telecommunications services. So whereas a specific industry vision is properly the province of business, as emphasised by the IPA (trans., p. 415) — this report sets out the regulatory framework for telecommunications that the Commission envisages will best meet Australia's interests.

The key parts of the Commission's vision are:

- Competition policy should be aimed at securing efficient outcomes — such as consumer choice, efficient production and innovation — rather than competition in its own right or the protection of particular competitors. Social objectives are better targeted by other policy instruments.
- Policy should be technologically neutral. While not limited to the telecommunications industry, rapid and unpredictable technological shifts in telecommunications highlight the importance of avoiding a regulatory bias towards particular technologies or design standards. Past distinctions between different telecommunications markets are blurring, and the evidence suggests this will continue. The benefits of remaining technologically neutral in regulation are clear at the best of times, but it is a particularly important principle in times of rapid technological change. Problems can arise very quickly where governments are seen to mandate such matters.
- Regulation should apply only to areas where there are clearly identified problems and where regulation is an effective remedy. It should be transparent, predictable, accountable, consistent, and fair.
- Where there are real bottlenecks justifying regulated access pricing, it is important to encourage efficiency in the *use* of telecommunications infrastructure while also recognising that *incentives for investment* in telecommunications infrastructure need to be maintained. Investment in core infrastructure can be frustrated by unduly low access prices and excessive regulatory scope, while demand for services and investment in facilities dependent on the core infrastructure can be frustrated by unduly high access prices, slow regulatory responses and anti-competitive behaviour.
- Regulations should alter the incentives of businesses so that they make better returns from a pro-competitive customer orientation than from market foreclosure or regulatory gaming.

⁷ There is an extensive set of other possible obstacles — reviewed by Pascoe (2001), that are outside this report's terms of reference.

- An important implication of convergence is that regulatory regimes that could once remain relatively uncoordinated, now need to be considered together (figure 1.1). This reflects the application of the previous principle that regulatory decisions should be technologically neutral — that is, they should focus on public interest questions and policy objectives affecting services delivered to the public, not on the alternative platforms that can be used for delivering those services. As argued by one participant:

How it gets delivered is totally irrelevant to the users. If that's the case, why on earth do we have then different regimes that operate differently and have different rules and regulations for the whole thing? (Paul Budde, Trans., p. 396).

The convergence of broadcasting and telecommunications accentuates the paradoxically pro-competitive orientation of policy towards traditional telecommunications and the protective pall of regulation that shrouds broadcasting. This report is mainly concerned with adjustments to telecommunications-specific regulations, but as the distinctions between the two platforms disappear, a dysfunctional regulatory environment for broadcasting can have more widespread damaging effects — a viewpoint argued strongly by the Commission in its inquiry into broadcasting (Productivity Commission 2000).

Figure 1.1 **The impact of convergence**

	Pre-convergence 1996			→	Convergence 2005
Platform	copper network	HFC	wireless (broadcasting)		Copper network, cableTV networks, optical fibre, fixed wireless access, mobile, broadcasting, satellite, power lines (?), high altitude platform stations (?)
Service	fixed voice	payTV	free-to-air		voice, web, payTV, VoD, messaging, free-to-air
Aggregation & distribution	telco retailer	channels, payTV operator	channel licensee		telco retailers, channels, pay-TV operators and licensees
Content	end-users	channels, studios			diverse (end users, communities, government, channels, studios, portals) but scope for single parties to gain exclusive rights to premium content
Ownership	telcos		broadcasting licensees		diverse, but scope for concentration of ownership of premium content & major platforms across all services (AOL/ Time Warner)
Main regulators	ACA & ACCC	ABA & ACCC	ABA		? ... but could be convergence in institutions& processes
Regulatory focus	open entry, pro-competitive rules, technological neutrality		restrictive entry, ownership controls, content controls		? ... but could be convergence in objectives

Data source: Productivity Commission (2000, pp. 105ff), MacKie-Mason (sub. 25).

1.3 Background to the regulatory environment

Building on a gradual deregulation of telecommunications which began in the late 1980s, significant changes were made in 1997. Competition regulation for telecommunications was revised and several aspects were moved from the Telecommunications Act to the Trade Practices Act (TPA). At the same time, the previous telecommunications-specific regulator, AUSTEL, was abolished. Responsibility for competition regulation moved to the ACCC, while that for technical regulation moved to the newly established ACA, which also took over the functions of the previous Spectrum Management Authority. Appendix A provides an overview of telecommunications policy in Australia in recent decades.

The new telecommunications-specific competition provisions inserted into the TPA — Part XIB covering anti-competitive conduct and Part XIC covering access — were less prescriptive than those that had applied previously. Nevertheless, the Government at that time argued that there was justification for continuing industry specific regulation because of ‘the state of competition in the telecommunications industry and the fast pace of change’ (Explanatory Memorandum, Trade Practices Amendment (Telecommunications) Bill 1996, p. 6). It was recognised that such industry specific regulation may not need to be permanent, however, and the Government’s intention was that ‘competition rules for telecommunications will eventually be aligned, to the fullest extent practicable, with general trade practices law’ (Explanatory Memorandum, Trade Practices Amendment (Telecommunications) Bill 1996, p. 7). Indeed, the 1997 TPA amendments made specific provision for a review to be held into the operation of Part XIB before 1 July 2000. In essence, this is the genesis of this report.

After sending the terms of reference to the Commission, the Government received a report into telecommunications service in rural and regional Australia (the ‘Besley report’, Besley 2000). Following consideration of that report, the Government expanded the Commission’s terms of reference to encompass aspects of competition and competition regulation in those areas. The original and additional terms of reference are set out at the front of this report.

1.4 Scope of the report

There are two telecommunications industry specific parts of the TPA — both are examined in this report.

- Part XIB covers anti-competitive conduct regulation, tariff filing directions, tariff filing by Telstra, record keeping rules and disclosure directions. The telecommunications industry is also subject to the generic regulation of

restrictive trade practices, including against misuse of market power, set out in Part IV of the TPA. Although Part IV is not currently under reference, it provides a benchmark against which to compare Part XIB.

- Part XIC sets out a telecommunications access regime. It seeks to promote competition by allowing service providers access to the services and facilities of other providers. The generic access provisions of the TPA, set out in Part IIIA, also apply to the telecommunications industry — this part has been under reference in another Commission inquiry (see below).

Also under reference are a number of provisions of the Telecommunications Act:

- Part 17, which deals with pre-selection of carriage service providers;
- Division 5 of Part 21, which deals with technical standards relating to the interconnection of facilities;
- Part 22, as it pertains to number portability;
- Division 3 of Part 25, which deals with ACCC inquiries; and
- Parts 2 to 5 of Schedule 1, dealing with the following licence conditions:
 - access to supplementary facilities;
 - access to network information;
 - access to transmission towers and underground facilities; and
 - industry development plans.

The two additional terms of reference added after Government consideration of the Besley report cover:

- whether greater recognition of the differing levels of competition across Australia should be incorporated into telecommunications competition regulation; and
- the implications of current pay television programming arrangements for the development of telecommunications competition in regional Australia.

In examining the issues, the Commission has endeavoured to assess:

- the state of competition in the telecommunications market as a whole, as well as in individual product segments and particular areas (for example, CBDs and rural and regional Australia);
- the impact of new technologies and delivery platforms — including ‘convergence’;

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- the community and economic benefits and costs, including ongoing network investment, flowing from the telecommunications-specific competition provisions; and
 - whether the provisions meet their stated purpose, whether they should be repealed or amended, and whether alternative arrangements are required or appropriate.

The focus in this inquiry is on telecommunications-specific *competition* regulation. Other matters, such as universal service obligations and telecommunications price controls, have been considered only to the extent that they are relevant to competition in the telecommunications industry and the regulation of that competition. The terms of reference specify that, in line with Government policy, the inquiry not encompass the structural separation of Telstra.

The Commission is aware that the development of telecommunications competition and the implementation of new telecommunications technology can influence the effectiveness of telecommunications interception as an investigative tool for security and law enforcement agencies. However, this inquiry is not specifically examining the telecommunications interception arrangements effected under the *Telecommunications Act 1997* and the *Telecommunications (Interception) Act 1979*.

1.5 The broad telecommunications framework

Some significant features of the telecommunications industry and markets permeate the consideration of issues in this report.

Telecommunications is very broad in scope. As defined in the Telecommunications Act (section 7) and the TPA:

- *telecommunications* means the carriage of communications by means of guided and/or unguided electromagnetic energy; and
- *communications* includes any communication:
 - whether between persons and persons, things and things or persons and things; and
 - whether in the form of speech, music or other sounds; and
 - whether in the form of data; and
 - whether in the form of text; and
 - whether in the form of visual images (animated or otherwise); and
 - whether in the form of signals; and

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- whether in any other form; and
 - whether in any combination of forms.

Despite the breadth of these definitions, these Acts, in regard to telecommunications, deal with the *means of delivering* the message, rather than with the *content* of the message. Accordingly, this inquiry focuses on delivery, not content, although some content issues relating to pay TV are covered.

Typically, a telecommunications delivery mechanism has the following features: there is a network of origination and termination points, any part of the network can communicate with any other part, and the communication flow can be two way. This is unlike some other services in which information flows are important. Broadcasting, for example, currently provides one way transmission of content from a few to any. However, future changes in the technology of broadcasting may mean that it allows for interactivity and may be transmitted via platforms that simultaneously provide telecommunications services.

A prime concern of telecommunications competition regulation in the past has been to deal with natural monopoly and market power. However, regulating to encourage facilities-based competition may not always be appropriate. For example, duplication of infrastructure may be uneconomic in certain technologies or regions. Further, the economic efficiency costs of an unregulated natural monopoly need to be distinguished from distributional effects (see chapter 2). For example, monopolies may tend to produce large transfers from consumers to telecommunications shareholders, while regulation may reduce or reverse that flow.

The definition of a market is important for sound telecommunications regulation. Too broad a definition may lead to an underestimate of a provider's market power, with too narrow a definition having an opposite effect. In each case, the nature and extent of regulation might be inappropriate. Defining markets is not easy as it needs to consider complementarity and substitutability in a number of dimensions: product, function, geographic and time, for example.

Technological change

Demand and technology conditions in telecommunications are continually and rapidly changing. The rapid technical change is a result of massive expenditure on R&D in the equipment and transmission sectors. This generates large price reductions — in particular, for bandwidth. In turn, this stimulates demand, both in traditional areas such as telephony and in new areas such as the internet.

Technological change is blurring distinctions between delivery mechanisms, for example between fixed line and mobile calls, and expanding the variety of services that can be run on given platforms, such as digital subscriber line (DSL) services on the legacy copper wire local loop. Such change may break down or accentuate market power, with regulatory implications.

Digitalisation and the increasing productivity of bandwidth

Early telecommunications networks were built for telegraphy and voice telephony, with analogue transmission the dominant technology. Technological improvements have led to an upsurge in the relative importance of non-voice traffic such as fax, email, internet, data and video (collectively referred to as ‘data’). The change from analogue to digital technology means that much more information can be transported at much greater speeds and by more flexible means than was possible under analogue systems. All new infrastructure developments are now designed for digital transmission.

In 1998, Australia carried more data than voice traffic on its international network for the first time and data accounts for a significant and growing share of domestic traffic. This shift is expected to continue to be a feature of this industry. New wired and wireless networks continue to be rolled out, often with higher capacity than was technologically possible only a few years ago. In addition, dramatically increased performance is being obtained from existing networks, including from the aging copper wires of the local loop. Key developments include the ability to operate multiple channels within single optical fibres, packet switching — rather than circuit switching — of digital traffic, and compression technologies such as DSL services. Importantly, while these technologies still require significant investments, they can be applied to pre-existing networks without the need, for example, to dig up cable or wires that are already in the ground.

At the same time, greater awareness of the capability of new services is increasing demand from consumers. Business traffic in and between central business districts has provided the impetus for much of the new optical fibre and microwave network rollouts in recent years. Some also expect a major increase in demand for mobile data services.

Importantly, technological changes have meant that facilities designed or used for one purpose can now be used for others. For example, cable TV networks are, or can be, used for telephone, internet and data services. Similarly, DSL technologies allow video and high speed internet to be provided by way of the copper wires of the local loop. Consequently, demand for network capacity is greater, increasing the incentives to install additional capacity and for innovation that increases capacity.

Future developments may include the replacement of copper based DSL bandwidth with fully fibre optic networks.

Uncertainty, technological risk and regulation

The speed of technological change adds to the riskiness of investment decisions. This includes the possibility of stranding of assets — the premature sidelining of investments in facilities or systems that can no longer generate income — and the risk of failure (as happened with the Iridium satellite system). In such an environment, providers can only plan with any certainty for the short to medium term.

Regulatory biases to particular technologies — as noted previously — can reduce technological and commercial options. Nevertheless, governments will continue to have a major influence on the development of technologies in this industry, a recent example being the decision to close the analogue mobile system.

Technical constraints affecting competition

Rapid technological change may mean that many alternative technologies are available at any one time. This has implications for providers and potential providers of services, and for competition. For example, lower costs and expanding coverage suggest that mobile telephony and fixed networks are becoming more substitutable. Developments in the capacity of wireless networks may open up what is effectively a new 'local loop' in some areas, potentially reducing the market power of Telstra. Conversely, DSL technologies, by allowing better and faster services to be provided over existing copper wire networks, may increase Telstra's market power.

With new carriers and service providers entering the market in recent years, a key concern is their capacity to connect with Telstra's network. Issues here include the processes that regulate access and deal with anti-competitive conduct, and those that seek to resolve technical issues such as interconnection standards and means of minimising signal interference.

Another example of an issue with implications for competition is the increasing use of internet protocol (IP) switching. This can affect carriers' charging options. For example, if data and voice traffic are sent by IP, it is difficult to distinguish between types of calls for charging purposes. This in turn has implications for the efficient recovery of communications costs. And more generally, the declining cost nature of parts of the industry also has implications for competition and industry regulation. Indeed, technological change suggests that the telecommunications network as a

whole is not a natural monopoly, though some key components may be (at least in the short run), as may be some facilities in less densely settled regions.

1.6 The Commission's approach to the inquiry

The TPA and the Telecommunications Act set out a number of objectives:

- the general objective of the TPA is to 'enhance the welfare of Australians through the promotion of competition and fair trading and provision for consumer protection' (section 2);
- Part XIC of the TPA, dealing with telecommunications access, has its own specific objective — that is 'to promote the long-term interests of end-users of carriage services or of services provided by means of carriage services' (section 152AB);
- the objectives of the Telecommunications Act (section 3) are meant to be read together with Parts XIB and XIC of the TPA. Two main objectives are specified together with a number of other objectives. The main objectives are to promote:
 - the long-term interests of end-users of carriage services or of services provided by means of carriage services; and
 - the efficiency and international competitiveness of the Australian telecommunications industry. (In this objective, 'industry' also includes the manufacturing and importing sectors.)

These objectives are somewhat narrower in scope than those to which the Commission must have regard. The terms of reference of the inquiry specifically require the Commission to have regard to the 'established economic, social and environmental objectives of the Australian Government'. As well, the Commission must have regard to the policy objectives set out in the *Productivity Commission Act 1998*. Taken together, these requirements draw attention to a number of goals. In summary, these include:

- Improving the economic performance of the economy overall in order to achieve higher living standards for all members of the Australian community and facilitating the development and growth of efficient industries. The Commission is also required to have regard to the need to reduce regulation where this is consistent with social and economic goals.
- Facilitating adjustment to structural changes and the avoidance of social and economic hardships arising from those changes and recognising the interests of the various different community groups likely to be affected by measures proposed by the Commission.

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- Increasing employment, including in regional areas, and promoting regional development.
 - Recognising progress made by Australia's trading partners in reducing trade barriers.
 - Ensuring industry develops in a way that is ecologically sustainable.
 - Meeting international obligations and commitments.

1.7 Other inquiries and reports

A number of recent inquiries and reports are relevant to consideration of the issues currently under reference by the Commission.

In December 2000, the ACCC issued a draft report on the retail price capping arrangements that apply to Telstra — its final report was made public in May 2001. A number of other relevant reports into telecommunications issues, including the assessment of Telstra's PSTN undertakings, inquiries into declaration, and publication of pricing guidelines for specific services, have been issued by the ACCC over the last few years. These are listed in the Reference section.

Other relevant Australian reports include the Besley report into telecommunications service in rural and regional Australia. As well, many studies into telecommunications have been undertaken in other countries.

The Commission itself has been examining the operation of Part IIIA of the TPA, the generic provisions dealing with access (Productivity Commission 2001a,c). As well, the Commission's recent inquiry into the Prices Surveillance Act covered some relevant issues (Productivity Commission 2001b,d).

The Commission has drawn on this material throughout the report where appropriate.

1.8 WTO commitments

Australia has made a number of international commitments in regard to telecommunications, including those made under the GATS in 1994 and follow up commitments such as the GATS Agreement on Basic Communications and its associated Reference Paper. In broad terms, these commitments are consistent with the direction of reform that Australia is pursuing.

Obligations under the GATS relate to, among others, most favoured nation treatment (which generally prohibits Members from discriminating between other Members), transparency, market access (which, for scheduled sectors, prohibits restrictions on the number of service providers or on participation of foreign capital, unless the restrictions are scheduled) and national treatment (which prohibits Members from discriminating in favour of national providers for scheduled sectors, unless the restrictions are scheduled). Additional obligations in relation to access to and use of ‘public telecommunications transport networks and services’ are contained in the GATS Annex on Telecommunications.

In relation to telecommunications services, many Members’ schedules of specific commitments included ‘enhanced telecommunications services’ such as electronic mail, voice mail, on-line information, electronic data interchange and value added facsimile services, but did not include ‘basic telecommunications services’ such as voice telephone, telex, telegraph and private leased circuit services.

In negotiating the GATS, a decision was taken to extend negotiations on basic telecommunications services beyond the signing date. These negotiations concluded three years later in February 1997 with what is commonly referred to as the Agreement on Basic Telecommunications (ABT). The ABT, which came into force on 5 February 1998, consists essentially of the scheduled commitments of participating Members in regard to basic telecommunications services (these are annexed to the Fourth Protocol to the GATS). These commitments cover market access (including foreign direct investment), national treatment and pro-competitive regulation (such as competition safeguards, interconnection guarantees, transparent licensing processes and the independence of regulators).

An important outcome of the negotiations on basic telecommunications was the development of a set of pro-competitive regulatory principles, known as the Reference Paper. It is legally binding for the Members (including Australia) that have agreed to accept it. It covers regulatory issues that have an important bearing on competitive conditions including interconnection, spectrum allocation and competitive safeguards. DFAT noted that the Reference Paper does not specify the adoption of particular regulatory regimes or institutional structures and that WTO members retain the flexibility to apply their own diverse regulatory mechanisms to meet the objectives of the Reference Paper (sub. 46, p. 1).

A relevant issue in this current inquiry is whether, if Parts XIB and XIC of the TPA were to be abolished, Parts IV and IIIA of the TPA, as presently enacted, would alone be sufficient to meet Australia’s obligations under the GATS. This issue was addressed in DFAT’s submission. It noted that ‘in general’ this would be so (sub. 46, p. 1). However, DFAT raised an issue relating to competitive safeguards — this is taken up in chapter 5.

1.9 Consultation

To facilitate participation in the inquiry and to allow the maximum degree of public scrutiny, the Commission:

- held informal discussions with 24 organisations that have a range of interests and perspectives, including discussions following the additions to the terms of reference made after the Besley report;
- released an issues paper in June 2000 to assist those wishing to make written submissions — a further issues paper covering the additional terms of reference was distributed in early January 2001;
- released a draft report in March 2001 for public comment;
- invited written submissions — 65 were received prior to the release of the draft report and 56 subsequently; and
- held initial public hearings in August 2000 in Sydney, with 14 organisations participating. Further hearings were held in May 2001 to receive comment of the draft report — 13 organisations took part.

Appendix B lists organisations and individuals who have participated in the inquiry.

1.10 Report structure

Chapter 2 sets out a framework for the consideration of competition issues in telecommunications.

This is followed by two chapters dealing with the nature and extent of competition: chapter 3 describes the main players, their markets and influences on investment; while chapter 4 assesses the current state of competition — including the likelihood of sustainable competition if existing telecommunications-specific regulation were to be wound back.

Part XIB of the TPA is considered in chapters 5 and 6. The first of these deals with anti-competitive conduct and the second with the information provisions and reporting requirements.

Chapters 7 to 11 cover Part XIC of the TPA. They deal in turn with a description of the telecommunications access regime and its use (chapter 7); the rationale, alternatives and scope for such a regime (chapters 8 and 9); an evaluation of its institutions and processes (chapter 10); and access pricing (chapter 11).

Provisions arising from the Telecommunications Act that affect competition are considered in chapters 12 to 15: industry development plans and some other licence conditions (chapter 12); codes and standards (chapter 13); number portability (chapter 14); and carrier pre-selection (chapter 15).

The next three chapters cover issues relating to competition in rural and regional Australia. Regional differences in competition are assessed in chapter 16. Chapter 17 deals with regional aspects of pay television programming arrangements. Issues relating to the universal service arrangements and regional competition are covered in chapter 18.

2 Competition issues

Box 2.1 Key messages

Competition policy — especially relating to access to complex technologically changing two-way networks in telecommunications — is controversial and difficult. Regulatory intervention should be subject to the tests of establishing sound rationales, efficiency and effectiveness, and observe best practice (such as reducing transaction costs and increasing transparency).

The basis for policy concern in telecommunications is substantial market power — with its potential to affect efficient pricing, cost-minimisation and innovation adversely.

It is often argued that telecommunications incumbents have market power because of natural monopoly. However, natural monopoly can hold in some market segments and not others. It may not hold over time. Phased investment, and technological and demand uncertainty can make it efficient to have several firms operating at the one time, even though costs are declining with scale.

The primitive model of an unregulated natural monopoly with unsophisticated pricing probably exaggerates the efficiency costs. However, regardless of the size of its efficiency effects, an unregulated telecommunications monopoly is likely to have significant distributional impacts, by increasing prices to consumers and increasing returns to shareholders.

The key measures employed by government for dealing with the problems posed by monopoly power are government ownership, downstream price controls, access regimes, vertical separation of the bottleneck facility and its downstream retail services; and laws against anti-competitive conduct. Most involve an element of, at least tacit, price control. Many experts disagree about the relative merits of the various solutions.

An early ‘solution’ to natural monopoly, creation of a public monopoly covering all telecommunications services with statutory elimination of competition, can result in significant economic inefficiencies and reduced innovation. The other ‘solutions’ have advantages and disadvantages, of which the risk of damaging investment incentives is probably the greatest challenge.

Process issues and the detail in regulations — such as ensuring adequately speedy resolution of problems — are probably as important as choosing between the broad range of instruments.

Convergence — in technologies and in the uses of telecommunications networks — has ambiguous effects on the need for competition regulation. It may erode market power in some segments, while maintaining or creating it in others.

Markets are difficult to define when demand and technology conditions are continually changing. There is potential for monopoly to remain for some services or in some areas (such as rural and regional Australia) even after CBD and other large markets have become much more competitive.

As in all regulation, there are risks of regulatory failure caused by information asymmetries, uncertainty, compliance burdens and the risk of regulatory capture.

Governments all around the world have complex regulatory arrangements for telecommunications services, even after dismantling, or at least reducing the market power of the publicly owned monopolies. This reflects their concerns with some of the distinctive features of large costly networks. This chapter sets out a framework for exploring competition issues in telecommunications, and provides some tools for understanding and assessing these evolving regulatory arrangements.

2.1 Overview of the report's analytical framework

The implementation of competition policy often requires regulatory intervention. Such regulation should be subject to the same set of general principles that apply to all good regulation. These principles have been widely examined and have been found useful in many different regulatory contexts.¹ Some questions that typify this critical approach to regulatory evaluation are shown in box 2.2, while figure 2.1 outlines a general framework for considering telecommunications competition policy issues.

Box 2.2 **General issues about regulation**

The design of current regulations

What is the primary problem being addressed by the particular regulation?

Is the regulation well targeted at the specified objectives?

Is the regulation consistent with related regulation?

Are there unintended consequences of the regulations or risks of government failure?

Is regulation the best approach to the problem or are there superior alternatives?

The implementation of current regulations

What are the costs of administration?

What are the costs of complying, in both money and time?

What are the risks of 'government failure'?

Are administrative processes timely, transparent and accountable?

Are review or appeal mechanisms appropriate, transparent, timely and cost-effective?

Are the review procedures being used 'strategically' by players in the industry, and if so, how should this be handled?

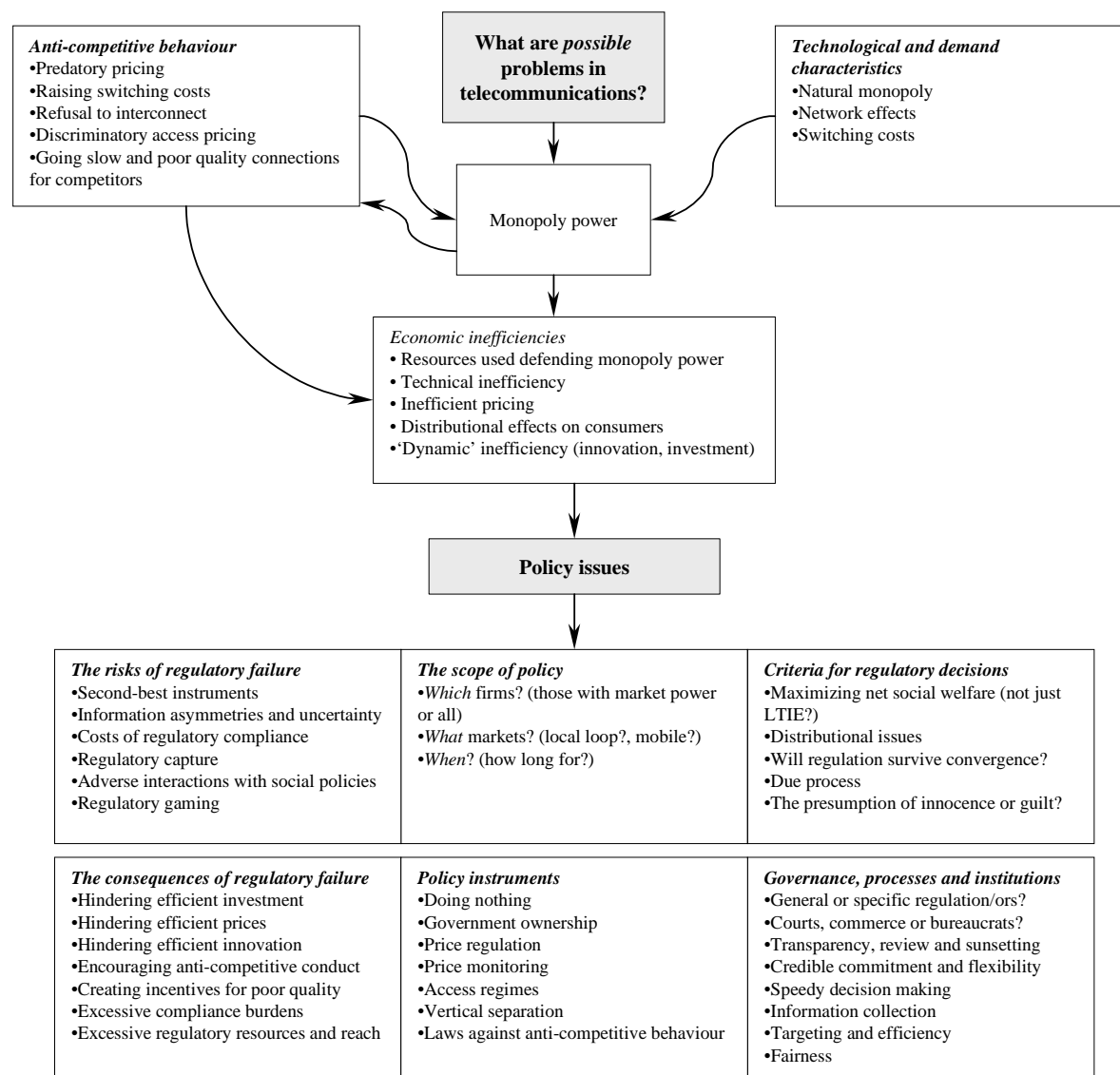
Do the regulations, as implemented, successfully address the relevant policy issues? If so, will they continue to do so in the near future?

How could the implementation of the regulations be changed to improve their operation and effectiveness?

¹ For example, Productivity Commission 1998, Office of Regulation Review 1998 and Ontario Red Tape Commission 1997.

A crucial first test for good competition regulation is a clearly established rationale for intervention. In the case of telecommunications, the major basis for policy concern is the potential for market power in certain services — with its potential to undermine efficient pricing, cost-minimisation and innovation. It should not however, be taken for granted that market power always produces these distortions, since there are circumstances in which its efficiency costs can be modest. How market power may arise — particularly from natural monopoly and network effects — and its impacts on efficiency and distribution are assessed in section 2.2.

Figure 2.1 A framework for competition policy in telecommunications



Competition is a means to an end (or ends), rather than an end in itself. While some policy approaches seek to increase competition (such as access regimes), others seek to solve market power problems through other regulatory means (such as direct

price measures). In some cases, encouraging competition can reduce efficiency — for example, by setting access prices so low that the bottleneck owner is unwilling to re-invest as the assets age.

A full assessment of regulations requires the assessment of options. Consequently, in this report the Commission assesses various approaches to the problems posed by market power other than Parts XIB/C of the TPA and other provisions in the TA. The varied instruments that can be applied to deal with these competition issues are discussed in section 2.3.

Telecommunications services are constantly changing and heterogeneous. There are many different delivery platforms and markets (such as mobile, internet, messaging and the plain old telephone system). Change is buoyed by rapid technological innovation and expanding uses of telecommunications and other infrastructure (under the rubric of convergence — section 2.4 and chapter 1). This may undermine or accentuate the need for regulation, depending on whether they reinforce incumbency advantages or lead to new sources of workable competition. Some telecommunications players (such as Telstra, Vodafone and Cable & Wireless Optus) consider that regulatory ‘reach’ is already excessive, entering telecommunications markets such as mobile telephony that do not warrant such intervention, while others dispute this. The fast pace of change requires that the need for and type of regulation should be periodically re-assessed, with the possibility that at some time telecommunications-specific regulation may no longer be required. Policy makers must determine the right scope of intervention (which markets, firms and periods?).

Any regulatory assessment has to establish the criteria that separate good from bad regulation. The Commission regards the welfare of the community as a whole — that is, having regard to the interests of all stakeholders — as the basis for judging whether a regulation is good or bad. This is not necessarily the same as the ‘long-term interests of end-users’ that is currently the standard applied in part XIC of the TPA (as discussed in more depth in chapter 9). Regulatory assessment needs also to take account of who wins and loses from regulation, the robustness of regulation to changes that are occurring in the economy and in telecommunications technology, and whether the onus of proof is for intervention or non-intervention.

Even where the rationales have been established and good instruments selected to deal with a regulatory problem, there are many different ways in which regulations can be structured. For example:

- Should there be a general competition regulator or one specific to telecommunications?

-
- What combination of court, administrative or commercial processes should arbitrate outcomes?
 - Since the exact nature of an access-pricing model makes a large difference to the benefits of an access regime, how is that model formulated and checked?
 - How important are concepts of fairness and equity when it comes to businesses rather than individuals?
 - What is the onus of proof that is required for action?
 - Are there mechanisms that are able to resist or provide incentives against gaming and frivolous complaints by market participants?
 - How transparent should proceedings be? Should bilateral arbitrations between the ACCC, access seekers and providers be converted to multilateral processes as mooted by the ACCC (sub. 16, p. 87)?
 - What provisions should there be to review and sunset declarations?
 - How speedy should processes be? For example, if there are large first mover advantages in new technologies, then slow moving competition policy approaches allow a powerful incumbent to lever off its existing infrastructure advantages, with adverse consequences for competition. On the other hand, speedy decision making increases the risk of regulatory error — which can adversely affect investment decisions.

Many of the differences between Parts IIIA/IV (the general access and competition regulations of the TPA) and Parts XIB/C (the telecommunications-specific parts) of the TPA relate to processes and thresholds, rather than to policy instruments or other aspects of policy. Small and subtle differences in process and test thresholds for competition policy can make a large difference — ‘the devil is in the detail’. The Commission examines governance, regulatory processes and institutions when assessing Parts XIB and XIC (chapter 5 and chapter 10).

Even if it were accepted that market power is present and causes large economic costs, this is not sufficient grounds for government intervention. The appropriate test of any intervention is how outcomes compare with alternative interventions, including the option of doing nothing. This takes into account the risks of regulatory failure and the inevitable imperfections that accompany regulations. In telecommunications competition regulation, these problems stem from, among other things:

- large information asymmetries between regulators and those regulated;
- the risk that errors in pricing methods may deter investment in bottleneck facilities;

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- the incentive effects created by regulations — that may encourage gaming or discourage cost minimisation;
 - uncertainty about technology and demand;
 - the risk of regulatory capture; and
 - interactions between different regulations.

Regulatory errors are explored in greater depth in section 2.5. These mean that regulation can produce distortions in investment, innovation and prices. Perversely, the imperfections inherent in competition regulation have the potential to swamp their benefits, implying that it can, in some cases, be best to use regulations sparingly, even if that leaves some market power unchecked.

2.2 What are the *prima facie* rationales for regulatory intervention?

There are three major arguments advanced as to why telecommunications markets may require competition regulations:

- large sunk costs of local network construction (such that it is usually most efficient to have just one provider of the facility — a natural monopoly);
- network effects that reflect the desire by customers to be able to make calls to and receive calls from anyone (the value of any-to-any connectivity). If they have to make a choice between a small network and a large one that are not interconnected, consumers will generally prefer the large one; and
- the legacy of an historical statutory public monopoly in telecommunications services that led to the dominance of one firm in the provision of the customer access network and in subscribers.

The barriers to entry posed by these obstacles are aggravated by some (otherwise less important) additional factors:

- consumer switching costs — an incumbent with a large subscriber base has the capacity to artificially manipulate the costs borne by consumers when switching between carriers. For example, they may use slow and costly procedures to transfer (churn) a customer, or require customers to change their telephone number when they change carriers (denying number portability); and
- a vertically integrated carrier has the incentive to resist access in subtle ways through anti-competitive behaviour, like delaying access (‘forgetting the keys to the exchange’ as one participant put it).

Each of these is described in turn, before assessing the apparent adverse impacts of market power that regulation aims to remedy.

Natural monopoly

It has often been contended that important segments of telecommunications markets are natural monopolies. A natural monopoly exists where one firm is able to produce a given set of outputs at a lower cost than two or more firms (box 2.3). That said, it is sometimes very complicated to assess when natural monopoly might occur. The cost circumstances in which natural monopoly arises can be complex and even counter-intuitive (box 2.3).

Economies of density (or economies of scale at the local level) appear to be the most important potential source of natural monopoly in telecommunications. These economies are the cost savings for a single firm from serving more customers in a given local market. Traditional wire and cable telecommunications networks involve substantial sunk costs (digging trenches or constructing poles, laying wire, establishing exchanges)² and low marginal costs. Once the infrastructure is in place, the costs of services on the wire running from the consumer to the local exchange is not traffic-sensitive (that is, marginal costs are near zero). The economic significance of this is that duplicating the trench³ (or the poles) and the wire or cable to many customers requires large additional investment, but does not produce any additional customer benefits.

² While the popular impression of telecommunications is that it is a high technology industry, many of its costs stem from ‘digging trenches’, installing cable and erecting poles. For example, the AIEAC (1999, p. 124) estimated that about 68 per cent of the cost of constructing a fibre optic network from Parramatta to Chatswood would be cable installation (excluding cable costs). Across the whole Sydney area, it was estimated that cable installation costs comprised 58 per cent of the cost of the fibre-optic network. These costs are ‘sunk’ — they cannot be transferred readily to other uses, unlike a locomotive engine on a particular railway service (characterised by Baumol et al. 1998, p. 281, as ‘capital on wheels’) or an aircraft in a particular airline (‘capital with wings’).

³ Many of the costs of duplication would be reduced were there capacity to share trenches or poles with competing telecommunications facility providers (even extending to other utilities, such as electricity and gas). There has been significant trench sharing between Foxtel and Telstra, and sharing between Telstra and other utilities in new urban developments. There is relatively little trench sharing between Telstra and other carriers, except in CBD areas (NERA 1999, p. 18). Carrier licence conditions require parties to notify each other of trench construction and to share where possible, but in many cases, there is little capacity to coordinate the provision of competing telecommunications infrastructure in a way that cuts trench costs. Nor have third-parties generally specialised in the provision of shared distribution systems, though dedicated towers for mobile phone networks are now common in Australia (Crown Castle sub. DR88) and the US (Galbi 2000, p. 7).

Box 2.3 **Natural monopoly**

A natural monopoly exists where one firm is able to produce the relevant range of outputs at a lower cost than two or more firms. In particular, a natural monopoly requires a strictly and globally subadditive cost function over the relevant range of output — every way of dividing output between two or more firms would result in higher total costs than if the output was produced by one firm.

For this to be the case, the cost of production has to be subject to economies of scale and/or scope over at least part of the output range.

Economies of scale exist where a one percent increase in production raises the total cost of production by less than one percent.⁴ A common cause is fixed costs, or costs that are incurred regardless of output (Baumol et al. 1988, p. 173). Fixed costs are significant in network industries such as telecommunications, postal services and electricity transmission.

Economies of scope exist where one firm can supply two products at a lower cost than two firms individually producing each product. For example, the costs of the joint provision of cable TV and telephony services are much lower than their separate provision.

Such scale and scope economies, are influenced by transaction costs and technological change, which means that a natural monopoly can be a temporary phenomenon. As demand for a product grows, the range over which economies of scale/scope can be achieved is likely to form a smaller proportion, further eroding the natural monopoly nature of production.⁵

However, a practical difficulty is that — as noted by King (2000) and Albon et al. (1997, pp. 24ff) — the econometric evidence regarding the existence of natural monopoly is often rather inconclusive, reflecting data and methodological difficulties. In King's view an appropriate 'rule of thumb' is that natural monopoly can be identified where there are large fixed costs (and therefore high average cost) and low marginal operating costs — which is true for major parts of telecommunications networks. For example, there are very large costs associated with the construction of the ubiquitous local loop.

It should be noted that economies of scale are neither necessary nor sufficient for natural monopoly in a multi-product industry like telecommunications. They are not sufficient because of the possibility of diseconomies of scope (Baumol et al. 1988, pp. 172–3). And they may not be necessary if a single firm's average costs are rising over some portion of output and are still less than that of another entrant (Viscusi et al. 1996, p. 355). Even the coexistence of economies of scale and scope does not necessarily imply natural monopoly (Baumol et al. 1988, pp. 173–4), further complicating econometric tests of their existence.

Sources: Albon et al. 1997 (p. 24); King 2000; Viscusi et al. 1996, Baumol et al. 1988.

⁴ This definition of economies of scale is consistent with that of Baumol et al (1988, p. 21), who developed the most rigorous definition of natural monopoly. This definition differs from the standard theoretical definition (which defines economies of scale in terms of the k-fold increase in output stemming from a k-fold proportionate increase in *all* inputs). But Baumol et al's terminology has now been widely adopted in the analysis of natural monopoly, and will be used in this report.

⁵ Natural monopoly characteristics may be acquired or lost over time. In the 1950s in the US, long distance telephony shifted from wire to microwave technology, which did not appear to be a natural monopoly (Viscusi et al. 1996, p. 488). However, currently most trunk services are provided by fibre optic technology, which is characterised by high fixed costs and low marginal operating costs.

The high sunk costs of some forms of infrastructure imply, therefore, that with stable technology and where demand is well below installed capacity, one set of wires or cables in typical areas is cheaper than multiple sets. In this case, provision by a single infrastructure provider would be the most efficient outcome. This provides a limit on feasible facilities competition for fixed services in regional Australia.

Non-technological factors can also affect the feasibility of duplication. For example, Consultel (1999, p. 31) suggests that laying new fibre in Australia is increasingly difficult, slow and expensive, because (amongst other things) of the reduced legal rights of licensed carriers to cross both private and public land.

In the UK telecommunications market it has been estimated (Cave and Williamson 1996) that the average costs of provision of telephony in a suburban setting is around £400 per subscription for 10 per cent local market penetration and around £100 for 90 per cent local market penetration. This is consistent with very high fixed costs being spread over many more subscribers. Modelling of these UK data suggests that duplication of telephony at the local level increases the infrastructure costs of the local network by around 40 per cent for a total joint market penetration of 90 per cent. As the higher costs will be reflected in interconnection prices to consumers, they have a feedback effect, reducing demand and market penetration, and further increasing the cost inefficiencies of duplication. Even with a very small amount of price responsiveness by consumers, this second-round effect significantly amplifies the inefficiencies of duplication.⁶

There are two other possible contributors to natural monopoly in telecommunications. First, there may be (non-local) *economies of scale* derived from a single firm serving many local markets (such as spreading overhead costs such as R&D, advertising and billing systems over more demand).

Second, there may be cost savings associated with the joint production of different types of services — *economies of scope*. These economies of scope may be realised by providing local telephone, national long distance and international network infrastructure, and in providing both infrastructure and retail services.⁷ This could lead to commercial pressures to integrate telecommunications firms vertically.

⁶ It should be noted, however, that the degree to which duplication increases total costs is heavily dependent on the technology being used, which can change quite rapidly. For example, if the cost of providing access from the kerb to the customer (including any termination equipment) is a relatively high component of total cost, then the percentage increase in costs from duplicating networks can be quite low (simply because duplication typically only relates to infrastructure to the kerb). Cheaper termination devices lower the overall cost of such networks, but increases the relative costs of having two networks rather than one.

⁷ There may also be economies of scope in software development and equipment manufacture.

However, a key issue in telecommunications policy is whether such vertical integration into retailing and other downstream services reflects genuine economies of scope or attempts by powerful infrastructure owners to exploit their upstream market power through market foreclosure (Tirole 1988, p. 193ff). For example it may be in the interest of a bottleneck owner to build ‘supporting’ market power in downstream markets and to reduce the threat of entry in the upstream segment. This issue is examined further in chapter 5.

As the use of networks expands beyond telephony, economies of scope encompass other network services, such as pay TV and internet, as well as the content of the information transmitted itself. The economies of scope for the provision of entertainment services and telephony have probably increased with technological changes (such as new fibre optic cable). These economies of scope also explain why regulations on cable and free-to-air broadcasting have flow-on effects to telephony and other telecommunications services. This is an important issue when considering the extent to which barriers to gaining access to content by a pay TV provider might reduce pay TV subscription numbers, thus making complementary telecommunications services uneconomic — an issue referred to the Commission as a result of the Besley inquiry into regional telecommunications services (chapter 17).

As facilities-based competition has intensified in certain markets with the removal of the former statutory monopoly, other *non*-telecommunications networks have the potential to provide telecommunications services on the back of their general advantages in network creation and management. For example, an electricity provider is using its electricity poles to extend a broadband telecommunications service through cable to large parts of Canberra. Economies of scope appear, therefore, to extend well beyond the realm of telecommunications-specific services.

The importance of economies of scope to the concept of natural monopoly in multi-product firms can lead to a confusing debate about the existence of a natural monopoly in telecommunications. The fact that there might be economies of scope in jointly producing a whole range of telecommunications services tends to focus attention on the question of whether it is economic to have one vertically integrated national (or in the US, state-level) telecommunications carrier or several. But even if there are several nationally, it does not mean that at some micro-level a firm will not have significant market power. In the US it appears that it is economically efficient to have many cable TV carriage services nationally. There is, therefore, no *national* natural monopoly in cable TV carriage services. However, 99 per cent of the 11 000 cable TV carriage systems have a local monopoly at the city level, where they appear to price monopolistically (Viscusi et al. 1996, p. 429). Accordingly, it is

important to define the scope for substitution with other services when assessing whether natural monopoly exists (section 2.4).

Telecommunications now involves many elements. It encompasses construction work associated with different networks (mainly digging trenches, erecting poles and laying/attaching the wires), various platforms (such as satellite, cellular mobile phones, fibre optic pay TV networks and the copper wire fixed wire telephone system), long distance and local calls, wholesale and retail services, and a large range of new services, such as the internet. It is likely that there is no natural monopoly in the carriage of all of these services, but that in certain sub-markets it will be most efficient to have one firm carry all the services.

So far, natural monopoly has been described in largely static and backward looking terms. However, there are a number of reasons (quite apart from the discipline provided by competition) why duplication may be economically efficient either now or in the future.

First, as discussed earlier, it can be difficult to identify genuine cases of natural monopoly. In cases of wrong identification, economic efficiency would be improved by 'duplication'. This is particularly relevant for segments that were identified as having natural monopoly characteristics in the past, given that technological change and demand growth have the potential to erode a natural monopoly.

Second, firms have different capacities for developing new technologies and products. Thus, an entrant with a sufficiently differentiated product may be profitable even in a declining cost industry and may improve economic efficiency despite what might look like wasteful duplication to someone who failed to take account of the consumer gains associated with differentiated products. Also, if different firms have varying comparative advantages in different technologies or emerging differentiated market segments, then it can be efficient to have several firms investing simultaneously in technologically divergent networks (as well as some using old technologies). There may be apparently high duplication costs from a static perspective, but this would ignore the value of having technological options, when the future characteristics of markets are uncertain.

Third, although at any one time, there may be apparent economies from having just one network element, the fact that investment occurs in irregular steps ahead of demand and that technology develops, suggests that it may be efficient to have two (or more) coexisting network elements. Say that a single firm initially supplies a market, taking into account the demand characteristics a few years ahead. As the market expands, additional capacity becomes necessary and it is not necessarily the case that the most efficient outcome is achieved by expanding the existing capacity

with the same firm. Indeed, another firm may enter and provide further capacity, often using technology of a different vintage.

In the absence of the legacy infrastructure, a single firm with the latest technology may most efficiently serve the market — the apparent condition for natural monopoly. However, neither technology nor demand are fixed. Accordingly, it may be economic to have a new network infrastructure alongside one of an older technology. The old technology network is unlikely to be immediately redundant following the introduction of a new lower cost technology. So long as it can meet quality standards and interconnection requirements it will continue to provide part of the demand with its existing capacity.⁸ This is because parts of the old network are likely to be sunk, so that the owner of the old technology can therefore price its services at something above marginal cost and still survive (until the old technology is scrapped). The old technology will limit the extent to which the new entrant could exploit its potential monopoly power. If technology is rapidly changing, then the existence of continually overlapping generations of technology can increase competition and optimally lead to multiple firms.

Network externalities

The value of a telecommunications network increases for all subscribers the more people are connected to it. Consequently, when a new subscriber joins, other existing subscribers also benefit, creating a network externality.

The relationship between the subscriber base of a network and its value to those subscribers explains why interconnection between network parts is so important in telecommunications. If there were multiple unconnected telephone networks, each with identical costs and quality, a new customer would generally prefer the one with the largest number of customers. Accordingly, a large network provider has a competitive edge over smaller competing networks, even if it has no supply-side cost advantages. The large provider could exploit this by setting high final prices for consumers and restricting access to its network.

If the telecommunications industry were characterised by roughly equally sized players (or each had roughly equal bargaining power), then they would generally commercially resolve interconnection disputes because each has the incentives to do so (Laffont et al. 2000, pp. 179ff). Vodafone (sub. DR70, p. 7) claims this is the situation in the Australian mobile market.

⁸ Moreover, technological change can markedly increase the functionality and capacity of the old infrastructure — as witnessed by xDSL technologies using copper wire lines.

However, in Australia, as in most other countries, the telecommunications industry has evolved from a statutory public monopoly to private competition. This means that one firm owns most of the fixed wire local loop — which is used for originating and terminating calls that end, start or pass through others' networks (such as mobile and long distance facilities). By setting high originating or terminating access fees, the owner of the ubiquitous local loop can affect the costs of competitors and their ability to compete in final markets.⁹

This is what Mackie-Mason has referred to as 'demand-side' monopoly (sub. 25, p. 13). This is the major rationale¹⁰ for access policies requiring any-to-any connectivity in telecommunications networks (a goal that is assessed further in chapter 9). Network effects imply that competition policy may be desirable even if the technology of the incumbent would fail the conventional natural monopoly test — which is important in determining the criteria for declaration of telecommunications services. It should not be assumed, however, that just because an incumbent owns most of the customer access network that network effects are always strong. For example, carriers seeking to interconnect to the incumbent's network may be able to avoid penal interconnection charges by connecting via existing international network connections, where interconnection charges are lower because of competition (Vodafone sub. DR70, p. 6).

Network effects also mean that two-way access problems *may* also arise if access regulations generate competition in the provision of origination and termination services. Each carrier must buy termination services from the other, with the possibility that they may levy high terminating charges or in some cases, collude (Laffont et al. 2000, pp. 179ff).

Even small non-dominant networks may exercise market power and levy high terminating charges on the dominant network (Telstra sub. 38, p. 22). This arises because regulations and other factors weaken the countervailing power of the incumbent that provides the originating calls:

- it cannot respond by refusing termination because of the regulatory requirement to provide access;

⁹ Access charges to the PSTN constitute a very high share of the total costs of downstream services. The ACCC (2000c, p. 34) has estimated that PSTN access charges to Telstra's competitors constitute between 40 per cent to 45 per cent of the average retail price for national and international long distance calls and approximately 30 per cent of the retail price of a fixed-to-mobile call.

¹⁰ There are also other social benefits associated with an extensive and accessible network, such as the ability to contact emergency services (Armstrong 1997, p. 67).

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- it cannot respond by setting high retail charges for its customers calling the non-dominant network because retail prices are capped under social regulations. For example, this problem may arise when data calls to ISPs by the incumbent face uncapped timed terminating charges while the retail originating charge is capped on an untimed basis (ACCC 2001b, p. 15);
 - customers may be ignorant of the network they are calling. Even were the incumbent freed to set high retail origination charges in response to high terminating charges levied by specific non-dominant networks, this would only affect the average call price from the customer's viewpoint (ACCC 2001b, p. 12). Consequently, the smaller the market share of the non-dominant network the greater the capacity of that network to impose margins on terminating prices (Laffont et al. 2000, p. 186); and
 - where the non-dominant network also needs to terminate traffic on the incumbent's network, the incumbent may not be able to set high reciprocal terminating charges because of access price regulations.

The resolution of problems associated with non-dominant networks is discussed in chapters 9 and 11.

The costs to consumers of changing suppliers — consumer switching costs

When consumers decide to change from one telecommunications service provider to another, they face costs, widely referred to as 'switching' costs. These include process costs,¹¹ changes to set-top boxes or other equipment if the technology of the new provider is not compatible with the old, changes to the telephone number (in the absence of number portability — chapter 14) and the use of additional dial codes when dialling out (in the absence of pre-selection — chapter 15).

Many of these costs are non-pecuniary — they involve time and convenience costs. While small in absolute terms, they may be large relative to any discount offered by competing telecommunications providers.¹² Across the whole economy, taking into account millions of subscribers, the impact of switching costs on total call value

¹¹ Such as application forms, establishing credit worthiness, paying off past debt, changing any automatic bank debit arrangements and paying any charges associated with switching (including early contract termination charges).

¹² For example, suppose that a consumer makes 1000 local calls a year and can choose between an incumbent that charges 22 cents per call and a new entrant that charges 16.5 cents per call (25 per cent less). Assuming equal line rentals, the annual saving is \$55. If the incumbent were able to increase switching costs by using slow churning procedures or by discouraging number portability or pre-selection, then the consumer may not switch to the new supplier.

may run into hundreds of millions of dollars. An analogy is interest rates on bank savings deposits. Household depositors tend not to shift funds between accounts or banks with different interest rates, simply because of the transactions' costs of doing so, coupled with uncertainty about the future relative competitiveness of the various products.

Switching costs are ubiquitous in any developed economy and yet are not commonly a source of significant market power or the object of regulation. So, are telecommunications switching costs special in some way? The policy relevance of such switching costs depends on a number of factors:

- the existing state of competition and the extent to which one service provider has acquired the bulk of subscribers prior to open competition. Consumers are forward looking. This means that they will often be wary of arrangements that reduce their future choice. Consequently, at least some consumers will factor the magnitude of any artificially increased lock-in and switching costs into their choices of supplier so as to retain flexibility and minimise their exposure to exploitation of lock-in. So long as there are enough such consumers, the suppliers will face disincentives in raising switching costs. However, if a supplier has built up its subscriber base in a period prior to open competition, then it faces strong incentives to increase switching costs artificially to reduce access by other competitors to its customer base. For example, it may require long complicated override codes or take a long time to process requests by a customer to transfer to another carrier. This would enable it to charge higher prices than otherwise;
- the extent to which telecommunications carriers forgo cost-effective measures for reducing switching costs because such measures would reduce their market leverage. In some industries, it is difficult to increase switching costs artificially in this way because intermediaries can enter to reduce them.¹³ The role of such intermediaries appears to be low in the case of telecommunications carriers.¹⁴ The *artificial* element of switching costs is particularly significant. If switching costs were not artificially high, there would be no compelling efficiency grounds for policies aimed at addressing switching costs *per se* (by definition, such policies could not be cost-effective). There may, however, be grounds for price regulation to reduce monopoly rents obtained by an incumbent as a result of high switching costs, even if the switching costs are 'natural';

¹³ For example, a host of software firms produce translation software to translate outputs from different word processing packages. Another example is insurance brokers that search among different insurance products to reduce search and switching costs for consumers.

¹⁴ Chapter 16 describes the potential role of intermediaries in pre-selection of telecommunications services.

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- the ratio of switching costs to the value of the services consumed. The greater is the ratio, the greater the barrier to competition posed by switching costs;
 - the importance of bundling of services (or economies of scope on the demand side). If consumers wish to buy a bundle of telecommunications services (such as local, long distance, international, internet and email) from the one supplier, then it increases the costs of dealing with separate suppliers of such services. A new entrant must bundle services to attract customers.
 - the material significance of the service. There are switching costs associated with all sorts of products, such as insurance policies; high quality cameras; banking; book, wine and health clubs; frequent flier schemes; and photographic developing services. In some cases, the overall size of the switching costs and/or the scale of the services is too small nationally to warrant policy concern over any artificially increased switching costs. Switching costs appear to be more materially significant in telecommunications.

It appears that switching costs may act as a barrier to entry in telecommunications — especially in the early phase of liberalisation. But whether the regulations that are intended to reduce them (such as number portability and pre-selection) produce benefits in excess of their costs depends on evidence (chapters 14 and 15).

Anti-competitive behaviour

Firms with market power (however that is attained) may misuse that power through anti-competitive behaviour. Such behaviour is intended to sustain long-run high profits by deterring entry or by disciplining the prices of competitors. Actions such as refusal to supply (or in some cases, buy), price squeezes (charging higher access prices to entrants while charging low retail prices to consumers by a vertically integrated incumbent), predatory pricing (charging unsustainably low prices to drive competition out of business), collusion, delays in interconnection and installing large additional spare capacity to deter competing investments are examples.

Anti-competitive behaviour can be distinguished from monopoly pricing per se. High prices from monopoly power can have the effect of encouraging the development of cheaper alternative delivery options and rewarding innovation and thus spurring competition. Rather, anti-competitive behaviour can be solely related to the strategies pursued to exclude rivals on some basis other than transactions costs.

It should be emphasised that where there are substantial sunk costs, as in telecommunications, a natural monopoly does not necessarily have a direct incentive to behave anti-competitively, since its monopoly power position is already

secured by the large entry barriers. However, it may have an incentive to behave anti competitively if this allows it to:

- build downstream market power in areas not available if it simply sold access; and;
- cement its position in the upstream market (for example to shield itself from entry that might occur as a result of technological development).

Furthermore, as noted later, a monopolist may have an incentive to behave anti-competitively when the sunk costs no longer act as an entry barrier because of regulation (for example, through regulated access prices to the sunk facilities) or technological change (for example, when new technologies have greater economies of scope, as in some new broadband networks compared with the fixed copper wire local loop).

Managing the legacy of a public statutory monopoly

It is sometimes argued that Telstra's origin as a publicly owned statutory monopoly affects the level of competition in the deregulated telecommunications market. For example, the ACCC argues (1999a, p. 38):

The current structure of a market, including the extent of seller concentration, often reflects its past history of development and regulation. In the case of telecommunications, the fact that, until relatively recently, a publicly-owned enterprise was the only carrier or carriage service provider permitted to provide a broad range of domestic telecommunication services is a significant influence on current competition and market power in those markets, even in a deregulated environment.

For example, past market shares and the legacy of government ownership may confer market power because:

- network effects favour an incumbent with a large subscription base;
- subscribers may be relatively slow to shift to cheaper entrants in the presence of consumer switching costs;
- the incumbent may be able to use its deep pocket, wide subscription base and brand recognition to use anti-competitive strategies to deter entry; and
- the incumbent may still be the beneficiary of some lingering public subsidies — such as low-interest rate debt or debt guarantees. Against this, it may be disadvantaged by its past association with government, stemming from lasting effects on its cost structure and public perceptions about its role as a community service, as well as service obligations.

It is apparent that the fundamental sources of market power that may result from past public ownership reflect factors like consumer switching costs and network effects. The legacy of public ownership may help explain why a troublesome market structure may persist after liberalisation.

It may be thought that once statutory protection from entry was eliminated the problems posed by historical ownership would be transitional. This was at least part of the premise behind the enactment of telecommunications-specific competition laws (chapter 5). However, natural monopoly and network effects may persist over the long-term, while even high consumer switching costs may preserve incumbency advantages over a long period.¹⁵

What are the costs of monopoly?

Accepting for the moment that a monopoly exists, the major purported adverse economic consequence is that consumer prices are uniformly higher than long-run production costs — which reduces demand and consumer benefits.

However, these adverse efficiency effects may be reduced to the extent that the monopolist is able to price discriminate, and would vanish if the monopolist were able to perfectly price discriminate.¹⁶ In that case, the effects of monopoly would be limited to a transfer from consumers to the monopolist, which would earn excess profits (or ‘rents’).¹⁷ Telecommunications firms commonly do use price

¹⁵ Ultimately, high switching costs alone cannot preserve monopoly because new subscribers would use new networks.

¹⁶ Another argument sometimes advanced for no regulation is that a market run by a monopoly can be contestable (Baumol et al. 1988, p. 292), so that the threat of entry leads to efficient pricing, with zero rents. However, in the provision of telecommunications carriage services (but probably not in telecommunications retail services), it is likely that exit costs are high for new entrants. This is because potential entrants anticipate *ex ante* that the incumbent’s price response to entry will make their investments uneconomic (these assets are typically sunk). This deters entry in the first instance, so that the threat of entry is not real. Moreover, the ability of the incumbent to deny access to the existing ‘bottleneck’ network (and its customers) can also effectively counter this threat of entry, and monopoly profits can be made.

¹⁷ It is sometimes argued that this rent may be dissipated by rent-seeking (Tirole 1988, p. 76ff). Incumbents, input suppliers or possible entrants may spend significant resources wastefully trying to maintain or acquire the rents. The risk of such rent seeking is higher when firms are attempting to acquire a statutory (or some other regulation-given) monopoly. Intuitively, it is also lower if some characteristic of demand or supply provides a readily defensible position to the incumbent. They simply do not need to engage in much resource use to defend their rents, and potential competitors faced with too high a set of resource costs do not enter the race. In the case of the natural monopoly elements of a telecommunications network, the risk of irreversible fixed costs and lack of interconnection to the incumbent’s network would deter entry. It is possible,

discrimination (between peak and off-peak and between customer and service type) and multi-part tariffs (where the price charged has both a fixed rental fee and a set of usage based charges).

If governments wished to foster the benefits of price discrimination on economic efficiency, while remedying the distributional impacts of monopolistic pricing, they could, in theory, implement a mechanism such as franchise bidding (Viscusi et al. 1996, p. 413ff). Moreover, such an arrangement has the advantage of maintaining the private unregulated natural monopoly's incentives to minimise costs, since any cost reduction is appropriated by the firm.¹⁸

In contrast, regulated pricing faces many quandaries in trying to reconcile the efficient use of existing network capacity and the recovery of the fixed costs of the network (chapter 11). For example, rate of return regulations or the now more common price caps (CPI-x), inevitably involve some long-run disincentives to minimise costs fully or provide incentives for lowering quality. Public ownership as an alternative to regulation (which could be a way of acquiring the monopoly rents and re-distributing them appropriately) invokes the risk of weakened incentives for cost minimisation, a conservative bias in risk-taking and politicisation of corporate decision-making. Other regulatory interventions, such as mandated access to the local network, can also affect efficiency adversely by either permitting inefficient bypass or providing insufficient incentives for the incumbent to invest. Thus, when assessing monopolistic pricing and its effects on efficiency, it is important to note that the benchmark is not marginal cost pricing, but a pricing structure that allows the recovery of fixed costs.

There are also doubts about the durability of monopoly. An efficient response may be to endure some temporary welfare losses and let markets and innovation threaten any monopoly power held by the incumbent. Any monopoly profits of an incumbent are attractive to others. So long as the monopoly is not statutorily based, entry will often occur over time as technological innovations undermine whatever is 'natural' in monopoly. As Posner (1999, Part IV) notes:

...natural monopoly conditions are quite likely to be transient. The degree of monopoly power possessed by railroads has declined enormously in the past 40 years. The same period has seen a number of once powerful monopolies disappear or decline, such as ice companies, street railways, and the Western Union Telegraph Company. Communications is a contemporary example of an industry undergoing rapid

however, that input suppliers (say unions) may seek to extract some rents and that this involves resource wastage through overmanning.

¹⁸ Subject to the normal provisos about the divergence between managerial and shareholder incentives for cost minimisation, and the difficulties, given information asymmetries, in shareholders enforcing full cost minimisation (Tirole 1988, pp. 75–76).

technological changes that are apparently opening up a host of new competitive opportunities.

However, the above summary appraisal of unfettered natural monopoly misses six points.

First, in practice, it is unlikely that a private unregulated natural monopoly would be able to price discriminate perfectly, and that the imperfect forms adopted might involve significant efficiency losses¹⁹ (Schmalensee 1981; Tirole 1988 pp. 133ff and Baumol and Sidak 1994, p. 53). A particular concern here is that demand for the most rapidly growing segment of the market (the internet and data services) appears to be highly price elastic compared with local telephone services (Madden et al. 1999, p. 44). A monopolist would want to have price menus for internet use that were considerably cheaper than other telecommunications services. But difficulty in quarantining internet services to areas that do not compete with other telecommunications uses (such as voice) implies that such discriminatory pricing may not be achievable. Another source of potential efficiency loss reflects the fact that many telecommunications services are sold as inputs into other businesses. These may not have the same scope for using multi-part tariffs with their customers as telecommunications carriers or CSPs. Thus a high fixed rental for telecommunications services to a business — notionally an efficient recoupment measure — is reflected in the unit price for the output of that business, affecting the demand for its final output, and therefore its derived demand for telecommunications services.

Second, monopoly also has major distributional consequences that government may be reluctant to accept, but which are hard to ameliorate. This is because franchise bidding arrangements, or other ways of reducing the rent, suffer significant limitations (Small 1999, p. 22 and Viscusi et al 1996, p. 429ff).²⁰ On the other hand, the distributional impacts of a private monopoly are not necessarily regressive. The rent may be distributed widely through diversified share ownership. Moreover, as pointed out by Posner (1999), the distributional consequences are not necessarily different from other circumstances in an economy that are often tolerated (such as when an owner of a scarce natural resource makes large economic rents because of its scarcity²¹). The distributional impacts on some groups may also be offset by the behaviour of the monopolist. The prices for the elastic portion of demand by the poor may sometimes be set at low levels by the monopolist, as

¹⁹ For example, if the monopolist engages in 3rd degree price discrimination in a group of separate markets, each with (different) linear demand functions, then the resulting welfare outcome is worse than if the same price was used in all markets.

²⁰ For example, in the US Cable TV industry, franchise bidding led to very costly rent-seeking.

²¹ Australia does impose resource rent taxes in some contexts.

implied by price discrimination. For example, cinemas offer low ticket prices for people who can demonstrate that they are students, pensioners or unemployed — not out of altruism — but because it makes sound business sense to sell spare capacity to people who would not pay the full price.

Third, the ‘no regulation’ option, while possibly efficient in the absence of any past regulation, may well produce larger efficiency losses if an incumbent has been afforded a long period of protection from competition either through statutory measures or by natural monopoly. Its past domination may provide an incumbent with residual market power (for example, stemming from network effects) that it can use to deter efficient entry. The benefits of entry by lower-cost rivals or entrants offering differentiated products might then be lost (Carter and Wright 1999). However, this may be to some extent mitigated, since the incumbent has incentives to use contracts to acquire from entrants the know-how or technologies that underpin differentiation or lower cost.

Fourth, there may be concerns about x-inefficiency and dynamic efficiency in a monopoly (Shepherd 1998, p. 57). Monopolies may be inefficient, lack innovativeness and produce poor ranges of services. Principal-agent problems between shareholders and managers limit the ability of shareholders to create the right incentives for efficiency, while the threat of takeovers on motivations for profit maximisation may be relatively weak (Tirole 1988, p. 34ff). However, these principal-agent problems are not unique to monopoly firms. As noted by Tirole (1988, p. 47), ‘the effects ... of competitive pressure on managerial incentives have not yet been formulated in a satisfactory way’.²² Notwithstanding the relatively immature state of the economic literature, it seems plausible that the combination of the absence of competition and a heritage of public monopoly would retard efficiency.

Fifth, a monopolist fearing that future technological and demand changes may threaten its current monopoly may use economically inefficient foreclosure strategies to reduce that risk (such as choosing a technology that is less amenable to interconnection, choosing an input mix that is less marginal cost, seeking to deny access to efficient downstream users when those users may develop a capacity to make the future network more contestable and devoting lobbying resources to affect regulations in a way that entrenches its interests).

²² Moreover, other research in evolutionary economics raises doubts about the extent to which monopoly reduces dynamic economies. For example, Nelson and Winter (1982) found dominant firms may accelerate productivity and product innovation through research and development. And clearly, patents and other intellectual property rights establish monopolies in order to create the ex ante incentives for innovation.

Finally, while profit opportunities provide a strong incentive for new entry and innovation, there is no golden rule that technological change will necessarily undermine market power. Mackie-Mason (sub. 25), for example, makes the point that technological change has raised fresh problems for monopoly while not eliminating the old problems. Thus, the local loop still dominates for voice, looks to have a longer life for a range of new uses through xDSL and could still act as a bottleneck for other services, such as long distance phone calls. Mackie-Mason characterises those who consider that technology will sweep away natural monopoly in telecommunications as ‘convergence utopians’. A unique facet of telecommunications, profound network effects, combined with the customer value of bundled services, could, in an unregulated environment, entrench rather than remove market power.

Thus, while its depiction of primitive pricing makes the simple model of monopoly unrealistic, so too is its more sophisticated version, with its assumptions of cost-minimisation and efficient price discrimination. An unregulated telecommunications monopoly, especially one that has experienced a transition from recent statutory protection, is still likely to have significant distributional and efficiency impacts.

Although there are clearly limitations associated with eschewing the regulation of telecommunications, the ‘no regulation’ case remains a useful conceptual benchmark for the assessment of regulatory alternatives. It:

- suggests that the greatest efficiency effects of monopoly are likely to be felt in two areas. First, monopoly, overlaid on the long-term legacy of statutory protection, may have adverse effects on dynamic efficiency by retarding the incentives for cost minimisation, innovation and product variety. Second, inefficiencies may be experienced in markets where price discrimination is not perfect and:
 - the markup is higher than required to cover investment;
 - inefficient forms of price discrimination are employed (such as forms of third degree discrimination that result in output reductions); and
 - especially where consumption is elastic.
- highlights that overall efficiency analysis needs to take account of profits as well as consumer surplus.²³ This then points to the relevance of distributional impacts of different regulatory approaches; and

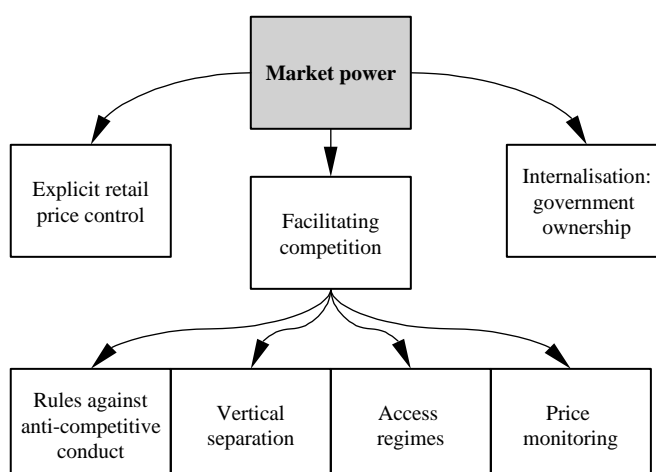
²³ It is notable that the recent review of access policies in New Zealand suggested that the gains from reform (that reduced the market power of the incumbent) to consumers would be around \$328 million annually, while the net efficiency gains were \$44 million annually (Fletcher 2000,

- suggests that the real-world complexity of business behaviour under monopoly conditions means that the gains from intervention may not be as large as some suppose. These gains have to be set against the costs of regulation — which in turn will depend on the regulatory instruments that are applied.

2.3 Regulatory options

Given the continued risk of abuse of market power in telecommunications, there are several broad regulatory options (figure 2.2). These can be broken into three approaches, some of which can be combined. An access regime is only one of the regulatory options. A condition of good regulation is that an instrument is well targeted and superior to alternatives.

Figure 2.2 Instruments for dealing with market power



There are a number of other possible instruments that are not considered in this section. These are franchise bidding for service delivery (used in urban water and sewerage) and auctions for capacity (used for spectrum allocation). These are both forms of competitive tendering. Franchise bidding is most suited to cases where either the infrastructure has not yet been built or government wishes to retain public ownership over infrastructure while encouraging efficiency in its operations and maintenance. It is not relevant to access to existing telecommunications bottleneck facilities — which is the major target of policy. Auctions are a method for determining the price(s) of capacity constrained infrastructure or services — and ensures that all capacity is allocated to the highest value bidders. Although it is economically efficient, it does not reduce monopoly rents if the bottleneck owner

p. 4). The disparity reflects the fact that the biggest gains experienced by consumers represent transfers from shareholders in the incumbent, rather than real additions to national welfare.

holds the rights to the auction proceeds. The Productivity Commission (2001c) analyses these options further.

Controlling market power in telecommunications through explicit retail price control

The principal target of competition policy in telecommunications is market power. A direct instrument to deal with potential excessive final prices is retail price regulation of carriers that exercise such power.

Currently, eight core telecommunications services provided by Telstra to consumers (but not to access seekers) are included in a global price cap, CPI-x, with x set at 7.5 per cent (ACCC 2000a). There is also a suite of sub-caps and other price conditions — which have been recently reviewed by the ACCC (ACCC 2000b, 2001q).

Direct price regulation in telecommunications has a dubious worldwide history, as witnessed by the inefficiencies caused by rate of capital return regulations and sub-caps (imposed on segments of the market). However, new theories of incentive regulation have suggested that global price caps (without sub-caps) may provide good incentives for cost minimisation by telecommunications firms, abate excessive prices, yet allow efficient recovery of common costs through efficient multi-part and discriminatory pricing (Laffont and Tirole 2000). They economise on regulatory transaction costs — requiring fewer time-consuming regulatory processes than the arbitrate/negotiate model used under access regimes. As well, the incumbent has greater incentives to provide access because the gains from withholding access cannot be realised if global caps constrain the downstream prices that can be charged.

On the other hand, Laffont and Tirole (2000) and Armstrong et al. (1994, pp. 165ff) also point out that such caps have their own suite of problems, as has the NCC (2001 p. 26) in an Australian context:

- the prices underlying global price caps need to span a wide range of products, including new products being introduced (as in the dynamic telecommunications industry). An input price cap — over access prices for basic services — may be more simple;
- the fact that x has to be periodically re-determined leaves it open to manipulation. Thus, interest groups may seek to influence its value. Public opinion against big profits or, at the other extreme, the potential demise of an incumbent, suggest that the regulator may find it hard to commit genuinely to a given x. If x is influenced by past profits then global caps no longer have their

fully desirable incentive effects on costs. Global caps may then converge to rate of return regulations, with all their problems;

- price is only one dimension of telecommunications services. If prices are regulated, even under a global cap, the regulated incumbent could have incentives to lower quality, requiring quality monitoring by the regulator. However, most other access regimes raise similar, and probably more pronounced, concerns about quality;
- determining x is difficult in the absence of appropriate benchmarks. While in some utilities, it may be possible to determine x on the basis of performance yardsticks between States, telecommunications is national infrastructure. It may be possible to use international benchmarks, but these involve their own complications (1999a,b and Cribbitt 2000). In the absence of a credible yardstick, the regulators must use some other measure, such as estimated efficient costs, to determine x . This and the fact that they must set the base correctly so as to reduce excess profits makes the method as informationally demanding as setting access prices. Alternatively, adopting a loose approach and setting x for subsequent periods on the basis of past experience will (as noted above) make CPI- x converge on rate of return regulations; and
- whereas an access regime, by its nature, necessarily facilitates entry in the downstream market (with benefits for product differentiation, innovation and competitive pressures), a cap does not necessarily facilitate downstream entry. Indeed, with a global cap in place, an integrated incumbent could employ price squeezes — raising access prices and lowering its retail prices, thus reducing final market competition. However, the incentives for an incumbent to do so are not well understood. If a cap was complemented with measures against predation (such as an ECPR test), such price squeezes could be avoided (Laffont and Tirole 2000, pp. 174ff).

Price caps have been widely used in the UK, with mixed effects:

RPI-X regulation has not evolved in accordance with Littlechild's original vision of clear incentives, a light regulatory burden, and rapidly emerging competition. The scope, toughness and detail of price regulation has all increased and it has been supplemented by new measures of quality regulation (Armstrong et al. 1994, p. 359).

It is unlikely that price caps by themselves will adequately deal with problems of competition in Australian telecommunications. Even so, despite their limitations, global price caps may still have an auxiliary role in the regulation of telecommunications — and they are further explored in the later discussion of access regimes (and in chapter 11 on access pricing).

Internalising the problems — statutory elimination of competition and government ownership of telecommunications facilities

The major rationale for the almost worldwide historical adoption by governments of vertically integrated national telecommunication monopolies with statutory protection from competition, was the belief that the local loop was a natural monopoly (Quiggin 1998 p. 428).

The statutory elimination of competition was based either on the argument that:

- the natural monopoly was unsustainable²⁴ (ie new entrants would have an incentive to enter, even though this would drive up total industry costs to the detriment of consumers); or
- price averaging by a regulated natural monopoly to meet certain social obligations to residential consumers, particularly remote ones, would be undermined by inefficient ‘cream-skimming’ entrants.

Commonly, statutory monopolies were also publicly owned, although in principle a private statutory monopoly could be taxed to give a similar effect. An argument for public ownership of a statutory monopoly is that it potentially overcomes information asymmetries between regulators and privately owned telecommunications firms, and potentially internalises any external effects. Prices can, theoretically, be set in a way that recovers the large common costs of telecommunications efficiently.

Some continue to argue that statutory public monopoly is a sound policy choice. For example, Quiggin (1998) argues that key parts of the telecommunications infrastructure is a natural monopoly and that relinquishment of government ownership and the creation of rival networks, such as the cable roll out by Cable & Wireless Optus, have decreased economic efficiency. Galbi (1999) has noted that the cost of advertising in some segments of liberalised telecommunications markets is higher than investment in facilities in those markets — and that these costs need to be taken into account when assessing the costs and benefits of liberalisation.

In practice, however, public ownership and statutory elimination of competition raise another set of substantial problems. Public ownership involves problems of reduced incentives for internal efficiency, a conservative bias in risk taking,

²⁴ A sustainable natural monopoly means that any new entrant is unable to undercut the incumbent. An unsustainable natural monopoly can occur, even with subadditivity, if at the level of current demand, average costs are rising. A new entrant may enter, supplying a segment of the market at a lower price than the incumbent (Viscusi et al. 1996, pp. 357–8; Baumol et al. 1988, p. 197). However, the assumptions about the pricing behaviour of the incumbent that leads to this result may be unrealistic.

increased exposure to political interference, barriers to capital raising and additional constraints on pricing innovation (for example, less use of multi-part tariffs). And the statutory elimination of competition is either unnecessary if the natural monopoly is sustainable, or likely to lead to excessive prices and regulatory overreach if it is unsustainable.

As pointed out by Baumol et al. (1988, p. 221) where a natural monopoly is unsustainable, the incumbent would not be able to find prices that enable it to earn rents equal to any entry costs and at the same time prevent entry. But the incumbent can still make some rents and preclude entry by lowering prices somewhat. So where there are entry costs,²⁵ the threat of entry (which is only feasible in the absence of its statutory elimination) forces a natural monopolist to lower prices, while not losing the cost advantages bestowed by natural monopoly. By taking away that threat, statutory elimination of entry has adverse efficiency effects.

Another immediate problem is that telecommunications is not just a single product, but a set of services, each with different cost structures. Some of these segments may be grouped as a natural monopoly, others not. It is critical to specify the segment that is being assessed as a potential natural monopoly. Some parts of telecommunications have high sunk costs and low variable costs over the relevant range of demand (such as the local loop in residential and rural areas) which might make the provision of this particular infrastructure a natural monopoly. But other telecommunications services — for example, retail services, microwave technologies and mobile services — tend to have lower sunk costs relative to the variable costs.²⁶ Economies of scope between different telecommunications services also vary. There are economies of scope between pay TV and telephony services on a pay TV cable, but probably fewer economies of scope between distinctly different transmission platforms (such as satellites and cable or wire), between the local loops in different regions or between the local loop and trunk lines.

Therefore, it is unlikely that a single firm would most efficiently provide the full range of telecommunications services and infrastructure. Thus, competition in some segments would be highly desirable. Deciding that telecommunications was a natural monopoly and using this as the basis for statutorily denying entry could lead to bars on all sorts of markets and technologies that fall under the wide umbrella of telecommunications, such as cable TV and satellite services (Maddock 1999, p. 41).

Moreover, even in market segments where natural monopolies might exist, a policy of excluding competition from such segments because of apparent efficiency gains

²⁵ Which are certainly significant in the case of telecommunications.

²⁶ And even though very high prices were paid for spectrum, such costs are not sunk.

may be dynamically inefficient. It deters possible entrants from discovering better and more cost efficient network solutions, or to find new sub-markets where they can operate cost effectively (for example, in CBD business networks). It ignores the possibility that demand might grow sufficiently or technology might change to erode a particular natural monopoly. Protection from competition can also have disincentive effects on technical and allocative efficiency by the statutorily guaranteed telecommunications monopoly.

Arguably there are also better ways of dealing with the need to avoid cream skimming arising from price discrimination than barring competition altogether. First, where cream-skimming incentives arise from price margins created by social regulation, there are arguments to use more efficient social regulations, rather than barring entry. Second, an alternative is to allow access for competitors, but to deter cream skimming by ensuring that any access price incorporates a ‘tax’ component equal to the one implicitly levied by the incumbent in the retail market to meet the needs of the social regulation.

It is unlikely that reinstating a statutory monopoly (public or private) would improve efficiency or equity, and this option is not considered again in this report.

Facilitating competition

The worldwide policy shift in the 1980s and 90s was to regimes that attempted to remove the obstacles to competition, rather than taking monopoly industry structures as given and trying to ameliorate their adverse outcomes. This pro-competitive policy stance was reflected in the Hilmer report (Hilmer 1993), which recommended sweeping changes to the way government utilities should be regulated. There are four strands to such pro-competitive policy, two more recent (vertical separation and access regimes), one with a long heritage (rules against anti-competitive conduct) and one (price monitoring) that might be a lighter handed alternative.

Dealing with natural monopoly through vertical separation

The Commission’s reference requires that the inquiry ‘not encompass the structural separation of Telstra, in line with Government policy on this issue’. The Commission will not, therefore, moot vertical separation as a policy option. It is, however, relevant for exploring the problems posed by access to a vertically integrated incumbent.

By itself, vertical separation is not necessarily a solution to the potential problems of market power associated with natural monopoly. This is because unless regulators impose price controls on access (or retail markets), the vertically separated wholesaler can set access prices that maintain any monopoly rent.

However, in some circumstances vertical separation may play a useful role when applied in *concert* with an access regime, price controls or other regulatory measures. The potential gain arises from the greater problems of *realising* foreclosure incentives for the vertically separated firm.

A vertically integrated carrier has an incentive to avoid the loss of monopoly profits associated with regulated access prices by giving its own downstream arm favourable access relative to other CSPs and carriers competing in the downstream market.²⁷ This strategy is sustainable the harder it is to monitor favouritism and to distinguish appropriate from inappropriate discrimination.²⁸ Effective regulatory monitoring can be difficult. In the US, for example, the Justice Department and AT&T tried to negotiate a settlement without divestiture that dealt with these monitoring problems — but the decree, known popularly as Quagmire II or the Telephone Book decree, was seen as impossibly complicated (Kahn 1996a, p. 171).

A vertically separated owner of the bottleneck subject to an access regime *also* may seek to form a collusive relationship with one or some partners and deny access to all other downstream users. The excess profits earned by this strategy could then be shared among the cooperating parties. However, unlike the vertically integrated case, there are two circumstances in which this foreclosure strategy will be hard to sustain.²⁹

²⁷ Under some circumstances, a vertically integrated incumbent, subject to regulation, may prefer to share monopoly rents with a downstream competitor rather than give them away altogether. The extent to which this will be true will depend on the exact nature of the regulatory regime. It may be, for example, that access arrangements with competitors are not scrutinised closely for potential collusion, while anti-competitive actions intended to advantage the downstream division of the integrated incumbent are strongly policed.

²⁸ Chapter 11 notes that were discrimination only permitted where it was based on end-user characteristics, then foreclosure would be harder to achieve.

²⁹ There is a third reason, but it is much weaker. There is probably a somewhat greater likelihood that collusive arrangements can be detected and punished through anti-competitive provisions of the TPA (Part IV) than favouritism shown to the downstream arm of a vertically integrated firm. Against this, the likely way in which such collusion would be achieved under an access regime would be through the preferential allocation of capacity to the colluding downstream firm. Such capacity-based collusion is very hard to distinguish from normal commercial practice — and so the prospect of a successful action, while perhaps better than in the vertically integrated case, might not be that great.

First, if the regulator imposes an access price cap on the vertically separated firm, then this constrains monopoly rents. That implies that there are few gains in collusive arrangements with downstream parties — since the upstream party cannot earn significant rents.³⁰ The joint application of vertical separation and some sort of access price cap on the vertically separated wholesaler would have the advantage of allowing much more flexible pricing, including multi-part tariffs. The ACCC (2000d, p. 83) has supported the use of such caps in cases where an industry is vertically separated. As noted previously, global caps can be applied to vertically integrated firms too. But their application is more complicated because there are more downstream services to be included in the cap and because some predatory incentives are likely to persist. Accordingly, price caps that allow more light-handed regulation are more feasible when the bottleneck facility is vertically separated.

Second, if there are no binding capacity constraints on the bottleneck facility then any collusive arrangements between a vertically separated bottleneck owner and a downstream firm can be undermined by other downstream firms that use the access regime. Under Part XIC (and Part IIIA) access providers and seekers can commercially negotiate access arrangements outside arbitration, and indeed, are encouraged to do so. Say that A was a vertically separated provider of bottleneck telecommunications facilities and reached a commercially negotiated deal with B, a downstream service provider. For A to reach a collusive deal with B, it must receive a sufficiently greater revenue through higher prices for access to the telecommunications bottleneck than it would from providing it to all potential access seekers. For B to pay this higher price, it must be assured that others will be unable to gain access at any lower price through arbitration, so allowing it to dominate in the downstream market. With access open to all parties, this will typically only be true if B is able to secure access to most of the capacity of the bottleneck.³¹

However, because the most important telecommunications bottlenecks are not highly traffic sensitive, other service providers would be able to use arbitration arrangements under the access regime to gain access to any needed capacity at lower prices than B, undermining the collusive strategy. Accordingly, while collusive behaviour may be a problem for some vertically separated bottleneck facilities subject to access regimes, it is less likely in telecommunications subject to

³⁰ While the price cap is likely to constrain collusive behaviour, it may not entirely eliminate it. For example, a downstream firm may be given favourable access in return for some other benefit paid in a way that circumscribes the price cap (such as a contribution to some expense item).

³¹ The TPA explicitly allows commercial arrangements priority for capacity over access determinations. Thus, under s. 152CQ of Part XIC, the ACCC must not make a determination that would prevent a service provider that already has access from obtaining a sufficient amount of the service.

such a regime.³² Collusive relations between upstream and downstream services do not appear to have arisen in the US, where the RBOCs (regional Bell operating companies) were for some time not permitted to offer long distance services or to manufacture telecommunications equipment (Kahn 1996a).

If the costs from trying to achieve collusive arrangements exceed the benefits, the vertically separated telecommunications carrier has incentives to treat all parties equally. In this case, an access regime dealing with the vertically separated carrier can concentrate on limiting the monopoly component of access prices, with a reduced need to combat other anti-competitive conduct. This can make it easier for the regulator to allow price discrimination and multi-part pricing — with its efficiencies — without being concerned that these are vehicles for anti-competitive intent.

Any gains from simplifying the access regime by implementing vertical separation have to be offset against the direct efficiency losses, such as lost economies of scope. Some studies have found evidence that statutory divestiture, as practised in the US, had adverse effects on overall competition, labour productivity, technology deployment and quality (Ware et al. 2000, p. 45). The Commission has not assessed the net gains (or losses) from vertical separation of Telstra, as it is excluded by the terms of reference.

Moreover, telecommunications carriers have far more complex production structures than suggested by the simple upstream/downstream story, which then raises the question of where the points of separation should occur. For example, ISDN and services based on the ULL can both be used for transmission of data, and revenue from providing access to one may erode revenues from providing access to the other. This can create foreclosure incentives, even if the firm is only selling access services.

The insights from above are that effective controls over a vertically integrated carrier will need to deal with the incentives for discriminatory dealing and how these are obscured by a lack of transparency in the accounts of the carrier. Accounting separation may offer a partial solution — an issue considered next (and in chapters 6 and 10).

Accounting separation

A seemingly related approach to vertical separation is accounting separation, in which the wholesale (facility-owning) and retail arms of the vertically integrated

³² One exception may be existing cable and satellite TV facilities. These have limited capacity for channels, so that there is scope for collusive arrangements that tie up capacity.

firm must provide separate accounts, though the firm remains intact. It is typically combined with the requirement that the wholesale arm treats the incumbent's retail arm and other rivals on a non-discriminatory basis for similar access agreements. Telstra has proposed just such a measure.

Such separation is a hybrid of vertical separation and integration. It may preserve some of the possible economies of scope of vertical integration, but it also preserves some of the incentives of the incumbent to disadvantage rivals. For example:

- it may be hard for an entrant to determine whether, for a given notionally non-discriminatory price, it gets exactly the same set and/or quality of services as the incumbent's retail arm; and
- there is an incentive to shift costs that belong to any other part of the business to the wholesale arm.

It also raises practical difficulties about how to handle common costs that cannot be attributed to any arm of the business (such as head office overheads).

Even so, accounting separation may, depending on the construction of the accounts, help to make transparent where foreclosure and monopoly pricing is occurring. Such transparency, by reducing the asymmetry of information, may facilitate negotiation by access seekers (and arbitration by regulators). When it is combined with other measures — such as global price caps and non-discrimination clauses, it becomes an alternative to standard access regimes — an option that is examined further in chapter 8.

Dealing with a telecommunications natural monopoly through an access regime

An access regime is a set of regulatory arrangements governing the rules by which one party is obliged to provide its services to other parties, even if it does not wish to do so. Access arrangements in telecommunications are governed by Part XIC of the TPA and are examined in detail in chapters 7 to 11.

Access per se is not the central concern of an access regime because the owner of a bottleneck facility could always bar access by setting prohibitive terms and conditions. Thus, access regimes both provide for access and determine 'reasonable' access terms and conditions. The regime then relies on competition between access seekers (and the downstream arm of a vertically integrated access provider) to generate competitive prices in downstream markets.

It may also provide other benefits of competition such as stronger incentives for innovation and cost minimisation (and possibly wider social and political benefits in

diluting concentrated power).³³ In contrast, global price caps may cut monopoly profits but they do not necessarily facilitate competitive entry — with its accompanying benefits.

While access regimes cast a wide net in terms of the business behaviours they monitor, they can also target particular facilities or services where lack of competition is a problem. This is because access regimes are driven by complaints, followed by market assessment by the regulator. Global price caps, in contrast, may cover all activities of the incumbent.

On the other hand, access regimes have a number of deficiencies:

- access price determination is very complicated — as witnessed by the elaborate network models and cost of capital calculations that underpin them (chapter 11 and appendix D);
- existing access arrangements — whether through Part XIC or its more generic counterpart Part IIIA — involve complex, protracted arrangements of declaration, negotiation and arbitration. These have relatively high transaction costs. Currently, arbitration decisions are typically made on a complaint by complaint basis (witnessed by the multiple arbitrations currently before the ACCC — chapter 7), whereas access determinations are conducted service by service. It is also deemed important to have ‘due process’ to defend the property rights of the access provider. This further complicates and draws out regulatory processes, with legalism and multi-level appeal processes;
- where access providers are forced to provide their facilities at prices lower than monopoly prices, they have incentives to frustrate access. These incentive problems with access regimes require that the regulator review aspects of business conduct that are much more complicated than price (or even quality) alone (such as fault rectification procedures, customer poaching, building artificial capacity constraints in towers, customer lock-in behaviour and divulgence of network plans). These are areas where the differences between normal commercial behaviour and anti-competitive behaviour can be very subtle. Accordingly, an access regime may have to specify certain standard access obligations and/or resort to anti-competitive conduct rules to control the incumbent’s foreclosure incentives;
- it is harder for a regulator to implement efficient multi-part tariffs and price discrimination under an access regime for a vertically integrated incumbent; and

³³ Or other aspects of the service, such as improved quality or increased variety. These too can be conceptualised as ‘price’ effects, since their effect is equivalent to the imposition of a set of lower prices (so-called ‘shadow’ prices).

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- appropriate access pricing is complex if there are barriers to competitive entry into the downstream market (Laffont and Tirole 2000, pp. 125ff).

It may be thought that retail price controls and an access regime were substitutes, and so should not be used together (as they are in Australia and many other countries). However, the application of retail price controls with an access regime may reduce foreclosure incentives. By tackling the market power of the incumbent in the final market, retail price controls would also stop entrants from exploiting any market power they could wield (for example due to sunk costs associated with entry into the downstream market). Thus, there is a possible basis for their joint application.

In fact, where a global price cap and an access regime are *coordinated* as complements, the way in which access prices are determined (the most complex and time-consuming feature of an orthodox access regime) is altered. In certain circumstances, all the regulator need do is observe the incumbent's own downstream prices that prevail under the cap, and set access prices equal to that final market price, less the opportunity costs for the incumbent from providing access. This is the motivation underlying the Efficient Component Pricing Rule (ECPR) of Baumol and Willig, and more explicitly the modified-ECPR (M-ECPR) described by Sidak and Spulber (1998) — explored further in chapter 11.

The potential attraction of the ECPR/price cap approach is that it allows more pricing flexibility by the incumbent and less oversight by the regulator — a more light-handed approach. However, even here, the in-principle simplicity of the ECPR vanishes on closer inspection (chapter 11). This problem re-introduces the need for detailed regulatory scrutiny and cost calculations. This suggests that the prospect for light-handed regulation of utilities characterised by complex heterogeneous services, such as telecommunications, is likely to be very difficult.

Laws against anti-competitive conduct

A direct and long-used method for removing obstacles to competition is to bar conduct by an incumbent that is anti-competitive in nature. Anti-competitive conduct occurs when an incumbent defends its ability to enjoy long-run excess profits by creating barriers to entry for rivals through its use of market power. Such conduct includes refusals to supply — and so can, in theory, encompass problems of access. Several participants in the Productivity Commission's parallel inquiry into Part IIIA suggested that s. 46 of the TPA would be adequate for dealing with access disputes generally. However, Hilmer (1993), the Productivity Commission (2001c) and others have questioned the feasibility of using s. 46 to deal effectively with

access issues relating to essential infrastructure services. The main obstacles to its effective use are that:

- access would only be available when the plaintiff could establish that the facility owner had denied access for a proscribed purpose;
- court-based decisions are difficult to generalise, which makes s. 46 less useful for multiple requests for access by different parties;³⁴
- court-based decisions are often slow, which would limit the usefulness of s. 46 for telecommunications where technology and demand is changing rapidly;
- the transaction costs of pursuing action under s. 46 may be a barrier to such actions by smaller players; and
- it would be hard to deal with situations in which access was provided but at inefficient prices.³⁵

Overall, the Commission's view is that anti-competitive conduct rules of s. 46 of the TPA are not, by themselves, well suited to making access to telecommunications bottleneck facilities available in a timely and efficient fashion and in determining efficient access prices.

Paradoxically, the anti-competitive conduct that regulations, like Part XIB, try to overcome is often the consequence of other pro-competitive regulations. Thus, access regulations for telecommunications aimed at facilitating competition provide incentives for defensive anti-competitive behaviour. For example, if an incumbent is required by regulation to provide access to its local loop or mobile facilities to another party, it could reduce the adverse impacts of such new entry by:

- delaying interconnection or trying to reduce the quality of access;
- building some core facilities at lower capacity than otherwise (for example, smaller exchanges that have less scope for rivals' switching and multiplex equipment and smaller towers for their transmission equipment);
- change network configurations, technology or standards in ways that rivals will find more difficult to access;
- trying to collude on prices;
- targeting the high value customers of the new entrant;

³⁴ However, Yarrow (2000, p. 2) has noted that conduct remedies under competition law can become ex ante constraints in later periods.

³⁵ For example, the Productivity Commission (2001c) notes a decision by the Federal Court that indicated that s. 46 does not strike at monopolists or those in a monopolistic position.

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- cutting prices in the final market so that entry is not profitable for an entrant without a deep pocket;
 - increasing switching costs for existing customers, so that few migrate to the new entrant.

The interaction of policy measures intended to increase competition and those aimed at proscribing the misuse of market power have two implications. On the one hand, they are complementary in that the first without the second may be a relatively weak instrument. On the other hand, an incumbent with market power may seek every avenue to maintain that market power, with the consequence that effectively abating market power may involve complex tiers of regulation. Since this complexity introduces its own costs, it may in some cases alter the balance between intervening or not in the first place to deal with that market power.

Price monitoring

The above instruments all grant the regulator powers to compel a carrier to change its behaviour in some way. Price monitoring may be a useful and lighter handed alternative in some cases. Under price monitoring, the regulator examines price and cost data in the relevant market to assess whether prices are excessive. Mere public disclosure can reduce some pressures for exploitation of any residual market power, while the potential threat of further action may also constrain prices.

Price monitoring is most suited to cases where there is some evidence of market power, but not enough to warrant intrusive regulation such as an access regime or explicit price controls. The possible role of price monitoring is discussed in greater length in chapter 9 and the Commission's inquiry into the Price Surveillance Act (Productivity Commission 2001d).

Comparing the key instruments

Price controls are often seen as prescriptive heavy-handed regulations compared with other policies, such as access regimes and vertical separation, which seek to foster competition. In practice, the differences have often been more cosmetic than real. Access regimes, public ownership and vertical separation are measures that pre-suppose tacit price controls at some level.

For example, access regimes are rarely concerned with refusal to grant access per se, but rather about the terms and conditions of access — price being the most

important.³⁶ The regulator effectively sets a ceiling on that price by rejecting an undertaking or signalling that it will arbitrate on price if no commercial agreement is reached. Arbitrated prices are regulated prices.

Similarly, vertical separation will only be useful as a tool for dealing with the problems posed by bottleneck facilities if the prices of the facility owner are subject to price regulation.

Moreover, none of the instruments are perfect and all involve complexities in administration that tend to spawn additional regulations. Most have large information requirements and require substantial regulatory resources. All are prone to some gaming by participants. However, there are still important differences between these instruments (table 2.1).

Table 2.1 Comparing key instruments for dealing with market power^a

	<i>Vertical separation</i>	<i>Global retail price caps</i>	<i>Access regime</i>	<i>Rules against anti-competitive conduct</i>
Weakens incentives for trying to tacitly deny access (eg 'losing' the keys to the exchange)	Moderate	Sometimes	No	No
Deals with explicit anti-competitive conduct	No	No	Sometimes	Yes
Information requirements for regulators	Low	High	High	High
Regulatory transactions costs	High initially then low	Low	High	High
Significantly reduces 'excess' profits	No for upstream segment; Yes for downstream segment	Yes	Yes	Uncertain
Degree of targeting of services	High	Low	Moderate	High
Allows multi-part tariffs and price discrimination	Yes	Yes	Sometimes	Uncertain
Facilitates downstream entry	Yes	Maybe	Yes	Yes
Speed of processes	High	High	Uncertain	Low

^a The ratings are generalisations. There will be circumstances in which the rating could change for particular configurations of an instrument. For example, if sub-caps are applied, then retail price caps can be very highly targeted. Price monitoring is not included in the table or the discussion since it applies in circumstances where the degree of suspected market power is weak. Also, various instruments can be combined and have different ratings when combined than by themselves.

³⁶ It is possible to have more light-handed access regimes that do not regulate price in this manner. For example, Yarrow (2000, p. 29) argues that regulatory determination of prices should be restricted to cases of pure incumbent monopolies and in other contexts the only ex ante access obligation would be that the terms of use of facilities should not be discriminatory between an infrastructure provider's own content/service businesses and other businesses.

The differences affect the effectiveness and efficiency of the instruments, but they also suggest that the regulator may have to apply some of the instruments jointly to deal effectively with market power in telecommunications.

2.4 Two critical concepts: markets and convergence

Defining the market

The TPA sets out several market definitions, of which some describe markets in terms of substitution possibilities and others — as in s. 151AF — do so in industry terms (box 2.4).

Box 2.4 What the TPA and ACCC say about market definitions in telecommunications

Section 4E of the TPA broadly defines a market in terms of substitutes:

For the purposes of this Act ... market means a market in Australia and, when used in relation to any goods or services, includes a market for those goods or services and other goods or services that are substitutable for, or otherwise competitive with, the first-mentioned goods or services.

Section 151AF of the TPA says that:

a “telecommunications market” is a market in which any of the following goods or services are supplied or acquired: (a) carriage services; (b) goods or services for use in connection with a carriage service; (c) access to facilities.

The ACCC (1999a) argues that:

Market definition is fundamental to the assessment of alleged anti-competitive conduct ... Too broad a market definition may underestimate the market power of the carrier or carriage service provider at issue. At the other extreme, too narrow a definition may result in an assessed likelihood of an anti-competitive outcome greater than that which is really the case ... Substitutability plays a key role in market definition. Where two products are regarded as closely substitutable, they are regarded as being in the same market. Hence, in order to establish the relevant market, the [ACCC] is concerned to establish the actual and potential sources of close substitutes for the good or service in question ... the process of market definition can be viewed as establishing the smallest area of product, functional or geographic space within which a hypothetical current and future profit maximising monopolist would impose a small but significant and non-transitory increase in price (SSNIP) above the competitive level (pp. 28–29).

Sources: TPA and the ACCC 1999a.

The definition of the market is important in competition regulation because it determines the scope of the regulation and it also affects the likelihood that regulations will apply or not. In Australian trade practices law, market definition is

the first step for assessment of market power (Brunt 1994, p. 44). As Yarrow (1998, 2000) notes, the definition of markets is highly problematic in practice and that while legally clear definitions are easy to establish, appropriate definitions are not. Market definition is only a stepping stone to the important question of whether a firm is able to exercise significant market power. Whether that is possible will depend on the degree of competitive pressure on firms arising from the *cumulative* effect of a whole range of substitution possibilities (such as demand for substitutes and potential or actual entry from other firms).

In the case of telecommunications, there are a number of dimensions to the market. There are *alternative delivery platforms* for telecommunications services (the copper wire network, coaxial and fibre optic cable, terrestrial microwave, satellite and other spectrum-based platforms). Because the telecommunications network is a network of networks, it is often misleading to see these as substitute technologies, though they may be so at the consumption end. For example, fixed to mobile and mobile to fixed calls use the local wire network.

The *geographical* aspects of infrastructure vary. The telecommunications equipment market is global, so that a telecommunications carrier that dominated a small country would have little capacity to influence equipment prices. However, for consumers the geographical concept of a market has more nuances.

First, if there are many national telephony providers (or, similarly, cable-TV providers), but only one in the local market, that single player may have substantial market power because there are no other suppliers providing a substitute service at a competitive price. This can lead to monopoly pricing at the local level.³⁷ Moreover, non-cooperatively determined termination charges for telecommunications services between two such network operators will generate more inefficient prices than an integrated monopolist (Laffont et al. 2000, pp. 184ff). This is because of double marginalisation — each operator adds a monopoly markup on marginal cost, which includes a monopoly markup on termination charges. If the market were defined as the aggregation of all these local services, then it would fail to be declared (it is not a national natural monopoly and the local networks have interconnected) — with adverse efficiency consequences.

Second, it is likely that lack of substitute infrastructure — in the whole range of telecommunications services — may persist for longer in non-metropolitan areas, with impacts on competition (sub. 36, p. 4; Ovum 1999, p. 10 and chapter 16).

Third, consumers value being able to ring any other person connected to the network (any-to-any connectivity). Even if prices are competitively set almost

³⁷ This situation roughly captures the US cable TV industry.

everywhere throughout Australia, it may still be of concern to a Sydney resident if the price of phone calls to another city is high because of a monopoly player in that market. So, monopoly in a local market not only affects the people in that location, but also others who wish to make calls to that location.

Telecommunications infrastructure is a platform for a *diversity of services and content*. These include entertainment services (video-on-demand and cable TV), internet services, fixed and mobile telephony, and video-conferencing. Some of these services may have substitutes that do not use the infrastructure (videos substituting for video-on-demand and movies on cable TV, free-to-air broadcasting substituting for cable TV). Others have weaker substitutes (the internet and telephone). Accordingly, it is appropriate to regulate access to services in defined markets not facilities (chapter 9), since otherwise workably competitive services will be caught up by regulation.

However, even when this approach is used, there remains a degree of inherent ambiguity in defining markets. This is exemplified by the ACCC's declaration of analogue subscription pay TV services in 1999. Among other reasons given, the ACCC claims that videos are not a substitute for pay TV because people have to go out to get them, and that free-to-air TV is not a substitute because it is paid for by advertiser's revenue rather than by subscription (1999h, pp. 24–25). Neither of these reasons substantiates the capacity of analogue pay TV services to extract rents because of the absence of substitutes. As Yarrow (1998) emphasises, the effect of many more distant substitution possibilities is equivalent to the effect of a few close substitutes. So, if a regulator crosses off all weaker substitution possibilities, the relevant market is always at risk of being defined too narrowly with the risk of regulatory overreach. The Commission examines the likely degree of market power in pay TV services in more detail in chapter 17.

Moreover, markets are not static, so that close substitutes may emerge or disappear in time. This makes it important to examine changing technologies and preferences. For example, the ACCC declared analogue subscription pay TV services, rather than technologically neutral pay TV services, because alternatives were not well developed at the time (ACCC 1999h, p. 9). Little, Ralph and Wong (1999) question this declaration because, with the advent of convergence, many other delivery platforms for substitute services are becoming available. Convergence is a general phenomenon with large possible influences on markets and competition. It is examined next.

Convergence

‘Convergence’ is a vague term with multiple meanings, but it has two main implications for telecommunications. First, different network platforms can now carry similar services.³⁸ For example, pay TV networks³⁹ and the copper-based local loop now carry both internet and telephone services, as can, to an extent, both mobile and satellite services.

Second, convergence will change the characteristics of the networks so that the range and nature of the services it can provide will increase significantly — offering the potential for economies of scope and scale that will not be dependent on traditional telecommunications services.⁴⁰ Growth in digital traffic is eclipsing traditional fixed line voice traffic (Mutooni and Tennenhouse 1997). The distinction between broadcasting and telecommunications is blurring:

The traditional dichotomy between telecommunications and broadcasting is becoming irrelevant with convergence of media and media interests, and the partnering of "conduit and content" means that companies with the capacity to deliver content will emerge as new media leaders (iiNet sub. 5, p. 1).

There are several, sometimes contradictory, claims about the implications of convergence for telecommunications competition regulation. Many participants in this inquiry claimed that there was a potential for convergence to exacerbate market power in telecommunications.⁴¹ The main arguments are:

- that there is scope for vertical and horizontal integration across platforms, services and content, combined with potential dominance in related products and services (for example, standards such as MP3, interfaces such as Windows OS, applications and navigation software such as Internet Explorer, and information such as customer information databases) may lead to increased market power in a converging world.⁴² Mackie-Mason views the dominance of AOL-Time

³⁸ It has been examined in detail as part of the Commission’s inquiry into broadcasting (PC 2000, pp. 105–123).

³⁹ For example, see Woroch 1996.

⁴⁰ Forecasts suggest that telephony will diminish as the major revenue source of the network to be replaced by other information flows, such as internet, broadcasting, datacasting and video-on-demand. For example, Madden et al.(1999, p. 3) forecast that by June 2004 internet use in Australia will use 51.2 per cent of the peak bandwidth of the telecommunications network compared with 3.2 per cent in June 1999.

⁴¹ For example, ACCC sub. 16, p. 7; SETEL sub. 33. p. 5; Macquarie Corporate Telecommunications sub. 44, p. 5; Australian Consumers Association sub. DR89; Cable & Wireless Optus sub. 8, p. 9 and sub. 63, p. 7; Caves sub. 25, p. 12; Mackie-Mason sub. 25, p. 4; Davnet sub. 13, pt. 2, p. 3.

⁴² Bauer and Wilsey 1997, pp. 5ff; Cowie and Marsden 1998, p. 4.

Warner in the US in the platform, distribution and content markets (sub. 25, p. 24) as an illustration of how convergence may increase market power.

- there is a particular concern that telecommunications incumbents that are vertically integrated into content may use their exclusive ownership of premium content to deter entry into telecommunications (ACCC sub. 16, p. 61; Caves sub. 25, p. 12; Austar sub. 60 and AAPT sub. 58, p. 16). This is particularly relevant to the feasibility of new broadband networks that offer pay TV and telecommunications services (chapter 17);
- US evidence suggests that consumer switching costs from moving from one broadband platform to another can be very high, which may entrench market power once it has been obtained (Bar et al. 2000);
- the market power of the incumbent may be preserved because they may own the key bottlenecks and control interconnection to these bottlenecks during any period of transition (Cable & Wireless Optus sub. 8, p. 9, PowerTel sub. 35, p. 9 and AAPT sub. 41, p. 36). The main bottleneck — the legacy copper wire loop — has had its life extended through technological change, extending the period of its relevance in a convergent world;⁴³ and
- any-to-any connectivity is now embracing more services (such as email to fax, email to pager, voicemail to email), thus increasing the potential significance of network effects (Caves sub. 25, p. 15).

However, others claimed that convergence *reduces* market power in traditional telecommunications networks, because other platforms or methods can now provide the services at competitive prices (IPA sub. 20, p. 5 and sub. 29, p. 2; Telstra sub. 38, p. 3, Page and Lopartka 1997). Telstra maintained that:

... the process of convergence will increasingly reduce the need for regulation of the local loop, and strengthen the case for ongoing regulatory forbearance (sub. 38, p. 3)

For example, lower costs and expanding coverage suggest that mobile and fixed telephony networks are becoming more substitutable. While most mobile calls currently terminate on the fixed network, that may change. Maddock (1999, p. 40) notes that in India the costs per connection of wired local services are around 66 per cent greater than on a cellular telephone system.

⁴³ Innovation, such as better data compression, has improved the capacity of the 'legacy' copper wire network. More generally, the equipment that is used for telecommunications delivery platforms — such as fibre optic cable, switches, multiplexers — is subject to something akin to Moore's law in computing. The capacity of fibre optic cables has been doubling every three years on average since 1983 (Madden et al. 1999, p. 11).

The internet may also play an increasingly important role in increasing competition and reducing prices. The internet is a generic technology that can be used for a range of purposes, such as long and short distance telephone calls, email, fax, data transmission, webTV and video services. Another unique aspect of the internet is that because it uses packet switching, the network infrastructure owner cannot know the use to which the net is being put and so cannot set different prices for long distance, local calls and other telecommunications services (Economides 1998).

Convergence may also intensify competition by bringing new players into the telecommunications market. A new set of informed and powerful parties, such as datacasters, broadcasters, ISPs and electricity companies, have interests in telecommunications networks. Access to the power poles of an electricity supplier (TransACT in the ACT using ACTEW poles) or the trenches of a gas supplier (Smart Radio Systems in Cooma using AGL trenches) may allow the lower cost construction of a rival network.

To the extent that convergence undermines enduring market power, then it justifies regulatory withdrawal from some services, and, as more services are delivered by the same platforms, the grounds for competition regulations *specific* to telecommunications may also be weakened.

The rapidly progressing convergence of telecommunications and computing, as well as voice, data, and video transmission services is posing a severe challenge to traditional industry-specific regulatory regimes that are based on traditional notions of how services and service providers ought to be identified and regulated. As industry boundaries blur, general competition rules become both more necessary and better-suited to deal with current *and* prospective risks that might arise (Ordoover sub. 43, p. 5).

Convergence may also aggravate regulatory risk if, for example, the regulator ignores the effect of convergence in weakening market power, and maintains regulatory control over incumbents for too long (Telstra sub. 38, p. 12). The profits expropriated by regulation might be, in reality, the rewards for innovation and early investment in new technologies.

Such regulatory risks may also arise if regulations in convergent sectors, such as broadcasting and telecommunications, are inconsistent or incompatible (Queensland Government sub. 39, p. 7; Budde sub. 3, p. 2).⁴⁴ The risk of market power in

⁴⁴ In some instances, restrictions on competition in other areas of the economy may have surprising effects in telecommunications markets. The current policy approach to spectrum-based broadcasting entrenches a limited number of TV channels and broadcasters. These restrictions are likely to increase the economic viability of cable-TV networks, which also have the capacity to provide telecommunications services. Thus, restrictions in broadcasting may intensify

broadband and other emerging telecommunications markets may be exacerbated by statutory barriers that prevent some platforms from contributing to competition. For example, anti-siphoning rules in broadcasting reduce the capacity of pay TV operators to compete against free-to-air television, lowering the incentives for rolling out pay TV infrastructure (or digitalising analogue cable) that can also provide significant broadband capability (chapter 17). In the US, cable TV platforms are the biggest source of broadband internet services (Bar et al. 2000). Digitalised television could also act as a competing telecommunications platform. However, the existing Australian policy framework for digital broadcasting has seen existing licensees acquire privileged access to spectrum, a bar on new entry and the mandating of a picture quality so high that much of the spectrum freed by digitalisation is eaten up by existing channels (Productivity Commission 2000, pp. 221ff). A source of competition — for bandwidth services and pay TV — has effectively vanished under this regulatory environment (chapter 17).

The implication of the regulatory inconsistencies raised by convergence is that regulatory decisions across formerly divergent sectors, such as broadcasting, information technology and telecommunications, might appropriately be bundled and overseen by a single regulator. For example, such a regulator has been recently proposed for the UK, and is already operational in some other countries (chapter 10). Convergence has also increased the importance of the regulator embracing technological neutrality so as to avoid prescribing any particular platform for any particular service (AAPT sub.7, p. 19 and Productivity Commission 2000).

A final regulatory challenge raised by convergence is merger policy. As Kahn (1996a, p. 164) warns, it is possible that current incumbents seek to reduce future sources of competition by merging with firms that have capabilities in platforms that may provide future competition. Kahn suggested that merger policy would need to recognise how markets are likely to evolve, not just their current structure, when approving or challenging mergers.

In summary, convergence has ambiguous effects on regulation and regulatory institutions. At this stage, it is premature to conclude whether convergence will decrease or increase market power of the current incumbents in telecommunications. There are forces that tug both ways, as both the ACCC (sub. 16, pp. 61ff) and Caves (sub. 25, p. 12) have noted.

Moreover, the pace at which convergence occurs remains uncertain. In 1996, in the Economic Report of the President, Alfred Kahn suggested that the ‘blistering pace

competition in telecommunications (assuming that the cable-TV network is not dominated by the incumbent telecommunications bottleneck owner).

of technological change' in telecommunications offered the scope for competition to the fixed wire loop from fibre-optics to the home, wireless local loops and widespread cable TV telephony in the US (Kahn 1996a, p. 159). While Kahn's forecasts may well still materialise, they had not done so to any great extent by 2001. In Australia, the full impact of convergence is likely to still be some years away given the so far weak take-up of cable-TV and high broadband services by residential consumers (Consumers' Telecommunications Network sub. 17, p. 4).

2.5 The risks of regulatory failure

Regulatory interventions are not costless — a point made by several participants (for example, IPA sub. 20, p. 3). Apart from their obvious compliance costs, they can also produce their own set of inefficiencies because they involve the use of imperfect instruments by regulators, devised under circumstances of asymmetric information and uncertainty. They impose rules on markets that can 'have chilling effects on entrepreneurship and innovation' (Yarrow 2000, p. 3).

Further, regulators may be captured by various interests and have objectives of their own. Sidak and Spulber (1998, p. 29) argue that regulators, like the businesses they regulate, are not angels, but can make errors and behave opportunistically and partially. And unlike the businesses being regulated, a regulator or competition body has more complex governance arrangements, and objective measurement of its success is difficult.

Costs of regulatory compliance

Effective competition policy is not easy, especially in industries like telecommunications that have rapidly changing complex technologies and dramatically increasing demand. Small (1999) characterises regulatory activity as a technology that is almost more daunting than the one being regulated:

...regulation of an industry is not a "contestable" activity; the "entry" process is not fast, cheap or costlessly reversible. Regulators need to make significant investments of time and effort in understanding the industry and in designing the regulatory tools and methods that will achieve its goals. (Regulation and Competition Law for Networks in New Zealand, p. 9)

This is mirrored in complex layers of regulation and procedure. For example, the access regime under Part XIC involves a multiplicity of steps that take years to work through in many access cases. This involves administration and compliance costs by regulators and firms, which impose direct (such as staff employed) and indirect (such as the cost of waiting for decisions) resource costs. As testimony to

the resources involved, Telstra has been cited as the biggest consumer of legal services in Australia (Wood 1999). However, regulators' costs appear to have been relatively modest (appendix I).

Second-best instruments

Competition policy is difficult for a complex industry such as telecommunications, characterised by rapid technological change and fast growth in demand. Many of the expert economists and consultants disagree about the right approaches, and different countries have chosen different approaches. Many say that the 'devil is in the detail' of the regulations and processes that are used — implying that small shifts in regulatory policy or methods can have marked effects on efficiency. For example, different methods used by the regulator for calculating depreciation in TSLRIC models can lead to excessively high or low access prices, with adverse effects on efficiency (appendix D).

This suggests that the theoretically undesirable state of unregulated natural monopoly should be compared with the imperfect set of regulatory alternatives, rather than with a mythical ideal.

Information asymmetries

Regulators are poorly informed relative to the main incumbents that they are trying to regulate. Interpreting the actions of an incumbent for possible anti-competitive behaviour is difficult. For example, it is hard to determine whether an access price is too high without understanding:

- the cost and investment recovery problem of the access provider;
- demand conditions in final markets;
- whether relevant parts of the network are congested or not; and
- whether there are other downstream pricing problems that may need to be factored into access (such as the deficit in infrastructure costs that arise from retail price controls on line rentals).

Similarly, it may be difficult to know when a particular low retail price is a predatory pricing strategy, a reflection of technological obsolescence in the facilities, or efficient price discrimination. It may be that regulators seek to overcome their informational disadvantages by imposing detailed record-keeping rules or by prescribing simple pricing approaches, such as uniform access price ceilings. But these strategies also may generate significant efficiency costs.

The risk of regulatory capture

There is a risk that regulators are subject to potential capture by interests inimical to the broader public interest. Partial regulatory capture of such bodies can occur from a number of quarters:

- *By government.* This is particularly true for regulators that are not genuinely independent of government. Kahn and Shew (1987, p. 195) found that prior to reforms in the 1990s, state telecommunications regulators in the US reinforced and facilitated monopolistic margins because these made multi-billion dollar contributions to local rates. Even where their governance arrangements allow for statutory independence, governments may still exert some influence because they provide funding and establish the functions and therefore the power of the regulator. Regulators and competition watchdogs will accordingly be mindful of government views unless they have a powerful internal ethos of independence.
- *By firms,* with possible biases to either new entrants or the main incumbents. The regulators deal frequently with the firms that they oversee, and therefore may tend to adopt their patterns of thinking and viewpoints rather than ones that reflect a more objective assessment of overall community welfare.
- *By technocrats.* Where regulators must endorse or develop standards, they can be captured by those who highly value technology for its own sake;
- *By ‘kleptocrats’* (Kahn 1998). Regulators may adopt a compulsive regulatory mindset, taking as given the existing set of regulations and attempting to resolve fresh problems with new layers of ever more complex regulation;
- *By precedent.* Regulators may be trapped by past decisions in which they have vested their reputation and credibility (the ‘face-saving’ problem), and which firms have relied upon to provide some certainty in their business decisions. Accordingly, a regulator may be reluctant to admit limitations in a pricing model that has been used in the past or to re-determine that apparently anti-competitive conduct is now, on balance, actually efficient. For example, suppose that a pricing model requires access at 5 cents a minute when it subsequently turns out that the appropriate price should have been 4 cents a minute. Say that so far one hundred million hours of access to access seekers have been charged at the wrong price — amounting to a \$60 million dollar loss to the access seekers. Admitting their error amounts to accountability for significant commercial damage, something the regulator may be reluctant to acknowledge.
- *By populism.* This is also known as the ‘knight in shining armour’ problem. Regulators like others to approve of what they are doing. This exposes regulators to the risk of decisions that are popular, even if poorly founded. Thus an action that is perceived to be profiteering exploitation by a large firm, even if

objectively efficient (for example, rewarding a past risky investment), may inappropriately be subject to regulatory control. A possible example is given by Waters (1999, p. 8), who argues that the decision by the UK regulator, Oftel, to regulate 3G access to 2G mobile roaming stemmed more from ‘an instinctive sense of fairness’ than economic principles. The intrusion of such non-economic grounds into regulatory policy may be more subtle. For example, it may make a regulator more willing to make an error on access pricing that favours vulnerable new entrants (for which business failure is a likely consequence of an adverse pricing rule) while penalising the main incumbent (which will remain in business regardless) than the other way around. This may be particularly pertinent during downturns in the industry.

Risk aversion by regulators

It is reasonable to portray regulators as risk averse, reflecting their link to government. In competition policy, wrong decisions are usually not obvious from ex post market outcomes (unlike, say, the outcome of a decision on whether an aircraft meets minimum safety standards). Wrong decisions are typically only exposed by review bodies and courts. Thus, regulators tend only to undertake court actions when the probability of winning is high. This implies that a prudent regulator will devote considerable time and resources before making determinations that are appealable.

In this sense, risk aversion by a regulator subject to review of their decisions may partly limit the problems associated with regulatory taking. Such risk aversion is appropriate in circumstances when the cost from taking regulatory action when it is not justified exceeds the cost from not taking regulatory action when it is justified. On the other hand, even when decisions ultimately favour rivals over incumbents, such risk-averse decision-making tends to be slow. Such slowness advantages incumbents (which, in telecommunications, have substantial first-mover advantages), offsetting the impact of decisions favourable to rivals.

However, regulators may seek to lobby for legislation that suits their attitude to risk and that reflects their understandable desire for discretion. Thus, they will tend to prefer non-appealable instruments that are invoked by subjective judgment, rather than appealable instruments based on objective criteria. These tend to be fast and flexible, but run the risk of over-regulation.

The chapters on the telecommunications access regime (Part XIC) and anti-competitive conduct (Part XIB) assess the extent to which risk-aversion by regulators may have affected regulation and regulatory processes.

Implications of regulatory error

There are two advantages of conceding that a telecommunications competition regulator is unlikely to be perfect. First, this motivates institutional ways of reducing the regulator's incentive problems (such as providing statutory independence or shifting responsibilities from an industry specific regulator to a more general one — as in the case of the ACCC). Second, it makes clear that just as markets may fail if some firms exercise apparent market power, the institutions and regulations intended to overcome these deviations from the competitive ideal may also fail. If the shortcomings of regulatory processes cannot be successfully overcome, it may sometimes be efficient to forgo some aspects of competition regulation.

3 Telecommunications industry

Box 3.1 Key messages

The Australian telecommunications industry is important in many ways:

- large value added from communications services — around \$19 billion in 1999-00, being around 3 per cent of Australia's GDP, and rising;
- large capital expenditure — investment in new infrastructure of more than \$9 billion during 2000-01.
- strategically important for the rest of the economy — telecommunications services are an input to all other industries.

The Australian telecommunications industry has also been fast growing — revenue growth over the period 1997 to 2000 has averaged around 13 per cent per year.

But the operating environment has been more difficult since the global shake-out in telecommunications share prices from late March 2000, following the end of the recent technology sector boom. The falling market capitalisations have meant a tightening of the current environment for companies seeking to raise funds for further expansion.

The number of players in the industry has increased significantly since the opening of the telecommunications market to full and open competition on 1 July 1997. The number of carriers has increased from 3 to more than 70. There are around 140 providers of telephone services and more than 650 internet service providers. The current market conditions and increased competitive pressures have also led to corporate restructuring, takeovers and business failures.

The entry of new players is not only giving end-users greater choice in selecting a service provider, but also is expanding the range of services offered.

Fixed voice services are still the largest single source of telecommunications revenue (45 per cent), but are a slow growing area of the market and are declining in relative importance.

The fastest growing areas are data, internet and mobile services. Australian end-users of telecommunications services are particularly responsive to new services, as indicated by high take-up rates for mobile phones and internet access.

The deployment of new networks by infrastructure-based carriers has introduced greater scope for competition in wholesale and retail markets. Infrastructure investment has occurred in all network segments, including long-haul backbone routes, CBDs, metropolitan customer access networks, and regional and rural areas.

3.1 Introduction

One of the most obvious effects of the introduction of open competition since July 1997 has been an increase in the number of providers of telecommunications services — carriers, carriage service providers (CSPs) and internet service providers (ISPs). A review of the main industry players is presented in section 3.2. A broad overview of the telecommunications industry is provided in section 3.3, where the main drivers of growth are identified and some key influences on future services growth are considered. Details of the main service providers are presented in section 3.4. The final section looks at the pattern of infrastructure investment by carriers in different network segments. Given the pace of change in the industry, this chapter describes company structures and networks as at June 2001. Details of the types of networks deployed by carriers are described in appendix C.

3.2 Who are the main players?

The new regulatory regime under the *Telecommunications Act 1997* specifies three types of players — carriers, CSPs and content service providers (box 3.2). This section briefly reviews each and also describes the key regulatory bodies.

Carriers

The process of phased deregulation of telecommunications services that commenced from the late 1980s had, prior to the introduction of open competition on 1 July 1997, resulted in a market characterised by the following key features:

- the *fixed network* carrier market had changed from a monopoly to a duopoly, with the entry of Optus (now Cable & Wireless Optus) in 1991 as the competitor to the incumbent (Telstra);
- the *mobile* carrier market had three licensed providers (Telstra, Optus and Vodafone); and
- many CSPs and resellers operated in a broad range of telecommunications markets.

Among the major changes introduced by the new regulatory regime were the removal of all legislative barriers to market entry and the introduction of ‘full and open’ competition — with carrier licences open to anyone and no regulatory distinction between fixed and mobile carriers.

Box 3.2 **Main types of telecommunications providers**

Carriers are owners of network units which are used to supply carriage services to the public. Network units can be line links exceeding 500 metres, radiocommunication links or satellite-based facilities.

Service providers include:

- **Carriage service providers** — supply carriage services to the public using a network unit owned by one or more carriers. Resellers of carriage services are also considered to be CSPs in specified circumstances and Internet Service Providers may also be considered CSPs under the Telecommunications Act.
- **Content service providers** — use a carriage service to supply content services to the public, such as a broadcasting service or an online information or entertainment service.

Licensing and the rights and obligations of providers differ between these three types.

Carriers must be licensed by the Australian Communications Authority (ACA). Carrier and service provider obligations cover access/interconnection, consumer protection, customer service, privacy and national security. Carrier and service provider rights relate to access and interconnection.

Neither CSPs nor content service providers are required to obtain a licence from the ACA in order to be able to conduct their businesses, unless they operate radiocommunications equipment.

Sources: <http://www.aca.gov.au/licence/carrier/spo.htm>, ACA 1999, ACA 2000a, Plante 2000.

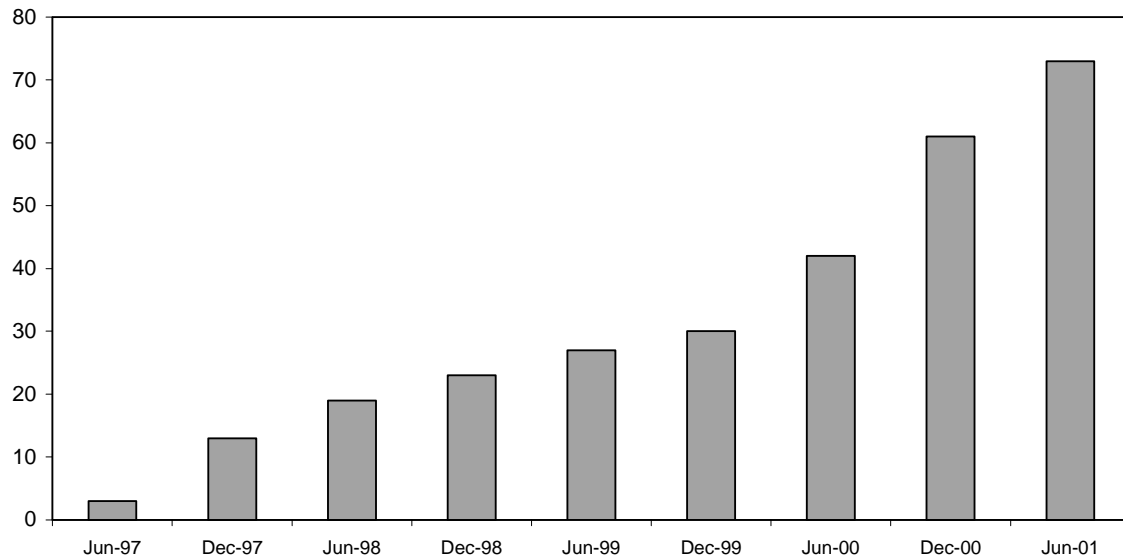
The removal of any limit on the number of carriers permitted to enter the industry was important because:

Carriers are key players and essential within the new scheme in that they provide the basic transmission infrastructure on which the supply of carriage and content services to the public rely (ACA 2000c, p. 1).

The number of carrier licences granted by the ACA has increased from three at the end of June 1997 (Telstra, Cable & Wireless Optus and Vodafone) to 77 by the end of June 2001 (figure 3.1). But the number of operational carriers is somewhat less than this figure because:

- four carrier licences have been surrendered in the period since 1 July 1997 — Northgate Communications, Iridium South Pacific, Ozitel Network and NetComm Limited;
- some carriers have more than one licence — for example, Telstra has two licences, Cable & Wireless Optus has four, TransACT has two and Uecomm has two; and
- some carriers are still planning their network rollouts.

Figure 3.1 Number of licensed carriers^a
by six monthly period ending at specified month



^a Carriers awarded a licence that was subsequently surrendered have been excluded from the relevant six month period in which they were granted the licence.

Data source: <http://www.aca.gov.au/licence/carrier/carriers.htm>.

Some pay TV operators hold carrier licences because of their ownership of cable networks, which fall within the definition of a ‘network unit’ (ACA 1999):

- Windytide, part of Austar United Communications, holds a carrier licence for its HFC cable network in Darwin;
- Optus Television holds a carrier licence, although Cable & Wireless Optus is the backbone carrier for its pay TV services;
- Neighborhood Cable holds a carrier licence for its HFC networks in Mildura and Ballarat; and
- Telstra Multimedia is the carrier licence holder for the facilities by which Foxtel (which is 50 per cent owned by Telstra) provides cable pay TV services.

Service providers

Service providers either supply carriage services, using carrier networks and their own infrastructure, or content services such as pay TV and online information and entertainment. Pay TV operators (such as Foxtel, Austar and Optus Television) that use cable and/or satellite networks to deliver their services are also regulated under the *Broadcasting Services Act 1992*.

As carriers are required to hold a licence under the Telecommunications Act, there is up-to-date information available on the number of licensed carriers in Australia. However, accurate information on the number of service providers is less readily available.

In this respect, Part 6 of the *Telecommunications (Consumer Protection and Service Standards) Act 1999* requires all telecommunications carriers and eligible service providers to be members of the Telecommunications Industry Ombudsman (TIO) scheme. (A recent challenge to the constitutionality of the TIO scheme has failed in the Federal Court — ACA 2001c). This includes companies that supply a standard telephone service or a mobile service, provide internet access, or act as a reseller of any of these services. As at June 2001, the TIO membership included (<http://www.tio.com.au>):

- 54 carriers;
- 88 telephone service providers;
- 53 providers of both telephone and internet services; and
- 909 internet service providers.

However, the TIO list may well overstate the number of different ISPs operating. For example, not all of those listed may still be in business, some ISPs offer services under more than a single ISP name and the TIO list includes intermediaries that do not directly supply a carriage service.

According to a new quarterly survey of ISPs by the ABS (table 3.1) there were 665 ISPs in Australia providing internet access services at the end of March 2001. The findings also reveal some consolidation in the industry. Overall, the number of ISPs fell by around 7 per cent between September 2000 and March 2001, mainly attributable to a decrease in the ‘small’ size category.

Table 3.1 Number and size distribution of ISPs

Australia, quarter ending at month specified

<i>Size category</i>	<i>Sep 2000</i>	<i>Dec 2000</i>	<i>Mar 2001</i>
Very small (≤ 100 subscribers)	132	129	129
Small (101–1 000 subscribers)	377	359	330
Medium (1 001–10 000 subscribers)	173	171	169
Large (10 001–100 000 subscribers)	28	31	31
Very large ($> 100\,000$ subscribers)	8	6	6
Total	718	696	665

Source: ABS Cat. No. 8153.0.

Regulators

The main telecommunications regulatory bodies are listed in box 3.3. As part of the changes introduced from 1 July 1997, the Government provided for a much greater use of industry self-regulation, though with two regulatory bodies (the ACCC and ACA) to provide a ‘safety net’ in situations where self-regulation is judged to fail.

Box 3.3 **Telecommunications regulatory bodies**

- *Regulation planning (objectives, policies, legislation)*
 - Department of Communications, Information Technology and the Arts (DCITA)
- *Regulators of Carriage*
 - Australian Communications Authority (ACA)
 - Australian Competition and Consumer Commission (ACCC)
- *Regulators of Content*
 - Australian Broadcasting Authority (ABA)
- *Industry organisations*
 - Australian Communications Industry Forum (ACIF)
 - Telecommunications Access Forum (TAF)
 - Telecommunications Industry Ombudsman (TIO)
 - Standards Australia (SA)

Source: Plante 2000.

DCITA has overarching policy control over telecommunications, although the department does not play an important role in the administration of competition regulations applying to the industry.

The ACCC has prime responsibility for administering both general competition regulation and telecommunications-specific competition regulation. Its main telecommunications functions are the administration of the access regime and regulation of anti-competitive conduct.

The ACA has responsibility for regulations relating to technical issues for telecommunications and radiocommunications. It licenses carriers, ensures compliance with carrier licence conditions and service provider rules and monitors service performance and quality. The ACA has the power to request that codes of practice be developed and to determine and enforce mandatory standards (including technical standards) where necessary. It also has responsibility for the management and allocation of frequency spectrum and numbering administration and allocation.

The Universal Service Obligation is administered by the ACA to ensure reasonable and equitable access across Australia to standard telecommunications services. The ACA is required to consult with the ACCC in regard to the impact of technical issues on competition (ACA 2001b).

Although there is at least some perceived overlap with regard to regulatory responsibilities for installation and access to facilities under Parts 3 and 5 of Schedule 1 of the Telecommunications Act, the ACA and ACCC have jointly issued a guide to their relative responsibilities (ACA and ACCC 1999).

The peak self-regulatory body of the communications industry is the ACIF — an industry owned, resourced and operated company established to implement and manage communications self-regulation. ACIF bears primary responsibility for the development of industry codes of practice and technical standards. ACIF is also assisted by Standards Australia — the peak non-government standardisation body.

Although the policy of increased self-regulation has delegated much of the code and standard making to industry bodies, the ACA has the power to impose a mandatory industry standard under certain conditions — for example, if an industry code has not been developed or is judged to be insufficient, or with respect to certain customer equipment and network matters.

The TAF is the self-regulatory body responsible for access issues. It is involved in the process by which services are subject to the regulatory access regime ('declared') and the development of access codes.

The TIO is an industry self-regulatory body that operates as an office of 'last resort' for disputes between providers and residential and small business customers.

The organisations covered by the telecommunications regulatory bodies include licensed carriers, pay TV operators, CSPs, content service providers (when using carriage services), ISPs and vendors of equipment connected to public telecommunications and radiocommunications networks (Plante 2000).

An overview of the development and main elements of the current regulatory regime is provided in appendix A.

3.3 Overview of telecommunications industry

In this section, recent trends in the main telecommunications services are examined and the areas that have become the main drivers of growth identified. Some key features are reported in box 3.4.

Box 3.4 **Key features of the telecommunications industry**

- Large size — total value added of around \$19 billion in 2000, being around 3 per cent of Australia's GDP, and rising.
- Generally fast growing — annual revenue growth 1997–2000 averaging around 13 per cent, but a weaker market is expected for the remainder of 2001.
- Large investment in new infrastructure — \$9 billion in 2000-01.
- Rapid change in the range and complexity of products/services — traditional areas such as fixed voice are growing much more slowly than data, internet and mobile services.
- Rapid technological change in relation to delivery of services, and ways of accessing services by end-users.
- Convergence of telecommunications, broadcasting and entertainment services and delivery technologies is blurring industry boundaries.
- Strategically important for the rest of the economy.
- Recent worldwide shake-out in telecommunications stock prices — falling market capitalisations of telecommunications service providers and equipment vendors since March 2000 have created a tighter environment for raising funds.
- The current weaker telecommunications market and stronger competitive pressures have resulted in corporate restructuring, takeovers and business failures.

Sources: Budde 2000a, IPA sub. 20, Campbell 2000.

Types of telecommunications services

Technological and other changes are serving to blur the boundaries between the telecommunications, broadcasting and entertainment industries (chapter 1). But against that background, the main types of telecommunications services provided include the following broad groups:

- *fixed voice services* — including local, national long distance and international calls, fixed-to-mobile calls, and enhanced voice services (such as voicemail);
- *mobile services* — including mobile access and connection, mobile calls, messaging services;
- *internet services* — including dial-up and broadband access, web hosting;
- *data services* — including private data network services such as leased lines, frame relay, ATM and managed IP services, and public data network services; and
- *content services* — including pay TV, on-line information and entertainment.

As a result of the technological and other changes over the past decade, two features of the telecommunications industry have been:

- the emergence of a large range of *new* services — such as e-mail, internet telephony, video conferencing, short messaging services (SMS), virtual private networks; and
- the trend to *bundling* of services to residential customers — such as telephony, pay TV and/or internet services in a combined package, often delivered over the same (broadband) network.

Take-up of telecommunications services

Australian consumers have shown a particular willingness to accept new telecommunication services, with market penetration of most services high by world standards. Some indicators of the take-up by consumers are given in box 3.5. Pay TV was introduced in Australia relatively recently (1995) and penetration lags that in more mature overseas markets (for example, 80 per cent in the US and 40 per cent in the UK and France).

Box 3.5 Use of telecommunications and related services, 2000^a

- Fixed residential lines — 7.5 million (96 per cent of households)^b.
- Mobile phones — 11.1 million subscribers (58 per cent of population) (March 2001).
- Home computers — 4.0 million households (56 per cent) (November 2000).
- Use of the internet — 4.0 million internet subscribers, of which 3.5 million were household and 482 000 were business and government subscribers (March 2001).
- Broadband cable coverage — 2.5 million households passed (35 per cent).
- Pay TV subscribers — 1.3 million (18 per cent of households) (September 2000).

^a Penetration rates based on population of 19 million and 7.2 million households. ^b Some households have more than one line.

Sources: ABS Cat. No. 8147.0, 8153.0, ACA 2000b, Budde 2000a, Lacy 2001a.

Recent trends in telecommunications services revenue

Access Economics commented on the general availability of information on the telecommunications industry as follows:

A detailed assessment of the impact of the 1997 regime is hampered by the absence of consolidated sources of information about the state of the telecommunications industry, including about the services delivered, turnover earned and the extent and nature of the networks established by the various participants (sub. 41, annexure B, p. 17).

The Australian Bureau of Statistics (ABS) conducted a survey of the telecommunications services industry in 1996-97, specifically to provide a benchmark for assessing the impact of deregulation on the industry. The 1996-97 survey (ABS 1999) provided information on the services delivered (classified into voice, mobile, internet, data and other services) by type of provider (carrier, CSP and ISP). The most recent information available is for 1998-99, which was obtained as part of a broader survey of the information technology and telecommunications industry. However, the data published on telecommunications services are much less comprehensive than for 1996-97. Furthermore, the ABS advised the Commission that confidentiality restrictions prevented them from providing data for 1998-99 on a comparable basis to that published for 1996-97.

Therefore, in the absence of useable official information on the telecommunications services industry, other data sources must be used to shed light on how the industry has developed during the period of deregulation. A time series of industry revenue by product/service, based largely on company data, is reported in table 3.2.

Table 3.2 Telecommunications services revenue
\$million

<i>Year</i>	<i>Fixed voice^a</i>	<i>Mobile</i>	<i>Data</i>	<i>Internet</i>	<i>Total</i>
2001 (estimate)	11 300	6 200	8 500	3 000	29 000
2000 (estimate)	11 300	5 500	6 950	1 400	25 150
1999	10 895	4 900	5 250	900	21 945
1998	10 835	4 300	4 150	550	19 835
1997	10 225	3 820	3 250	360	17 655
1996	10 050	3 200	2 700	145	16 095
1995	9 970	2 120	2 265	n.a.	14 355
1994	8 960	1 536	1 780	n.a.	12 276
Growth 1994–2000 (% p.a.)	3.9	23.7	25.5	n.a.	12.7
Growth 1997–2000 (% p.a.)	3.4	12.9	28.8	57.3	12.5
Growth 1999–2000 (% p.a.)	3.7	12.2	32.4	55.6	14.6

^a Includes basic access, local, domestic long distance, international, and fixed-to-mobile calls, value added services (such as voicemail and call number display) and enhanced voice services.

Source: Budde 2000a, tables 21 and 114.

Fixed voice services

The major characteristics of fixed voice services are:

- *still the largest single source of revenue* — accounting for 45 per cent of revenue in 2000;

-
- *slow growing* — fixed voice services revenue has grown at an average annual rate of around 3 per cent since 1997, compared with around 13 per cent for telecommunications services as a whole; and
 - *declining in relative importance* — its share of total telecommunications revenue is falling steadily, from nearly three-quarters in 1994 to about 45 per cent in 2000.

Within fixed voice services, local telephony (local calls plus line rental) is estimated in 1999-00 to have accounted for around 47 per cent of total fixed voice revenue, national long distance calls around 33 per cent and international calls around 20 per cent (chapter 4).

Revenue from basic voice services over the PSTN (local, long distance and international) is expected to continue to decline in relative importance — with further falls in retail prices serving to offset any induced expansion of traffic. However, there is likely to be a shift to voice over internet protocol (VoIP) to provide lower cost long distance calls. VoIP services vary, depending on the technology used to make and receive the call (whether it be a computer or a telephone) and the extent to which the PSTN is used.

The carriage of international calls over the internet is likely to increase significantly in the future as the provision of VoIP in the Australian market gathers momentum. Some new entrants that are either currently offering or planning to provide phone-to-phone VoIP services include Central Exchange, NorthVoice Communications, Global Dial, Interline Networks and Equant. Telstra and Cable & Wireless Optus are aiming to provide a range of new IP-based services, including VoIP during 2001 (Potter 2000). VoIP revenues in overseas markets in North America, Europe and Asia are predicted to display explosive growth over the next couple of years (*exchange*, 12/40, p. 5).

Mobile services

The major characteristics of mobile services are:

- *fast revenue growth* — mobile services have displayed consistently high revenue growth since 1997, averaging around 13 per cent per year;
- *new subscribers are still increasing* — the December 2000 quarter saw a surge in the mobile market, with more than one million new customers in that quarter alone (chapter 4, table 4.7), while in the March quarter 2001 more than 800 000 new subscribers were acquired; and

-
- *growth is likely to slow as high penetration rate reached* — the number of subscribers was more than 11 million at the end of March 2001, being around 58 per cent of the population.

The number of mobile services in operation now exceeds that for fixed connections (chapter 4). With scope for multiple mobile subscribers per household, and with responsive markets such as youth being targeted, mobile penetration rates are likely to be substantially higher than for fixed line connections from 2001 onwards (Hutchison sub. 6, p. 5).

However, with mobile phone penetration now around 58 per cent of the population, it is likely that growth rates in subscriber numbers will slow — and remaining potential customers also tend to be lower spending. Further, the take-up of wireless application protocol (WAP) services, which allow mobile phone users to send and receive e-mails and connect to the internet, to date has been slow. The next main growth opportunity is likely to be high speed data services, which requires the existing mobile networks to be upgraded to third generation (3G) standard. These new networks will support communication via mobile phones as well as portable devices like handheld computers and personal digital assistants.

Data and internet services

The major characteristics of data and internet services are:

- *fast growing* — revenue growth faster than mobile services; and
- *increasing in relative importance* — data and internet services combined are likely to exceed voice services as the main source of telecommunications revenue.

Carriers are continuing to build broadband infrastructure — using technologies such as ‘last-mile’ fibre optic cable, HFC cable, wireless local loop, satellite and DSL over copper wire — to give business and residential customers access to high speed data and internet services. The internet market offers future opportunities for growth as more homes with PCs are connected to the internet, set top boxes that enable e-mail and internet access via a television set become available, e-commerce applications and business-to-business transactions expand, and high speed and ‘always on’ internet services become available.

Yet there are signs that the growth in internet usage might be tapering off. For example, according to Media Metrix (2001) the number of individuals with home access to the internet grew dramatically from 4.5 million to 6.6 million between January and August 2000. Since then the market has grown only slightly to around 6.8 million by December 2000, at which level it has remained up to May 2001. That

the use of the internet in the first half of 2001 is relatively flat is supported by recent ABS statistics — in the six month period to March 2001, the number of internet subscribers increased by only around 3 per cent (table 3.3).

Table 3.3 Internet use
Australia, quarter ending at month specified

	Sep 2000	Dec 2000	Mar 2001
Subscribers ^a			
Business & government ('000)	432	512	482
Household ('000)	3 417	3 410	3 486
All ('000)	3 849	3 921	3 968
Data downloaded			
Business & government (millions Mbs)	457	467	428
Household (millions Mbs)	595	583	611
Total (millions Mbs)	1 052	1 050	1 040

^a Customers (individuals or businesses) with ISP accounts. Counts of subscribers differ from counts of people/organisations/households with internet access.

Source: ABS Cat. No. 8153.0.

So far there has been only a limited take-up of broadband connections in Australia. For example, in the twelve month period to December 2000, the number of Telstra broadband subscribers increased from 12 000 to 50 000 (Telstra 2001a, p. 5) and at May 2001, the Optus@Home high speed cable internet service had more than 30 000 subscribers (Cable & Wireless Optus 2001b). While take-up projections are extremely tenuous, IDC has forecast that the number of cable modem connections in Australia is likely to increase from around 110 000 at the end of 2001 to more than 800 000 by 2005, and for DSL users to increase from 235 000 by the end of 2001 to 3.58 million by 2005 (IDC 2001).

However, take-up rates for broadband access will depend partly on how attractively the services are priced. For example, it has been reported that the Launceston broadband project — a Telstra-Commonwealth Government joint venture — had attracted only 180 subscribers by July 2001 following its launch in March 2001, despite users receiving a rebate of \$38.50 (around 40 per cent) on Telstra's normal monthly fees for the ADSL service. With the project's target of 2 500 users by June 2002 (and 5000 in five years, or 20 per cent of homes) in doubt, the Government is now also offering a refund on the \$189 connection fee in an attempt to boost subscriber numbers (Hayes 2001).

Current influences shaping the industry

The overall trend in the Australian and global telecommunications industry up to 2000 was one of significant growth. However, the most recent Australian

experience has mirrored global trends in being characterised by a slump in telecommunications sharemarket values, a generally weaker demand outlook for the remainder of 2001, with revenue and profit downgrades announced by many players, and company restructuring, takeovers and failures occurring.

Falling market capitalisations

There has been a general worldwide shake-out in the share prices of telecommunications companies since the boom in the technology sector came to an end in late March 2000. In mid July 2001, the Australian Stock Exchange's Telecommunications Index was around 48 per cent below its peak of late March 2000. While Telstra's shares have lost around 30 per cent of their value over this period and Cable & Wireless Optus' around 47 per cent, other telecommunications companies have performed much worse. For example, Hutchison's share price has declined by 92 per cent between March 2000 and July 2001, and that of Macquarie Corporate Telecommunications by 95 per cent, PowerTel by 90 per cent and Davnet by 97 per cent.

The downturn in telecommunications company valuations globally and in Australia has created a tighter environment for raising funds, which is influencing the ability of carriers and service providers to fund network expansions and other capital expenditure. Shortly after the share market downturn, two planned floats were called off — Vodafone Pacific cancelled its \$2-\$3 billion float and ComVergent, a subsidiary of global company RSL Communications, shelved its \$350 million float in May 2000. The single biggest telecommunications cash raising in 2000 was by Ucomm, which was floated in August 2000 for \$315 million. However, in the period since, its share price has fallen by 90 per cent.

A weaker telecommunications outlook

As a consequence of the current weaker telecommunications market and stronger competitive pressures resulting from deregulation and technological change, corporate restructuring is taking place and strategies are being revised. For example:

- Vodafone Australia announced on 15 May 2000 that it was restructuring its local operations to enable it to compete more effectively in the future. Part of the restructure involved a cut in its workforce of 12 per cent.
- Telecom New Zealand (the parent company of AAPT) announced on 3 May 2001 that AAPT and Lucent Technologies had agreed to close down the rollout of a CDMA mobile network "in view of changes now occurring in the Australian mobile telecommunications market" (Telecom New Zealand 2001a).

AAPT had spent more than \$125 million on the network up until 31 December 2000 and was planning to become Australia's sixth mobile network operator.

Greater competitive pressures and a weaker demand environment are leading to many carriers announcing lower revenue and profit results. For example, in June 2001 Telstra announced a downgrade of revenue and profit forecasts for that half-year, ascribed mainly to a tightening of spending among small to medium sized businesses in the first few months of 2001 and price competition from rivals in a generally slowing market (Telstra 2001b). The final year results, released in August 2001, confirmed that announcement (further information is given in section 3.4). Many smaller telecommunications companies are performing more poorly than their larger competitors. For example, Pulsat Communications (which had been building a nationwide wireless data network) announced on 19 June 2001 that as a result of reduced spending patterns, low margins and high costs of growing a telecommunications business, it had decided to sell its telecommunications assets.

Global telecommunications equipment vendors such as Nortel, Alcatel, Lucent Technologies, Cisco Systems and Marconi have responded to the slump in demand by carriers and service providers, particularly in Europe and the US, by taking global restructuring and cost cutting actions. These restructuring decisions have generally resulted in labour shedding in their Australian operations as well.

Takeovers and bankruptcies

During 1999, Cable & Wireless plc decided to concentrate its focus on the global data and business services market, primarily in the US, Europe and Japan. Because Cable & Wireless Optus — in which it had a 52.5 per cent stake — is an integrated, full service telecommunications provider, that investment was no longer seen as a core asset. After a lengthy period of review, a takeover offer by SingTel was announced in March 2001. The offer valued Optus' equity at up to \$17 billion. Following approval by the Australian Foreign Investment Review Board and other regulatory approvals, the Treasurer announced on 22 August 2001 conditional approval for SingTel to proceed with its offer (Costello 2001).

The most significant recent exit from the Australian telecommunications scene was the collapse of the fifth-ranked carrier One.Tel in late May 2001. One.Tel was a reseller of fixed line services (around 250 000 local and long distance customers), a reseller of GSM mobile services (around 250 000 customers) and had recently launched services on its own 'Next Generation' mobile network (around 170 000 customers at March 2001). One.Tel was also a leading ISP — One.Net had Australia's fifth largest subscriber base. As well as its Australian operations, One.Tel had resale operations in the UK, continental Europe and Hong Kong.

Restructuring in the local scene has also occurred as a result of international failures. For example, global player World Access, the parent of WorldxChange, filed for bankruptcy in the USA in April 2001. The Australian operations of WorldxChange were subsequently acquired by New Tel. With WorldxChange having around 130 000 residential and 11 000 small business customers, the acquisition took New Tel into the top ten carriers in Australia.

3.4 Nature of main service providers

Range in types of service providers

The various players in the telecommunications market differ significantly in the nature of the services provided:

- *Facilities-based vs mainly services-based* — facilities-based carriers provide services by directly connecting customers to their own networks. Other providers with less substantial infrastructure rely mainly on obtaining access and transmission services from facilities-based carriers.
- *Wholesale vs retail* — some carriers mainly provide wholesale services (to other carriers and CSPs) while others are fully vertically integrated and offer a range of wholesale and retail services.
- *Business vs residential* — some providers focus on business customers while others offer services to both the business and residential markets.
- *Full service vs narrower focus* — some providers offer a broad range of services to residential and business customers using several delivery platforms while others are mobile/wireless only providers or focus only on the wholesale and/or corporate markets.

An indication of the largest players classified by type of provider is given in table 3.4. Details of market shares held by the main players, in particular wholesale and retail market segments, are presented in chapter 4.

The largest carriers are more than just a single type of provider and often are a carrier, CSP (including ISP) and content service provider. For example, some of the overlaps for the largest three players are:

- *Telstra* — Australia's largest carrier and CSP as well as the leading ISP. Telstra is also a content provider via its internet portal (telstra.com). Telstra also provides carriage services to Foxtel, Australia's largest pay TV operator, in which it has 50 per cent ownership.

- *Cable & Wireless Optus* — Australia's second largest carrier and CSP. It is Australia's third largest dial-up ISP and a provider of high speed internet access and content services (Optus@Home). Optus Television is Australia's third largest pay TV operator.
- *AAPT* — Australia's third largest carrier and CSP. It is also a leading provider of wholesale and retail internet services with its acquisition of connect.com.au in February 1999, and a leading provider of content services as a result of its joint venture with AOL Australia in March 2000.

Table 3.4 Largest players by type of provider

Ranked by market share, July 2000

<i>Carriers</i>	<i>CSPs</i>	<i>Internet Service Providers</i>
Largest 8:	Largest 8:	Largest 8:
Telstra	RSL COM (ComVergent)	Big Pond (Telstra)
Cable & Wireless Optus	WorldxChange ^b	OzEmail/UUNet (WorldCom)
AAPT	Link Communications	Cable & Wireless Optus
Vodafone	Global One	iPrimus
One.Tel ^a	BT Australasia	One.Net (One.Tel) ^a
Primus	Teleglobe	TPG Internet
Hutchison	KDDI Australia	connect.com.au/AOL (AAPT)
Macquarie Corporate	Equant	Austar/eisa
Other carriers:	Other CSPs:	Other ISPs:
Approx. 50 operational	Approx. 95	Approx. 650

^a Administrators appointed on 29 May 2001. ^b Acquired by New Tel in May 2001.

Source: Budde, pers. comm.

Among CSPs, one distinction is that between access-based providers and resellers (Woodbridge sub. 41, annexure A):

- *Access-based CSPs* provide services by combining some of their own network elements with services provided by network-based carriers. For example, they may provide national long distance telephony services by using their own switching facilities and purchasing originating and terminating access and long distance transmission services.
- *Resellers* are switchless providers who purchase end-to-end wholesale telecommunications services and resell them to retail customers. Resellers add value to the wholesale service through customer care and billing services.

Revenue and other performance indicators of the largest two players

As the original incumbent, Telstra is still very much the largest operator in the industry, accounting for around two-thirds of telecommunication services revenue

(Budde 2000a). Because of the importance of Telstra and second-ranked carrier Cable & Wireless Optus in the overall telecommunications picture, a breakdown of their sales revenue by service category in recent years is given in tables 3.5 and 3.6.

Table 3.5 Telstra — sales revenue and other indicators
year ended 30 June

	<i>As reported in 2000</i>				<i>As reported in 2001^a</i>		<i>Share of revenue 2001</i>	<i>Growth 2000 to 2001</i>
	1998	1999	2000	<i>Growth 1998 to 2000</i>	2000	2001		
	\$m	\$m	\$m	% p.a.	\$m	\$m	%	%
Basic access	1 770	1 855	2 020	7	2 005	2 361	12	18
Local calls	2 664	2 727	2 650	0	2 646	2 143	11	-19
National long distance calls ^b	2 594	2 775	2 626	1	2 626	2 554	14	-3
International telephone services	1 380	1 103	987	-15	770	786	4	2
Mobile services ^c	2 154	2 538	2 859	15	2 993	3 155	17	5
Data and text services ^d	2 097	2 315	2 585	11	2 592	2 769	15	7
Internet services ^e	100	168	253	59	249	374	2	50
Other services ^f	3 944	4 090	4 629	8	4 441	4 775	25	8
Total sales revenue	16 703	17 571	18 609	6	18 322	18 917	100	3
EBIT after abnormals ^g	5 053	5 849	5 917	8	6 072	6 406		6
Total assets	26 470	27 682	30 339	7	30 339	37 473		24

^a Except for assets, relates to 'underlying' sales revenue — ie excludes 'unusual' revenue and incorporates revenue recognition accounting policy change in 2001. ^b Includes fixed-to-mobile revenue. ^c Includes mobile handset sales. ^d Includes integrated services (including ISDN), packet switching technologies (such as frame relay), data and leased lines and text (fax). ^e Includes revenue from internet access and service provider services. ^f Includes directory services, customer premises equipment, intercarrier services, inbound calling products, facilities management, and other sales and services. ^g Earnings before interest and tax.

Source: Telstra 2000a and 2001c.

Local telephony (including basic access and local calls) is still Telstra's main revenue source, accounting for around one-quarter of sales in the year to June 2001, while long distance voice services (domestic and international) account for around 20 per cent of revenue. But fixed voice revenue is also the slowest growing area, and the one where competitive pressures are being felt most — local call revenue has displayed almost no growth since 1998, while Telstra's revenue from international services has fallen significantly in recent years. Mobile and data services are important in terms of their share of overall revenue and are also among the faster growing areas. While internet services are the fastest growing source of revenue, they were only 2 per cent of Telstra's overall sales revenue in 2001.

In the period 1998–2000, growth in Telstra’s sales revenue has averaged around 6 per cent per year with a slow down in 2001 to about 3 per cent. Growth in profit (earnings before interest and tax, EBIT) has been around 8 per cent per year. At the end of June 2001, Telstra’s total assets were valued at more than \$37 billion, growing at an average annual rate of around 7 per cent between 1998 and 2000, with a 24 per cent increase in 2001 (due mainly to increases in current assets, non-current receivables, investments and intangible assets).

Table 3.6 Cable & Wireless Optus — sales revenue and other indicators
year ended 31 March

	1998	1999	2000	2001	Share of revenue 2001	Growth ^e
	\$m	\$m	\$m	\$m	%	% p.a.
Local telephony ^a	10	72	329	403	8	243
Long distance telephony ^b	1 052	1 035	1 048	1 141	23	3
Mobile communications	1 326	1 453	1 762	2 120	43	17
Data	91	129	187	302	6	49
Capacity sales ^c	0	3	113	151	3	n.a.
Satellite	121	97	163	222	5	22
Other business services	148	237	321	281	6	24
Internet services ^d	23	67	107	183	4	100
Cable television	108	107	115	138	3	9
Inter-divisional revenue	0	0	(33)	(62)	-	n.a.
Total sales revenue	2 879	3 200	4 112	4 879	100	19
EBIT before abnormals	81	274	383	461	n.a.	79
Total assets	6 050	6 797	8 430	10 934	n.a.	22

^a Includes broadband local revenue and local access resale revenue. ^b Includes broadband long distance, long distance resale, and long distance business and wholesale revenue. ^c Sales of transmission capacity to other carriers. ^d Includes business internet and e-commerce and consumer dial-up internet revenue. ^e Average annual growth 1998 to 2001.

Source: Cable & Wireless Optus 2001a.

Because of the somewhat different nature of the Cable & Wireless Optus network compared to Telstra’s, there are differences in the revenue sources of the two carriers. While local telephony accounts for less than 10 per cent of sales revenue for Cable & Wireless Optus, it is a fast growing source — reflecting both the uptake of services on its own broadband network as well as local call resale. Long distance telephony is a significant source of revenue (23 per cent), but not a growth area. Mobile services are Cable & Wireless Optus’ most important revenue source and are also relatively fast growing. Data and internet services combined contributed 10 per cent of revenue to end March 2001 and were among the fastest growing sources (behind local telephony).

In the period 1998–2001, Cable & Wireless Optus’ revenue growth and profit (EBIT) growth have been well above the industry average — at around 19 per cent and 79 per cent per year respectively. Its revenue growth for the year to end March 2001 was similar to its earlier performance while its EBIT growth was around 20 per cent (Cable & Wireless Optus 2001c). At the end of March 2001, Cable & Wireless Optus’ total assets were valued at nearly \$11 billion, and grew at an average annual rate of around 22 per cent between 1998 and 2001.

Profitability of the main players

Some indicative information on the profit performance of the largest three players is reported in table 3.7. It is apparent that Telstra’s profitability (measured by the ratio of EBIT to operating revenue) is very much higher than that of its main rivals. As an indication of Telstra’s above industry-average profit performance, Macquarie Corporate Telecommunications commented:

Telstra still boasts that three out of four telecommunications dollars spent in Australia are spent with Telstra and that 90 per cent of all profits from telecommunications services were made by Telstra in 1999-00 (sub. DR97, p. 1).

Table 3.7 Profitability performance — main players

Carrier	1999 ^a			2000 ^a			2001 ^a		
	EBIT ^b	Revenue ^c	Margin ^d	EBIT ^b	Revenue ^c	Margin ^d	EBIT ^b	Revenue ^c	Margin ^d
	\$m	\$m	%	\$m	\$m	%	\$m	\$m	%
Telstra	5 849	18 218	32.1	6 489	20 581	31.5	6 359	23 086	27.5
C&W	274	3 236	8.5	383	4 159	9.2	461	4 947	9.3
Optus									
AAPT	26	751	3.4	57	942	6.1	na	na	na

^a Year ending 30 June except for Cable & Wireless Optus, which is year ending 31 March. ^b Earnings before interest and tax (and before abnormals). ^c Operating revenue. ^d EBIT as a percentage of revenue.

Source: Telstra 2000a and 2001c, Cable & Wireless Optus 2001a, AAPT 2000a, 2000c.

Many of the telecommunications companies are still struggling to become profitable. For example:

- Hutchison reported year end June 2000 earnings before interest, tax, depreciation and amortisation (EBITDA) of minus \$22.1 million.
- PowerTel announced in July 2001 that as a result of the general downturn in the telecommunications sector, it had revised the time at which it expected to achieve a break even EBITDA from the fourth quarter of 2001 to the first half of 2002 (<http://www.asx.com.au>).

- Uecomm announced in June 2001 that it expected total revenues for the full year 2001 of around \$50 million and EBITDA to be approximately minus \$12.5 million (<http://www.asx.com.au>).

Ownership of the main players

In the local market, many of Telstra's competitors are either wholly or majority owned by large multinational players. Ownership details for some of the largest carriers are reported in table 3.8. As noted above, the most significant recent change has been the proposed acquisition of Cable & Wireless Optus by SingTel. The Singapore Government owns 78 per cent of SingTel.

Telecom New Zealand became the major shareholder in AAPT in November 1999, when it increased its stake to 80 per cent. Telecom New Zealand subsequently bought out the minority shareholders in November 2000 and then delisted AAPT from the Australian Stock Exchange.

Vodafone Group plc recently increased its stake in Vodafone Pacific from 91 to 95.5 per cent as a result of the takeover of Mobile Communications, which owned 4.5 per cent of Vodafone Pacific.

Table 3.8 Nature of ownership — largest carriers

<i>Carrier</i>	<i>Main shareholder</i>
Telstra	50.1 per cent owned by The Commonwealth of Australia
Cable & Wireless Optus	Previously majority owned (52.5 per cent) by Cable & Wireless plc (UK). Approval of takeover bid by Singapore Telecommunications Limited (SingTel) announced by the Government on 22 August 2001
AAPT	Wholly owned by Telecom Corporation of New Zealand (Telecom NZ)
Vodafone	95.5 per cent owned by Vodafone Group plc (UK)
Primus	Wholly owned by Primus Telecommunications Group Inc. (USA)
Hutchison	Majority owned (58 per cent) by Hutchison Whampoa Limited (HK)

Sources: Telstra 2000a, Cable & Wireless Optus 2000b, <http://www.aapt.com.au>, http://www.vodafone.com/media/press_releases/994339746.htm, <http://www.primus.com.au>, *Australian Financial Review*, 15 January 2001, p. 11.

3.5 Infrastructure investment

Capital expenditure

The information available on aggregate capital expenditure by the various players in the telecommunications industry is somewhat limited. Access Economics commented on the situation as follows:

The availability of data on aggregate investment levels and composition is ... poor. Carriers must lodge industry development plans with the Department of Communications, Information Technology and the Arts, and there is a requirement that a version of these plans should be made available to the public, but the content of these reports is generally only descriptive and they provide little detail about what capital expenditure is planned by carriers, or its value, location or timing (sub. 41, annexure B, p. 17).

The ABS survey of the telecommunications services industry for 1996-97 referred to above, and its update for 1998-99, did not obtain information on capital expenditure. Trends in capital expenditure are examined here in terms of information for the largest three carriers (table 3.9).

Table 3.9 Capital expenditure — largest 3 players
\$ million, year ended 30 June unless otherwise specified

	1996	1997	1998	1999	2000	2001
Telstra ^a	3 904	4 248	3 741	4 274	4 705	4 368
Cable & Wireless Optus ^b	1 436	1 627	786	898	1 471	1 604
AAPT ^c	n.a.	n.a.	111	204	215	na
Total largest 3 players	5 340	5 875	4 638	5 376	6 391	

^a Capital expenditure excluding capitalised interest. ^b Data for 1999 and 2000 are year ended 31 March.

^c Data for 1998 and 1999 are taken from AAPT 1999a. AAPT was expecting to invest in excess of \$500 million in the year to 30 June 2001.

Source: Telstra 2000a, Cable & Wireless Optus 1999b, 2000b, AAPT 1999a, 2000a.

Because capital expenditures in telecommunications projects can be lumpy — such as major network deployments — there are dips and peaks over the five-year period for both Telstra and Cable & Wireless Optus. The relatively high capital expenditures in 1995-96 and 1996-97 reflect in part Telstra's and Cable & Wireless Optus' broadband network rollouts. Even so, expenditure was highest in 2000, when the largest three operators undertook combined capital expenditure of around \$6.4 billion.

Warren and Landrigan (2000) argued that regulation is having an adverse effect on investment levels in Australian telecommunications. They stated that (p. 15):

There are, in particular, signs of 'cheap riding': that is, entrants rather than investing themselves, prefer to rely on Telstra's investment efforts ... Telstra's total capital expenditure (expressed as a percentage of total sales revenues) has increased over the 1994-1999 period, while Optus' capital expenditure (expressed as a percentage of total sales revenues) has declined dramatically over this same period.

However, the information in table 3.9 reveals that such a conclusion may not be justified. In the case of Cable & Wireless Optus, the major capital expenditure associated with its HFC cable network rollout was largely completed by 1997-98

and hence it is not surprising that the pre-1998 level of expenditure was not maintained. However, Cable & Wireless Optus' capital expenditure picked up again appreciably in 1999-00. Indeed, over the period 1998–2000, its capital expenditure growth performance has been faster than that of Telstra. Because of the lumpiness of much investment expenditure, arguments linking regulation and investment can either be supported or refuted depending on the selection of the particular start and end years. In any case, what is relevant is an appropriate 'counterfactual' — this is not readily discernible, if at all.

The information in table 3.9 covers the largest three players only. As an indication of aggregate capital expenditure across all providers, DCITA has reported that telecommunications companies were undertaking capital expenditure of more than \$9 billion during the financial year 2000-01. Of this amount, more than 34 per cent was to be undertaken in non-metropolitan areas (Campbell 2000).

To gain an idea of the recent investment expenditure by particular players on individual infrastructure projects, some selected examples are reported in box 3.6. Further information about potential investment in particular projects is given in a recent BIS Shrapnel report commissioned by the ACCC (BIS Shrapnel 2001).

Box 3.6 Selected capital expenditure projects undertaken or planned

Austar has rolled out its infrastructure in regional Australia to the value of between \$800 million and \$1 billion (sub. 60, p. 2).

PowerTel committed \$325 million to complete its initial network construction phase. This occurred in December 2000 (*Prospectus*, January 2001).

Nextgen Networks is proceeding with the development of an \$850 million national optic fibre cable network extending from Brisbane to Perth via Sydney, Canberra, Melbourne and Adelaide (<http://www.leighton.com.au>).

ntl Telecommunications has announced a three year \$140 million contract to build a microwave and fibre network in eastern Australia (<http://www.ntl.com.au>).

Amcom's fibre optic link between Melbourne and Adelaide is being rolled out at a capital cost of around \$25 million (<http://www.amcom.com.au>).

Uecomm has invested \$30 million in its fibre optic network in Sydney, Melbourne and Brisbane by end 1999, about \$75 million in 2000 and \$56 million in the half year to June 2001 (<http://www.uecomm.com.au>).

Patterns of infrastructure investment

The period since July 1997 has seen the entry of alternative infrastructure providers to Telstra, Cable & Wireless Optus and Vodafone in some network segments. At the

end of 1999, the National Bandwidth Inquiry report (AIEAC 1999) summarised the scope for infrastructure-based competition as follows:

It is useful to think of the Australian market as a series of markets with varying characteristics, ranging from thin and, in some cases, commercially non-viable routes where Telstra remains the sole service provider, to thick, CBD, inter-capital and international routes in which both service and infrastructure based competition is occurring (p. 8).

A further 30 carrier licences have been granted in the twelve-month period since the National Bandwidth Inquiry report was released, with new carriers announcing plans to deploy new infrastructure in a range of network segments.

Telstra views the infrastructure investment undertaken by competitors in the industry so far as being heavily skewed:

... Australia suffers from very skewed patterns of investment in the fixed network as a result of regulatory distortions. The access regime and the access pricing principles that are already embedded within it, generate enormous costs and deter efficient investment. As a result, it is already apparent that there is no significant fixed network investment by Telstra's competitors outside the major metropolitan regions ... The provision of regulated access on uneconomic terms has dulled the incentives for facilities-based competition, virtually eliminating investment by Telstra's competitors outside of the CBDs (sub. 24, p. 2).

Some participants rejected the claim that an access regime may hinder investment in infrastructure by new entrants (further examined in chapter 11). For example, AAPT argued that access-based competition can *lead to* infrastructure-based competition:

... AAPT's experience is that it is in those markets where access services have promoted competition, investment opportunities are created. The most efficient way to secure facilities-based competition is to allow new entrants to first build a customer base using access services. This provides the incentive for investment, the means of securing funding and the experience to efficiently employ those funds in new networks (sub. 7, p. 3).

Davnet expressed a similar view:

Another myth is that declaration or the threat of it has a dampening effect on access provider investment. This has simply not occurred, as incumbents and new access providers continue to make significant post-1997 network investments in declared markets ... Indeed, the post-1997 environment if anything has been characterised by over-investment in telecommunications infrastructure (sub. 13, p. 3).

To put these views in perspective, the remainder of this section describes the new networks either undertaken, in progress or being planned by new carriers in the various network segments (further details are provided in appendix C).

Long-haul backbone routes

The National Bandwidth Inquiry report (AIEAC 1999) found that current usage rates on the main domestic trunk routes are only a small fraction of the available bandwidth capacity. For example, use of capacity on key routes in 1999 was assessed as follows:

- Sydney-Melbourne — usage was about 0.72 per cent of capacity (or, in other words, capacity was about 140 times usage);
- Sydney-Brisbane — usage was about 1.09 per cent of capacity;
- Adelaide-Perth — usage was about 1.61 per cent of capacity; and
- usage for all other inter-capital city routes was less than 1 per cent of capacity.

Furthermore, technological developments like Dense Wave Division Multiplexing (DWDM) can enhance the capacity of existing fibre optic cables — for example, the capacity of a single fibre can be increased by factors of the order of 16 or even 160-fold. Macquarie Corporate Telecommunications noted that DWDM:

... has the capability to enhance the capacity of a single fibre so that it would be capable of efficiently carrying the entire forecast load between Melbourne and Sydney for the next five years (sub. 11, p. 10).

Yet these features have not served to deter new backbone network deployments. A number of new carriers have chosen to deploy fibre optic or microwave backbone networks to compete with Telstra and Cable & Wireless Optus on particular routes — such as PowerTel, Macrocom and Soul Pattinson. There are also other backbone networks currently being deployed (for example, by Amcom, Reef Networks, ntl Telecommunications and Telecasters) and many more network plans are being proposed (appendix C). The largest telecommunications infrastructure investment announced recently is that by new carrier Nextgen Networks, which plans to build an \$850 million fibre optic network stretching from Brisbane to Perth. When completed, it will be competing with at least five other network operators on the Melbourne-Sydney-Brisbane route, and three on the Melbourne-Adelaide-Perth route (table 3.10).

Macquarie Corporate Telecommunications interpreted such strategies as follows:

... what has happened is that because the entrenched operators are restricting access to underlying fibres, new entrants are forced to commit to uneconomic duplication of infrastructure and reproduce the most expensive transmission element (sub. 11, p. 10).

But as the AIEAC (1999, p. 62) noted in its inquiry into bandwidth:

... new market entrants who install additional capacity must consider that the costs of network construction are justified and that they can compete effectively with existing carriers.

Table 3.10 Current and proposed network operators on long-haul routes
by route segment

<i>Route</i>	<i>Operators (end 2000)</i>	<i>Proposed operators</i>
Sydney-Melbourne	Telstra Cable & Wireless Optus PowerTel Macrocom	Soul Pattinson Nextgen Networks ntl Telecommunications
Sydney-Brisbane	Telstra Cable & Wireless Optus PowerTel Macrocom Soul Pattinson	Nextgen Networks ntl Telecommunications
Melbourne-Adelaide	Telstra Cable & Wireless Optus	Amcom Telecommunications Nextgen Networks Macrocom Nava Networks
Adelaide-Perth	Telstra Cable & Wireless Optus	Amcom Telecommunications Nextgen Networks Nava Networks
Brisbane-Cairns	Telstra	Reef Networks Telecasters Communications ntl Telecommunications
Mainland-Tasmania	Telstra	National Grid ntl Telecommunications Macrocom

Sources: Carriers' websites, *exchange* (various issues).

The viability of these networks therefore turns on expectations about the pricing and other behaviour of market participants and the key drivers on the demand side of the market. As noted above, the internet and data markets are the fastest growing segments of the telecommunications industry (table 3.2). A range of estimates have been made on likely growth rates in demand for bandwidth, including:

- studies commissioned by the AIEAC inquiry suggested that the growth in wholesale bandwidth demand is expected to be in the range of 30 to 60 per cent per annum (1999, p. 152);
- Paul Budde has estimated the broadband data market to be growing at an annual rate of 20–30 per cent in recent years (Budde 2000a); and
- research by Ovum and KPMG suggests that market demand for bandwidth is growing at 40 per cent per year (Nextgen Networks 2000).

Another feature of telecommunications networks is that the marginal cost of spare capacity at the time of deployment is very low — because construction costs rather than equipment costs form the bulk of network deployment costs. For example, for a fibre optic trunk route rollout, the network equipment might account for 25 per cent of network costs and construction costs for the other 75 per cent (*exchange*, 12/41, p. 15). Hence, it is not surprising that trunk networks tend to be installed with considerable initial surplus capacity, so that future increases in demand for bandwidth can be easily accommodated.

CBD networks

There has been considerable deployment of fibre optic and wireless networks in all capital city CBDs, ranging from around ten network providers in the most populous cities (Sydney and Melbourne) to only two or three in the smallest capitals (Hobart and Darwin) (appendix C, table C.2).

But Telstra argued that it is really *only* in CBDs that other carriers have invested in new infrastructure:

... Telstra's competitors have only really offered access and local call services in the CBDs, while relying on regulated access to Telstra's network to provide services elsewhere. They have, in other words, only invested in their own facilities in the most densely populated, high revenue areas, while relying on Telstra to incur the investments needed to provide services in other parts of Australia (sub. 24, p. 17).

To support the claim that competitor infrastructure is being confined to CBDs, Telstra presented evidence in relation to local number portability (LNP) and Telstra's access payments to competitors. In situations where a customer switches from Telstra to a competitor but wishes to retain the existing telephone number, Telstra is required to port that number to the competitor, but competitors can only terminate ported numbers where they have infrastructure in place. Similarly, the termination payments that Telstra makes to other carriers (for local and domestic long distance calls) indicates the extent of local network infrastructure operated by other carriers. This information indicates that:

- the number of services ported to competitors in 1999-00 accounted for just over 1 per cent of total services across Australia, and they were confined to just four call charging areas — Sydney, Penrith, Melbourne and Brisbane; and
- 80 per cent of total competitor termination traffic was in the five major CBDs of Sydney, Melbourne, Brisbane, Perth and Adelaide.

It might also be argued that these data are not so much an indication of networks deployed but rather reflect Telstra's continued dominance in the local access market

(chapter 4). While some new infrastructure has been rolled out, other new infrastructure is currently being deployed, and hence it will take time for services to come onstream and for these new network operators to build customer bases. Moreover, it may not be economically efficient for duplication of facilities in much of the country.

Local access networks

Telstra is still overwhelmingly the dominant nationwide provider of customer access networks (the ubiquitous copper local loop). According to AAPT (2000b):

... there are not more than 400 000 lines out of a total of 10 million that are not owned by Telstra.

Telstra commented that the pattern of new network deployment (in particular the lack of deployment of alternative customer access networks in Australia) is in contrast to developments overseas:

In the UK for example, alternative network is now widespread with nearly 20 per cent of all lines in the UK provided by companies other than BT. Equally, even in New Zealand, where population density is relatively low, the development of alternative access networks has outstripped that in Australia, with Clear setting up optical fibre networks in relatively small centres such as Christchurch and now in the process of a nation-wide rollout of LMDS [local multipoint distribution service] to business customers. In addition, Saturn, a joint venture with Telstra, has committed to the extensive rollout of competing local loop in the main centres as well as Dunedin, Hamilton and Tauranga. It is surely striking that the rollout plans announced by Telstra's competitors in Australia are far more limited in scope (sub. 24, p. 19).

But this assessment seems to understate the deployment of customer access networks either undertaken or in the pipeline in Australia (appendix C, table C.3). For example, the cable-based customer access networks deployed (or being rolled out) in capital city metropolitan areas and regional cities are summarised in table 3.11.

It is also important to distinguish between alternative network *availability* and the *take-up* of services on these alternative networks. For example, Cable & Wireless Optus' HFC network passes around 30 per cent of households in Australia. While it currently provides local access services for only around 4 per cent of households overall, it has a penetration of 18 per cent in the geographic markets it contests and take-up is growing rapidly.

Rather than duplicating existing networks, newer operators of cable networks are filling in some of the gaps in coverage, such as: TransACT's fibre network in Canberra; Windytide's (Austar) HFC network in Darwin; West Coast Radio and

iiNet in Perth, targeting new suburbs not cabled by Telstra; Neighborhood Cable's HFC networks in Ballarat and Mildura (and planned for Geelong, Bendigo, Albury and Wodonga); and Smart Radio Systems' fibre optic network in Cooma.

Table 3.11 Cable (HFC, fibre) customer access networks

Includes networks deployed and in progress

<i>State/Territory</i>	<i>City/region</i>	<i>Carrier</i>
NSW	Sydney	Telstra
		Cable & Wireless Optus
	Cooma	Smart Radio Systems
	Albury	Neighborhood Cable (planned)
Victoria	Melbourne	Telstra
		Cable & Wireless Optus
	Mildura, Ballarat	Neighborhood Cable
	Geelong, Bendigo, Wodonga	Neighborhood Cable (planned)
Queensland	Brisbane	Telstra
		Cable & Wireless Optus
	Gold Coast	Telstra
South Australia	Adelaide (partly)	Telstra
Western Australia	Perth (partly)	Telstra
	Perth (new suburbs)	West Coast Radio (Broadcast Engineering Services)
	Kalgoorlie	iiNet
ACT	Canberra	Cable & Telephone
NT	Darwin	TransACT
		Windytide (Austar)

Source: Carriers' websites.

In many locations, wireless and satellite systems provide perhaps the greatest scope for facilities-based competition in the provision of broadband services. Some recent examples include:

- nationwide rollouts of LMDS networks are currently being undertaken by AAPT and Agility Networks (a subsidiary of Cable & Wireless Optus); and
- wireless networks are being deployed, or are planned, in many metropolitan areas — including those by carriers such as Datafast, Netcare, Third Rail, Agile, iiTel, Swiftel and AirNet (appendix C, tables C.3 and C.4).

Regional and rural areas

There are fewer operators on regional inter-city routes than on the main inter-capital city routes because of the lower traffic volumes, though some new entrants are rolling out fibre optic links and others are building microwave links on higher

traffic regional routes. Significant network deployments to service rural and regional areas are currently underway or planned using wireless and/or satellite technologies — some examples are reported in box 3.7 (appendix C, table C.4). Regional networks are also described in chapter 16.

Box 3.7 Examples of planned network deployments in regional areas

COMindico — deploying Australia's first pure IP network by installing nodes in all 66 Telstra call charging areas throughout Australia, to provide converged voice, data and multimedia services (*exchange 12/36*, p. 3).

Bush Telegraph (BushTel) — planning to use non-line-of-sight wireless local loop equipment interconnected to the COMindico pure IP backbone network to provide telephony and high speed internet access to regional centres in WA and the NT (*exchange 12/36*, p. 2).

Chime Communications — deploying mainly wireless technologies to deliver services in remote, regional and suburban centres in WA.

Agile — deploying a microwave network to provide broadband services to the Coorong region, south-east of Adelaide.

Netcare Telecommunications — planning a microwave rollout in rural and regional areas of WA.

Airnet Commercial Australia — offering an integrated satellite/wireless network (via a strategic alliance with Auspace) to deliver high speed internet and other services to rural Australia.

Source: Carriers' websites.

Cellular mobile networks

There has been significant investment in mobile networks. Following the collapse of One.Tel, there are now four mobile network operators — three operators of global system for mobiles (GSM) networks (Telstra, Cable & Wireless Optus and Vodafone) and two operators of code division multiple access (CDMA) networks (Telstra and Hutchison) (appendix C, table C.5). Recent developments that have occurred in relation to mobile network providers include:

- in May 2001, AAPT announced it had abandoned its rollout of a CDMA mobile network, writing off more than \$125 million spent up to 31 December 2000; and
- following the collapse of One.Tel, there is a possibility that its 1.8GHz mobile spectrum might be bundled with Lucent's Next Generation mobile network for sale as a package of complementary assets (Lacy 2001c).

The Government's 3G mobile spectrum auction of licences in the 2GHz band was

held in March 2001 and generated total revenue of \$1.168 billion — about \$61 per head of population.¹

While the largest bidders were the incumbent mobile network operators (Telstra 3G Spectrum Holdings, Optus Mobile, Vodafone Pacific and Hutchison) the 3G spectrum auction also saw the entry of two new companies into the Australian market — Qualcomm and CKW Wireless.

Summary of network deployments

The ACA has summarised trends in the types of networks deployed by new carriers over the three years to June 2000, based on their Industry Development Plans. The major trends have been (ACA 2000b, p. 5):

- *wireless networks were more popular than cable* — 15 carriers planned to deploy cable networks to deliver services, while 20 planned to use radiocommunications facilities, either solely or in combination with cable;
- *significant opportunities for more economical provision of services* — particularly over wireless local loops to specialised market segments, such as corporate and government customers in metropolitan regions and customers in regional areas;
- *the most populous markets were still preferred* — two-thirds of new carriers planned to invest in the most populous markets with either nationwide or inter-capital networks; but
- *increased regional emphasis* — the most significant change was a growth in the number of new carriers seeking to develop niche markets in regional areas.

¹ This amount was much lower than the average price paid at European 3G spectrum auctions in 2000 of around \$407 per head (and \$1000 per head in the UK and Germany). As a result of the high prices paid by European carriers, there is concern about whether they will be able to fund the rollout of the 3G networks and ever earn an adequate return on investment (Grant Samuels & Associates 2001).

4 State of competition

Box 4.1 Key messages

The telecommunications market has seen the entry of a large number of new players since 1997 — carriers, carriage service providers and internet service providers. However, the extent to which effective competition has developed varies in the different market segments.

Among the more competitive markets are:

- Mobile services — despite the collapse of mobile network operator and reseller One.Tel, the mobile market is very competitive and this is likely to intensify with the introduction of mobile number portability in September 2001 and the planned introduction of 3G services by some operators in late 2002/early 2003.
- Internet services — there are four providers of backbone services, with Telstra accounting for more than half of the wholesale market. The retail dial-up market has a very large number of providers (more than 650) with Telstra having the largest market share at around one-quarter.
- Data services — many new players have built data networks and captured substantial market share, particularly in the newer technology areas such as frame relay, ATM and managed IP services, where Telstra appears to hold less than 50 per cent of the market.
- Long distance telephony services — new entrants have provided strong competition in the international call market, collectively capturing around one-third. While Telstra still accounts for around 75 per cent of the domestic long distance market, new entrants have driven much recent price competition and there is appreciable customer churn.

Facilities-based competition is emerging in long-haul transmission services with the entry or planned entry of competitors to Telstra and Cable & Wireless Optus on most inter-capital city routes.

Effective competition is less well developed in:

- Local access services — Telstra's ubiquitous copper local loop is still overwhelmingly the dominant customer access network in Australia and likely to remain so for the foreseeable future. At June 2001, Telstra accounted for around 95 per cent of local access services, with Cable & Wireless Optus accounting for most of the remainder.
- Local telephony services — Telstra accounts for around 81 per cent of retail local telephony revenue and 83 per cent of retail local services, with most competition provided by resellers of Telstra's services rather than Cable & Wireless Optus' HFC network. Sustainable service-based competition in local telephony is dependent on Telstra's local call wholesale service provided to competitors, as well as its access prices for the unconditioned local loop service.

Competition in retail pay TV services among the main providers is limited. The only contested markets appear to be metropolitan Sydney, Melbourne and Brisbane (where Optus Television competes with Foxtel) and the Gold Coast (where Austar competes with Foxtel). All other geographic market segments are predominantly served by either Foxtel or Austar.

Overall, while the existing state of competition is much greater than some years ago, this partly reflects the impact of the competition regulations that are in place. In the absence of any regulatory oversight, it is likely that competition would be weakened significantly. A degree of continued oversight is justified.

4.1 Introduction

In considering the state of competition in telecommunications markets, it is useful first to examine the three main forms of competition — facilities-based (or network-based), access-based and resale (section 4.2). An assessment of competition and market power depends on how the relevant markets are defined, and also the particular market characteristics that can indicate the likely strength of competitive pressures on participants (section 4.3). The bulk of the chapter examines how competition has developed in particular telecommunications markets over the last decade, and also likely future developments (sections 4.4 through to 4.11). Section 4.12 examines whether competition has developed sufficiently to dismantle regulation. Regional aspects of competition are examined in chapter 16.

4.2 Competition in telecommunications

Types of competitors

There are three main types of competitors in telecommunications markets (ACCC 2000o, pt. 2, paper 1):

- *facilities-based* — providers that build their own network infrastructure to compete either as wholesalers or as integrated retailers or as both;
- *access-based* — providers that combine some of their own network elements (such as switches) with services supplied by facilities-based providers to compete in wholesale and retail markets; and
- *resellers* — providers that compete in retail markets by reselling the services offered by facilities-based providers. Resellers can add value in the form of customer support and billing.

Another classification distinguishes facilities-based and service-based competition (ACCC 1999b). Competition at the retail service level can involve resellers of end-to-end services and access-based providers as well as integrated facilities-based providers (see below).

While these main types of players can be distinguished, some follow more than one type of competitive strategy. For example, some providers use access to the networks of facilities-based providers as a way of building an initial customer base and gaining knowledge of markets and technologies before investing in their own network infrastructure. Similarly, some facilities-based providers may use resale to expand their range of services and/or lease capacity from other facilities-based providers in order to extend the geographic coverage of their networks.

Levels of competition

Competition in telecommunications markets can take place at two functional levels:

- *wholesale level* — facilities-based providers and access-based providers compete in the provision of wholesale services; and
- *retail level* — integrated facilities-based and access-based providers compete at this level, along with resellers.

A characteristic of telecommunications markets is that there is a very high degree of vertical integration across the wholesale and retail levels, with facilities-based providers tending to be the main providers at the retail level.

4.3 Assessing the state of competition

Defining telecommunications markets

Any assessment of whether a firm has market power depends on how broadly or narrowly a market is defined. In this respect, markets can be defined in terms of four dimensions (ACCC 1999a):

- *product* — a market should encompass products that are close substitutes for end-users (for example, are fixed and mobile services close enough substitutes?);
- *function* — the most common functional levels are the wholesale and retail levels;
- *geographic* — in some markets the area of close competition may be nationwide, while in others it may be regional in scope; and
- *time* — competition is a dynamic process and hence it is preferable to take a long-run view of substitution possibilities.

The market groupings used below to examine the state of competition in telecommunications are broadly those that the ACCC (1999c, 2000b, 2000g) and other participants identified as the main areas of competition, namely:

- local access services;
- local telephony services (local calls and line rental);
- long distance telephony services (domestic and international);
- mobile services;
- internet services;

-
- data services; and
 - broadband services.

Perhaps the most debatable market definition in terms of the product dimension is that of treating fixed telephony services and mobile services as separate markets. As Daly and Stoeckl (2000, p. 119) have commented:

Mobile phones at the very least offer a cap on the prices that a fixed local service is able to charge. Casual empiricism suggests that for many people mobile phone services are a close (albeit imperfect) substitute for fixed phones.

The higher charges for mobile calls have been one factor reducing the substitutability between fixed and mobile services. However, one new mobile entrant, Hutchison, has introduced a service on its Orange One mobile network in Sydney and Melbourne that is in direct competition with fixed local telephony providers.

The Commission has chosen to examine the fixed telephony and mobile areas separately, as well as combined, and in terms of the various types of fixed and mobile calls (such as fixed-to-fixed, fixed-to-mobile and mobile-to-fixed).

Effective competition

Ordover stressed that whether a market is competitive or not should be judged not against the criterion of textbook ‘perfect competition’ but rather in terms of *effective* competition:

An effectively competitive market provides a better and more realistic benchmark against which to assess the current state of competition and the incumbent’s ability to exercise substantial market power to the detriment of competition and consumers. In an effectively competitive market, one or more firms may possess some degree of market power, yet pose no significant risk to present and future competition (sub. 43, p. 8).

The Australian Trade Practices Tribunal has defined competition in terms of a process of rivalry:

Competition expresses itself as rivalrous market behaviour. In our view, effective competition requires both that prices should be flexible, reflecting the forces of demand and supply, and that there should be independent rivalry in all dimensions of the price-product-service packages offered to consumers and customers (*Queensland Co-operative Milling Association Ltd and Defiance Holdings Ltd* (1976), ATPR 40-012, at p. 17 246, quoted in AAPT sub. 7, p. 5).

To determine the extent to which effective competition has developed in telecommunications markets, it is necessary to look at structural features of the

markets, behaviour of the main participants and the market outcomes that have resulted from these structural and behavioural characteristics.

Indicators of effective competition — elements of market structure, conduct and performance

One of the features of the telecommunications industry noted in chapter 3 was the significant entry of new service providers since 1997. But the number of players is only one element of the competitive environment. For example, Davnet commented that:

Commonly quoted ‘competition’ intensity measures like the number of new carrier entrants, with reference to the large number of carrier licensees ... or to the number of ISPs ... is extremely superficial. Most of this ‘competition’ refers to either marginal downstream retail competition, other niche retail competition, apparent wholesale contestability or niche CBD wholesale contestability (sub. 13, p. 1).

A more comprehensive set of indicators needs to be used to assess the state of competition. As the ACCC stated:

Competitive markets are not usually identifiable by a single, one-dimensional measure. The nature and extent of competition are the outcome of both structural and behavioural factors (sub. 40, p. 18).

Accordingly, the characteristics of a market that can be examined include:

- *elements of market structure* — for example, the number of players competing in the market, the market shares of the main players, the degree of concentration (the extent to which a small number of players account for a large share of the market), the height of barriers to entry (the relative ease or difficulty for a new player to enter the market), costs of exit and the extent of vertical integration (between wholesale and retail services); and
- *elements of market behaviour/performance* — for example, prices of wholesale services and access to infrastructure, prices of retail services, marketing strategies and the range and quality of services provided.

Of course, the way in which firms compete in a market is also influenced by broader influences, including the regulatory framework in which they operate.

Ordoover suggested that to assess the effectiveness of competition in telecommunications markets, evidence should be examined in relation to at least the following features (sub. 43, pp. 55–6):

-
- *Patterns of market entry* — the entry of new competitors demonstrates that entry barriers are low. It is important also to examine investment trends by new and incumbent firms.
 - *Trends in market shares* — provide some indication of the extent of industry rivalry. If the incumbent has continuously ceded market share over time, this is indicative of strong competitors.
 - *Pricing trends* — price reductions and product innovations provide an indication of rivalry as competitors respond to changing competitive conditions and customer tastes.
 - *Customer churn* — competition is likely to be strong where consumers have numerous viable alternative service providers and switch between them.

Unfortunately, information on a comprehensive set of market structure, behaviour and performance characteristics is not readily available for the range of telecommunications markets examined here. For instance, in relation to one key indicator of the state of competition, namely changes in the market shares of the leading players, commercial sensitivities mean that carriers rarely report such measures. As Telstra noted:

The Australian carriers do not publish data that could readily be used to calculate market shares and hence it is necessary to rely upon estimates based upon carrier annual reports and other imprecise secondary data sources ... (sub. 24, p. 15).

Nevertheless, estimates are presented here of market shares in particular market segments, drawn from a number of sources, as well as other market characteristics and indicators of competition on which information is available.

Participants' views on the state of competition

Participants expressed a wide cross-section of views on the current state of competition in telecommunications services. The views ranged from the suggestion that the underlying market power of Telstra remains significantly unchallenged, to the suggestion that almost all telecommunications services in Australia appear to be effectively competitive (box 4.2).

Box 4.2 A selection of views on the state of competition

The ACCC concluded that conditions in the customer access market were not sufficient for effective competition and this was unlikely to change in the foreseeable future ... Conditions for effective competition did not exist in the downstream market for local telephony services (fixed local calls and line rental) ... [A]lthough competition had developed significantly in the market for long distance services, Telstra remained the main supplier of long distance telephone services and controlled the supply of PSTN origination and termination services, which represent a significant proportion of competitors' costs (ACCC sub. 40, p. 21).

While competition has developed successfully in some markets (such as mobile and international), Australia's interconnection prices still benchmark as high by OECD standards, the development of competition in local call services has been slow and this market is still in an extremely delicate stage (Cable & Wireless Optus sub. 8, p. 4).

Telstra still retains a unique position, which gives it a very high degree of market power in the fixed services market. Telstra retains control of the only ubiquitous fixed line network in Australia. That network (or system of networks) remains vitally important for the delivery of a range of voice and data communications services and it is unlikely that it will be economic to fully duplicate this network in the foreseeable future (Vodafone sub. 15, p 20).

The robustness and effectiveness of competition should not be judged merely by the number of new entrants — it is clear that there are many. The appropriate measure of competition is the extent to which the new entrants constrain the incumbent so that it no longer has a substantial degree of market power. This is not yet the position (PowerTel sub. 35, p. 14).

It is true that many new entrants have emerged since 1997 and that some markets and sub-markets are arguably competitive. Examples of areas in which there is enhanced competition include the markets for international and some other long distance calls ... [But] in key areas such as delivery of local call services, competition has not developed to a satisfactory level (One.Tel sub. 18, p. 6).

... there are still important parts of the industry that remain affected by competition to only a small degree. In particular, the fixed local telephony market remains dominated by Telstra ... Telstra still has substantial market power in a range of telecommunications markets, particularly in wholesale markets ... The effects of the current regime [on competition] have been felt most dramatically in ... business services and long distance voice services (AAPT sub. 7, pp. 21, 53).

The underlying market power of Telstra remains significantly unchallenged and even with these pro-active regulatory interventions, Telstra's market shares and pricing appear not to have been significantly impacted. As a vertically integrated access and service provider, Telstra continues to be motivated to restrict access where access may result in competition in downstream markets. Telstra still holds significant market dominance (Macquarie Corporate Telecommunications sub. 11, p. 9).

(Continued next page)

Box 4.2 (Continued)

While the vigour and long- term robustness of competition in the Australian fixed line telecommunications market may still be open to some debate, there is a general consensus within the Australian telecommunications industry that competition in the mobile sector is already vigorous and robust (Ericsson sub. 23, p. 3).

... competition in the Australian telecommunications industry is still emerging, and cannot be considered to have been achieved to date (iiNet sub. 5, p. 4).

... far from competition being still in the infant or fledgling state, Telstra now faces strong, well-established competitors — in many instances, the subsidiaries of entities far larger than Telstra itself ... Where competition has not developed to the same extent — primarily in access and local call service — the main impediment is not inherited market power, but rather persistent regulatory intervention that makes it cheaper and easier for competitors to rely on Telstra's network than to build networks of their own (Telstra sub. 24, p 5).

Almost all telecommunications services in Australia appear to be effectively competitive at this time, or are rapidly progressing in this direction. The two exceptions are (1) the provision of local access services and (2) universal termination services. However, even for these services, there is mounting evidence that nascent competition is taking root (Ordovery sub. 43, p. 5).

4.4 Local access services

There are two functional levels of the fixed local services market:

- *wholesale* level (local access) — where local network operators provide local access services to themselves and other service providers; and
- *retail* level (local telephony) — where integrated local network operators and other providers (resellers) supply local telephony services to end-users. Resellers purchase local access and an end-to-end local call service from a local network provider (local call resale).

This section looks at the first of these — the supply of local access services. Competition in retail local telephony services is examined in the following section.

Wholesale local access market shares

The fixed local access market is highly concentrated, with the main local network providers being:

- Telstra — which owns the fixed public switched telephone network (PSTN) throughout Australia; and

- Cable & Wireless Optus — which offers basic access services and local calls to residential and business customers over its hybrid fibre coaxial (HFC) cable network and fibre optic loops in capital city CBDs.

Information on the number of access lines or services in operation in recent years for the two main providers is given in table 4.1. It is clear that Telstra is overwhelmingly the main supplier of local access services, providing more than 10 million basic access lines at 30 June 2001.

Table 4.1 Local access lines in service
million, year ending month specified

<i>Network</i>	<i>June 1998</i>	<i>June 1999</i>	<i>June 2000</i>	<i>June 2001</i>
Telstra network ^a				
Residential basic access lines	6.77	6.93	6.51	6.29
Business basic access lines	2.43	2.44	2.36	2.47
Total retail customers	9.20	9.37	8.87	8.75
Domestic wholesale	0.34	0.39	1.18	1.30
Total basic access lines in service	9.54	9.76	10.05	10.06
Cable & Wireless Optus network				
Local telephony directly connected customers ^b	0.055	0.157	0.351	0.450
Total local access lines	9.595	9.917	10.391	10.515

^a The data refer to basic access lines, which exclude fax lines and ISDN lines. Also excluded are basic access lines for Telstra's own internal use. ^b Because the accounting year end for Cable & Wireless Optus is 31 March, the year end 30 June figures for 1998 and 1999 reported here are estimates, interpolated from the annual data. The data for end June 2000 are interpolated from the end March 2000 and end September 2000 data. Data for 2001 equals the March 2001 figure plus the estimated 3-months growth.

Sources: Telstra 2000a, 2001a, 2001c Cable & Wireless Optus 2000a, 2000e, 2001a.

Cable & Wireless Optus has offered local telephony over its HFC network since 1997-98, though the market coverage is limited to the metropolitan areas of Sydney, Melbourne and Brisbane. The number of directly connected local telephony customers was 318 000 at March 2000 (Cable & Wireless Optus 2000a) and 425 000 at March 2001 (Cable & Wireless Optus 2001a).

The Cable & Wireless Optus network passes 2.2 million homes, or slightly more than 30 per cent of Australian households. Hence, its local telephony penetration (customers as a proportion of households passed) at end March 2001 was around 19 per cent. With Telstra having the only alternative network in these areas, this is also Cable & Wireless Optus' share of local access in the geographic markets that it contests with its own network. Because the number of directly connected Cable & Wireless Optus local telephony customers is growing rapidly (albeit from a small base), there is scope for its share of local access to increase appreciably in the future.

In the business market, a number of new carriers have deployed networks in capital city CBDs to provide voice and high speed data services to business customers (appendix C). For example, Primus reported to the ACA that it had approximately 2000 services in operation at the end of June 2000 (ACA 2000b). While there is no published information available on the aggregate number of access lines by these newer network providers, anecdotal evidence suggests their share of the total number is likely to be around 1 per cent.

In terms of market shares of basic access services at a national level, therefore, these data suggest that at March 2001:

- Telstra's share was around 95 per cent;
- Cable & Wireless Optus' HFC network share was around 4 per cent; and
- competitors' CBD networks accounted for around 1 per cent.

Fixed and mobile local access services combined

Most analyses of competition in telecommunications markets treat fixed and mobile services as separate markets, because while mobile services are the main alternative to fixed local services, they may not be considered close enough substitutes to be included in the same market.

However, Ericsson assessed the substitutability between fixed and mobile services as follows:

The use of pre-paid schemes and the judicious use of consumer tariffing has made mobile telephony a true substitute for fixed line telephony resulting in a rapid growth in demand by individuals for mobile phones for personal use rather than for business purposes ... Moreover, the fixed basic network has been supplemented by the deployment of extensive mobile telephony infrastructure as the distinction between mobile and fixed telephony blurs and mobile communications becomes truly substitutable for fixed services (sub. 23, p. 5).

As Telstra commented:

Mobile telephony is converging with traditional fixed line services. For example, the [Hutchison] 'Orange' personal wirefree home phone, using wireless local loop technology, acts as both a home phone and a mobile ... At current prices, mobile phones can be a cost effective alternative for basic access services — particularly for customers that predominantly want to receive calls. Moreover, some mobile operators have recently announced plans to provide untimed local services so as to more effectively compete with the fixed network offerings (sub. 24, p. 43).

Hence, it is of interest to examine market shares at the wholesale level for the fixed and mobile access markets combined (table 4.2).

Table 4.2 Fixed and mobile wholesale services — combined market, early 2001

<i>Carrier</i>	<i>Fixed connections^a</i>	<i>Mobile connections^b</i>	<i>Total connections</i>	<i>Share</i>
	million	million	million	%
Telstra	10.070	5.058	15.128	70.0
Cable & Wireless Optus	0.425	3.682	4.107	19.0
Vodafone	-	2.110	2.110	9.8
One.Tel ^c and Hutchison	-	0.273	0.273	1.3
Total	10.495	10.850	21.618	100.0

^a Telstra data are at end December 2000 and Cable & Wireless Optus at end March 2001. ^b At end March 2001. ^c Placed in administration at end May 2001.

Sources: Telstra 2001a, Cable & Wireless Optus 2001a, Lacy 2001a.

For this broader market definition, Telstra and Cable & Wireless Optus retain their dominance because they are also the first- and second-ranked mobile operators. However, Telstra's share of the combined market (70 per cent) is somewhat lower than its fixed local access share, while Cable & Wireless Optus' share is higher (19 per cent). Vodafone — a mobile only carrier — accounts for around 10 per cent of total connections. Further details of the mobile services market are provided in section 4.7.

Entry barriers and new local access networks

Telstra's PSTN is the only ubiquitous fixed local access network in Australia. Particular features of the local access market mean that entry barriers are generally very high. As the ACCC commented:

... economies of scale and density, together with the sunk nature of the customer access infrastructure, constitute significant barriers to entry in the customer access market (sub. 40, p. 20).

The height of entry barriers in local access is also influenced by geographic factors. In relation to fixed local networks, Woodbridge stated that:

There are a large number of geographic segments of the local services market. The characteristics of geographic areas differ by the number, density and demands of customers. This alters the scope for entry and competition at the wholesale level. In some areas, such as CBDs, it may be economic for a number of network-based providers to enter and compete. In many rural areas of Australia, it may only be economic for one network provider to serve the entire market segment (sub. 41, annexure A, p. 21).

The sunk costs associated with deploying a local access network can also vary with the delivery technology: for example, wireless networks typically have lower infrastructure costs than cable-based networks.

Many new carriers have rolled out customer access networks (fibre optic and wireless) in CBDs involving dedicated connections to large business customers (appendix C, table C.2). As expected, the number of alternative infrastructure providers is fewer in the smaller capital cities (such as Hobart and Darwin where there are only one or two providers other than Telstra) than the larger cities (Sydney, Melbourne and Brisbane where there are ten or more alternative network providers).

The main reason for network duplication in CBDs is that the largest spending business customers tend to be located there, and this geographic concentration means that customer access networks can be deployed there more profitably.

As Access Economics noted:

Where [high value] customers are businesses they are usually geographically aggregated (in the various CBDs) and therefore alternative customer access networks [are] viable and have, to a degree, been constructed by entrants (sub. 41, annexure B, p. 34).

By contrast, in capital city metropolitan areas, the scope for new entrants to deploy cable-based alternative local access networks to the Telstra copper wire local loop is more limited because:

- Cable & Wireless Optus has rolled out an HFC network in Australia's largest three capital cities of Sydney, Melbourne, and Brisbane; and
- Telstra has rolled out an HFC network in the largest five capital cities — with a coverage of most of Sydney, Melbourne, Brisbane and the Gold Coast, and parts of Adelaide and Perth. The Telstra network overbuilt 80 per cent or more of the Cable & Wireless Optus network in Sydney, Melbourne and Brisbane (sub. 8, p. 155).

It is not surprising then that a number of new carriers have either rolled out or are in the process of deploying local access networks in *other* metropolitan and particular regional areas, using a range of technologies (appendix C):

- there are rollouts of cable-based local networks in progress in some cities — such as TransACT's fibre network in Canberra and Neighborhood Cable's HFC networks in Mildura and Ballarat (and planned for Geelong, Bendigo, Albury and Wodonga); and

-
- wireless local access networks (such as local multipoint distribution services, LMDS) are being deployed in capital cities and some regional centres (appendix C, tables C.3 and C.4), targeted mainly at business customers.

Will other networks compete with the local loop?

The most extensive competing network to Telstra's copper wire local loop is the Cable & Wireless Optus HFC network. Other cable-based and wireless local access networks are currently being deployed and new networks are likely to be built in the future. However, they will generally be of more limited geographic scope and have a much smaller customer base in comparison with the ubiquitous fixed local access network of Telstra. A selection of participants' views on competition with the local loop is provided in box 4.3.

Box 4.3 Participants' comments on competition with the local loop

It has been suggested that alternative networks will be able to break the monopoly of the local loop, but the reality is that alternative technologies such as wireless and satellite have had a very limited effect on competition. These technologies are only efficient in special circumstances and can rarely compete with in-ground copper local loops. It is unlikely that in the near future alternative networks will do any more than provide an illusion of competition, except in specific niche markets (Tasmanian Government sub. 36, p. 3).

... the development of competitive alternatives to Australia's incumbent networks (particularly in regard to the 'last mile') is, at best, nascent (AAPT sub. 7, p. 19).

[Absence of competitive infrastructure provision] suggests that competition regulation is essential to mandate competitive access to the in-place copper loop (Consumers' Telecommunications Network sub. 17, p. 3).

... it does not seem that effective competition has emerged across the whole telecommunications landscape of Australia. The key consumer area that is not being contested is the local loop (Australian Consumers' Association sub. 30, p. 1).

... technological developments in train now will transform the way Australians use communications services by increasing access to all manner of services traditionally only accessible over fixed lines ... Furthermore, technological developments over the next year or so will further increase its competitiveness to the point where mobile services will truly be substitutable for fixed services (Ericsson sub. 23, pp. 7-8).

Hence, Telstra's fixed copper wire local loop will remain the single largest network on which calls originating on these new networks (and mobile networks in the case of mobile-to-fixed calls) are terminated, for the foreseeable future. While there is unlikely to be a single alternative network to compete with the local loop, Telstra

will face increasing competition (as it currently does from the Cable & Wireless Optus HFC network) in particular geographic sub-markets.

Assessment of state of competition

Telstra (2000a) has described the state of competition in local access services as follows:

We currently face limited infrastructure competition in basic access and local call services. However, we expect that competition will increase significantly in these markets as competitors deploy their own infrastructure (p. 32).

In the future, competition is likely to increase and Telstra's share of local access services is likely to decline somewhat as a result of:

- growth in the number of direct connections for local telephony to the Cable & Wireless Optus network;
- growth in the number of direct connections of business customers to the networks of competitors in CBDs; and
- direct connections to new cable-based and wireless local access networks currently being deployed and other networks likely to be deployed in the future.

4.5 Local fixed telephony services

Nature of market

The supply of local telephony services (fixed local calls and line rental) generated retail revenues of around \$4.8 billion in 2000-01 (table 4.3).¹ Of this amount, Telstra is estimated to have accounted for around 81 per cent, with Cable & Wireless Optus' own network accounting for around 5 per cent and resellers of Telstra's local telephony services around 14 per cent.

There is a very high degree of vertical integration between the wholesale and retail levels of the local telephony market, as indicated by the fact that Telstra in 2000-01:

- provided 87 per cent of its basic access lines directly to retail customers (table 4.1); and

¹ Telstra reports wholesale revenue from basic access and local calls in its *Annual Report*, but there is no information available on the retail revenue of resellers of Telstra's local telephony services. Hence, to estimate the latter, it is necessary to make an assumption about the margin earned by resellers on their resale of Telstra's local telephony services (see footnote to table 4.3).

- obtained 86 per cent of its local services revenue from retail customers (table 4.3).

Also notable is that Telstra's wholesale local telephony revenue increased by almost 60 per cent in the year to June 2001, reflecting increased local call resale activity by competitors.

Table 4.3 Local telephony retail revenue
\$ million, year ended 30 June unless otherwise specified

	1998	1999	2000	2001 ^a
Telstra network				
Retail basic access	1 675	1 755	1 853	2 058
Retail local call ^b	2 504	2 569	2 427	1 824
Total retail local telephony	4 179	4 324	4 280	3 882
Wholesale basic access	95	100	167	303
Wholesale local call	160	158	223	319
Total wholesale local telephony	255	258	390	622
Wholesale (per cent of retail)	6	6	9	16
Cable & Wireless Optus network				
Broadband retail local telephony ^c	9	31	153	232
Resellers of Telstra services				
Estimated retail local telephony ^d	268	272	411	655
Total local telephony ^e	4 456	4 627	4 844	4 769

^a Not strictly comparable with earlier years. ^b Includes value added services provided to retail customers.

^c The end of the accounting year for Cable & Wireless Optus is 31 March. ^d In the absence of direct information on revenue from local call resale for these providers, it is necessary to make some assumptions in order to estimate these revenues. As the ACCC notes (1999b, p. 58), service providers resupplying Telstra's local telephony services generally claim to do so at a loss — the charges paid by them to Telstra represent approximately 90-100 per cent of the revenue they receive from their customers for those services. For these calculations, a ratio of 95 per cent is assumed. ^e This is the sum of Telstra retail, Cable & Wireless Optus retail and the estimated retail revenue of resellers.

Sources: Telstra 2000a and 2001c, Cable & Wireless Optus 2000b.

Trends in retail market shares

At the retail level, carriers such as AAPT, Primus, and Cable & Wireless Optus together with CSPs such as RSL COM resell Telstra local call services and add their own retail activities such as billing and customer care services. According to Telstra, 1.30 million (around 13 per cent) of its local access lines were resold by service providers in the year to June 2001 (table 4.1). For example, Cable & Wireless Optus has reported having 478 000 local call resale customers at end March 2000 (Cable & Wireless Optus 2000b) and AAPT reported signing up over 300 000 local call customers to its 'smartChat' service by June 2000 (AAPT 2000b).

Estimates of local telephony retail market shares in terms of revenue (derived from table 4.3) and basic access lines are presented in table 4.4. In the year ending 30 June 1998, it is estimated that Telstra held around 96 per cent of the local access lines in service, with competition arising mainly from other providers reselling Telstra services. For the year ending 30 June 2001, Telstra's retail share is estimated to have dropped to around 83 per cent of services in operation, because of the increased uptake of local telephony on the Cable & Wireless Optus HFC network and the increase in local call resale by Telstra's competitors. The market share estimates based on revenue are similar, though suggesting a market share for Telstra at end June 2001 of around 81 per cent.

Table 4.4 Local telephony retail market shares
per cent

<i>Carrier</i>	<i>1997-98</i>	<i>1998-99</i>	<i>1999-00</i>	<i>2000-01</i>
Basic access lines				
Telstra retail	95.9	94.5	85.4	83.2
Resale of Telstra basic access lines ^a	3.5	3.9	11.3	12.4
Cable & Wireless Optus (own network)	0.6	1.6	3.4	4.3
Revenue				
Telstra	93.8	93.5	88.4	81.4
Resellers of Telstra services ^b	6.0	5.9	8.5	13.7
Cable & Wireless Optus (own network) ^c	0.2	0.7	3.2	4.9

^a Includes Cable & Wireless Optus resale. ^b See footnote d in table 4.3. ^c Because Cable & Wireless Optus' accounting period is earlier than that for Telstra, and given that its customer base is growing rapidly, this will lead to a slight understatement of its market share.

Source: Productivity Commission estimates based on tables 4.1 and 4.3.

Again it should be noted that these calculations do not take account of retail competition from competitors with CBD networks other than Cable & Wireless Optus. However, as indicated in the previous section, it is likely that at end June 2000, they would have held a market share of retail access lines of only around 1 per cent.

Local call resale

As noted in table 4.4, the main local call competition for Telstra at the retail level is currently provided by resellers of its wholesale services (local call resale). The sustainability of local call resale is dependent on the wholesale price charged by Telstra. The local carriage service is a declared service under Part XIC of the Trade Practices Act (TPA), such that Telstra must supply the service on terms and conditions agreed with wholesale customers or, where Telstra and a wholesale customer disagree over the price for the service, one of them can request the ACCC

to arbitrate and set the price. At August 2001, for example, there were six ongoing arbitrations involving the local carriage service.

According to RSL COM (2000, p. 7), the main reason for these disputes is that:

Participants are unable to negotiate commercially realistic rates of return with the incumbent, which would allow them to compete ... Any further, competition led, retail price reduction is unlikely to occur in this situation.

Similarly, Cable & Wireless Optus stated that:

Telstra does not provide competitors with a local calling product at prices that permit effective competition ... Hence, Telstra's competitors, when adding their own retailing costs, are required to loss-lead in the provision of [local call resale] if they are to provide consumers with the one-stop shop/full telephony service. This has decreased effective competition in both local and long distance calling (sub. 8, pp. 89–90).

Local call prices and wholesale local call charges are currently influenced by retail price control arrangements and the access deficit contribution. The ACCC has recently recommended some changes, but current arrangements have been continued until mid-2002 at least. With a view to promoting local call retail competition, the ACCC has proposed a 'retail minus avoidable cost' approach in pricing the wholesale local carriage service (2000j).

Unconditioned local loop services

The declaration of the unconditioned local loop (ULL) service by the ACCC was gazetted in August 1999. Telstra is the predominant supplier of this service, through its ownership of the copper local access network. The use of the ULL allows providers to supply high bandwidth digital subscriber line (DSL) services, such as high speed internet, as well as local and long distance voice services.

As the ACCC (1999c, pp. 76–7) stated:

... declaration of the unconditioned local loop service promotes competition for use of the customer line. In essence, Telstra will no longer have absolute control over the line. It will have to compete, along with other service providers, for use of the line by offering end-users a better service range, or lower priced services, than that offered by its competitors. In a very real sense, there will be competition for the customer ... Declaration is also likely to promote competition in the market for local telephony services.

Local call prices and bundled service offerings

Price competition in the local call market started to emerge in 1997 when Cable & Wireless Optus introduced 20 cent local calls (compared to Telstra's 25 cent local calls) for customers directly connected to its HFC network. After the declaration of the local carriage service by the ACCC in August 1999, several resellers started to offer local calls at cheaper rates than those of Telstra and Cable & Wireless Optus. For example, Primus, AAPT, One.Tel, RSL COM and other providers offered 15 cent local calls, and Telstra responded with its own 15 cent neighbourhood call product (this charge applies only for numbers called within a local exchange service area). Some of the local call plan offerings of providers are presented in box 4.4.

Box 4.4 Selected price offerings in residential local call market — August 2001

<i>Carrier/CSP</i>	<i>Plan name</i>	<i>Local call rate</i>	<i>Monthly line rental^b</i>
Telstra	HomeLine Complete	22.0¢	\$17.50
	HomeLine Plus ^a	18.5¢	\$19.50
	HomeLine Net	19.0¢	\$14.50
AAPT	SmartChat Full Service ^a	17.6¢	\$17.60
C&W Optus	Standard Optus Local	20.0¢	\$15.35
	OneTouch Advantage ^c	20.0¢	\$12.05
	OneTouch 15¢ Advantage ^c	15.0¢	\$16.50
Primus	18.5¢ Plan ^a	18.5¢	\$17.50
	16¢ Plan ^a	16.0¢	\$21.19
WorldxChange	GoTalk Local 1 ^a	16.5¢	\$21.00
	GoTalk Local 3 ^a	20.5¢	\$17.00
Dingo Blue	Residential	18.5¢	\$20.25
TransACT	HomeSaver Plus ^d	20.0¢	\$12.00

^a Pre-selection required. ^b Includes line rental and phone rental. ^c For customers who connect to Optus Local and pre-select Optus Long Distance for 12 months, and includes one OneTouch feature. ^d For customers who directly connect to the TransACT network.

Sources: Service providers' websites, <http://www.phonechoice.com.au>.

On 10 August 2001, Telstra announced that the line rental for its Homeline plans would be increased by \$2.40 per month from 1 September 2001.

According to a recent study of changes in the prices paid for telecommunications services (ACCC 2001c) the price of local calls decreased by 13 per cent between 1996-97 to 1999-00 (based on data for Telstra, Cable & Wireless Optus, AAPT and One.Tel). The most significant price reduction occurred between 1998-99 and 1999-00 (9.6 per cent) compared to falls of 3.0 per cent between 1996-97 and 1997-98 and 0.7 per cent between 1997-98 and 1998-99. The price fall in the most recent period reflects the impact of increased competition and a rebalancing of basic

access charges — line rental prices increased by 9.5 per cent during 1999-00 following little change in previous periods.

Price competition in local telephony has tended to emerge in several ways, with individual providers offering cheaper local calls:

- in return for a higher line access (rental) charge;
- if local telephony is taken as part of a bundled telephony offering — together with domestic long distance, international and fixed-to-mobile calls; or
- if local telephony is taken as part of a bundle of telecommunications services — such as long distance telephony, pay TV and high speed internet.

As one example of the price competitiveness of bundled offerings, Cable & Wireless Optus has a pay TV package (Optus Access) such that customers who take Optus Local and preselect Optus Long Distance for 12 months can subscribe to 11 pay TV channels for a monthly fee of \$19.95. This fee is similar to the line rental charges of other providers for telephony alone.

The offering of local calls by providers in a bundle also reflects the fact that the new entrants in the retail local services market tend to be those providers that were already offering national long distance and international services. As Woodbridge commented:

Retail competition in local services has developed under the regulatory regime largely as a result of entry and competition into the provision of national and international long distance services. As some consumers prefer to purchase a package of telecommunications services from one provider, providers of national and international long distance services have become retail providers of local calls in order to provide packaged services (sub. 41, annexure A, p. 30).

There is also a view that customers attach importance to having only one phone bill, and hence some providers have entered the local telephony market as resellers of Telstra's local calls in order to be able to offer a full suite of telephony services.

Wireless and mobile competition to fixed local loop

As Vodafone noted (sub. 45, p. 7) providers of new wireless and mobile services are directly challenging fixed line telephone services. In particular, Hutchison's 'Orange One' mobile service combines fixed and mobile features, such that local calls made from a customer's home (LocalZone) are at local call rates whereas those made away from home are at mobile rates. For example, the Orange One standard plan offers LocalZone untimed local calls at 15 cents and a monthly access

fee of \$16.50 (<http://www.hutchison.com.au>). These charges are very competitive with the offerings of fixed line providers.

One indication of possible increasing substitutability between fixed and mobile services is that residential users made fewer local (and long distance) calls per fixed line in 2000 than in 1999. As the ACA (2000b, p. 45) concluded:

The decline in the average number of local calls per line is probably due in part to the substitution of mobile telephony for local calls, particularly with the introduction of free calling times by many mobile carriers.

Assessment of state of competition

At end June 2000, Telstra accounted for around 85 per cent of retail local telephony services, with its share falling in the preceding 12 months by around 9 percentage points as resellers of its wholesale services and direct connections to the Cable & Wireless Optus HFC network gained market share. In the 12 months to June 2001, Telstra's share fell by another 2 percentage points.

Notwithstanding the recent difficulties of the telecommunications sector, Telstra's share of retail local telephony is likely to continue to be under pressure in the future as a result of:

- increased competition from local call resale — which will be dependent on the local call wholesale product Telstra provides to resellers;
- outcomes associated with declaration of the unconditioned local loop, in particular Telstra's access prices for the ULL service (this will also have implications for competition in the broadband services market);
- increased take-up of local telephony services on the Cable & Wireless Optus HFC network;
- increased take-up of services on competitors' networks in CBDs;
- provision of local telephony services on competitors' new cable-based and wireless local access networks currently being deployed and other alternative networks likely to be deployed in the future; and
- growth in mobile services that are becoming closer substitutes for the fixed network access market.

Nevertheless, Telstra will continue to maintain market power through its ownership, by way of vertical integration, of the only ubiquitous fixed local access network.

4.6 Long distance telephony services

Nature of market and main players

The long distance telephony market comprises two sub-markets: the national long distance market and the international services market. It is also sensible to consider fixed-to-mobile calls in this market. As AAPT pointed out:

... the fixed-to-mobile service has generally been defined as part of the mobile telephony market, when in fact it appears to belong more naturally to the fixed telephony market since these calls originate in the fixed network (sub. 7, p. 20).

Fixed-to-mobile calls and national and international long distance calls are currently part of a single pre-selection basket — such that customers who preselect a provider for fixed-to-fixed national long distance calls automatically have their fixed-to-mobile calls carried by the same provider.

The long distance telephony revenue of the largest three players is reported in table 4.5. Taking account of other providers, it is estimated that long distance telephony services generated revenues of around \$5.5 billion in 1999-00, with national long distance services (including fixed-to-mobile calls) accounting for around \$3.5 billion and international services around \$2 billion.²

Prior to 1997, the main players were the two fixed network carriers Telstra and Cable & Wireless Optus, with a small number of more limited access-based providers, such as AAPT, also providing services. Since 1997 there has been significant market entry, with the more important players including Primus, PowerTel, WorldCom, RSL COM and WorldxChange.

Elements of long distance and international call services

The provision of national long distance and international calls involves the following services (Woodbridge sub. 41, annexure A):

- *national long-distance* — call origination, switching, long-distance transmission, call termination, and customer care and billing; and
- *international* — call origination, switching, international transmission, call termination in the destination country, and customer care and billing.

² These estimates are very approximate and are based on the market share information for Telstra in long distance and international services in 2000 reported in table 4.6 and Telstra's retail revenues to year ended 30 June 2000 reported in table 4.5.

Table 4.5 Long distance telephony revenue — largest 3 players

\$ million, year ended 30 June unless otherwise specified

	1998	1999	2000	2001 ^a
Telstra				
National long distance retail	2 474	2 652	2 566	2513
National long distance wholesale	120	123	60	41
International	1 380	1 103	987	786
Cable & Wireless Optus^b				
Long distance retail	587	524	505	459
Long distance wholesale	460	494	493	589
AAPT				
National long distance ^c	140	163	275	na
International	137	193	168	na
Total largest 3 players	5 298	5 252	5 054	na

^a May not be strictly comparable with earlier years. ^b Separate information for national long distance and international are not published in Cable & Wireless Optus (2000b). The end of the accounting year for Cable & Wireless Optus is 31 March. Long distance retail is the sum of business and consumer revenue. ^c The information for 1999 is taken from AAPT 1999.

Sources: Telstra 2000a and 2001c, Cable & Wireless Optus 2000b and 2001a, AAPT 1999, 2000b.

The main types of providers in national long distance and international services are:

- *Facilities-based providers* — such as Telstra, which provides long distance services over its own network involving typically all of these components, but purchases a terminating service for calls terminated on other networks. Other network-based providers such as Cable & Wireless Optus and PowerTel provide call origination, switching, long distance transmission and billing for customers directly connected to their networks, but also generally purchase a terminating service (since most calls are terminated on Telstra's network). For international services, facilities-based providers are typically members of consortia owning submarine cables, and have arrangements for call termination in other countries.
- *Access-based providers* — such as WorldxChange (prior to its demise), typically provide national long distance services by combining purchased originating and terminating services and wholesale long distance transmission services with their own switching facilities. For international services, these providers typically also purchase international transmission and termination services in destination countries.
- *Resellers* — purchase end-to-end national long distance and international calls from network-based or access-based providers.

Wholesale long distance transmission providers

The main wholesale provider of long distance transmission services is Telstra, which has extensive fibre optic and microwave networks linking all capital cities and regional cities and towns (appendix C). Cable & Wireless Optus is the second-ranked facilities-based carrier, with a fibre optic backbone network linking Brisbane, Sydney, Canberra, Melbourne, Adelaide and Perth. There has also been entry by other facilities-based competitors in some inter-capital city routes (PowerTel, Macrocom, Soul Pattinson) and other backbone networks are currently being deployed (Amcom, Nextgen Networks, Reef Networks, Telecasters and ntl Telecommunications). These new networks are likely to promote competition in the supply of wholesale transmission services on long-haul domestic routes.

The national long distance services market is characterised by a high degree of vertical integration. For example, Telstra is the major network provider, the largest provider of wholesale long distance transmission services, and also has the largest share of the retail market (see below). This means that most access-based providers generally have to purchase services such as call origination, call termination and long distance transmission from network providers that are also their competitors in the retail market.

Barriers to entry

Cable & Wireless Optus considered that the degree of market entry into the national long distance and international services markets demonstrates that barriers to entry are low and the markets highly competitive (Cable & Wireless Optus 2000d). However, Woodbridge (sub. 41, annexure A, p. 37) argued that there are still some potentially important barriers to access-based and retail competition, such as:

- *absolute costs* — the investment costs required to build a national network with points of presence in all regions and switching facilities are relatively large;
- *switching costs* — the previous need to dial over-ride codes to select an alternative carrier was a disincentive for customers to switch between providers and gave facilities-based providers a competitive advantage over access-based providers.
- *vertical integration* — the high degree of vertical integration means there is scope for facilities-based operators to disadvantage competing access-based providers by inflating the price of originating and terminating access.

But regulation has played the greatest role in some of these areas in reducing entry barriers and promoting competition (Woodbridge sub. 41, annexure A, pp. 38–40). For example:

- the availability of improved customer churn processes after the ACCC issued a competition notice on this matter significantly reduced the cost to consumers of switching from the incumbent to a rival; and
- the declaration of domestic PSTN originating and terminating access under Part XIC of the Trade Practices Act reduces the scope for market power in the provision of wholesale local services to limit and distort competition in downstream services such as national long distance, international and fixed-to-mobile calls.

Trends in retail market shares

Since 1997, new facilities-based providers, access-based providers and resellers have entered the national long distance and international call markets. Some estimates of market shares for the main players are reported in table 4.6.

Telstra's market share has been estimated in mid-2000 at around 75 per cent for national long distance services and around 48 per cent for international services. The relative success of new entrants in capturing market share has therefore differed between the national long distance and international sub-markets:

- at that time, Telstra and Cable & Wireless Optus still accounted for a combined share of around 90 per cent of the national long distance market; but
- new entrants have provided the strongest competition in the international call market, collectively accounting for around one-third.

Table 4.6 Long distance retail market shares

Revenue shares, per cent

	1998 ^a	1998 ^b		2000 ^c	
	<i>Overall long distance</i>	<i>National long distance</i>	<i>International</i>	<i>National long distance</i>	<i>International</i>
Telstra	76	80	60	75	48
C & W Optus	19	15	23	16	18
AAPT	(inc. in others)	3	6	6	6
One.Tel ^d	(inc. in others)	(inc. in others)	(inc. in others)	2	5
Others	5	2	11	1	23

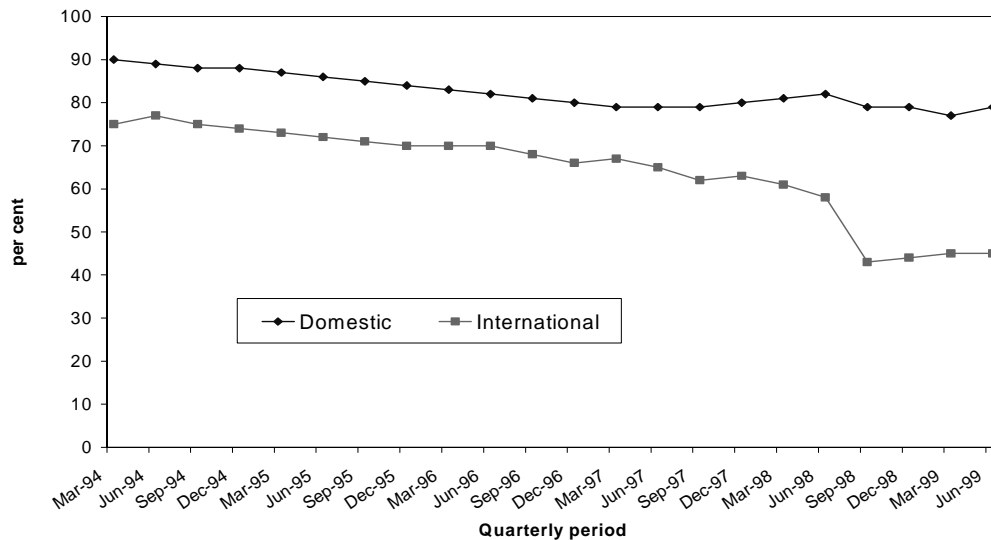
^a 1997-98, ACCC estimates. ^b Merrill Lynch & Co estimates. ^c June 2000, JB Were & Son estimates.

^d Administrators appointed on 29 May 2001.

Sources: ACCC 1999c, pp. 61-2; ACCC 2000c, p. 32.

Telstra reported estimates of its own share of the national long distance and international markets, measured in terms of minutes of traffic rather than revenue (figure 4.1).

Figure 4.1 Telstra's share of retail long distance markets
minutes of traffic



Data source: Telstra sub. 24, p. 16.

These estimates tell a very similar story to that presented above:

- *national long distance* — Telstra's share fell from 100 per cent in 1992 to 90 per cent in 1994, and then fell steadily to be slightly under 80 per cent by June 1999;
- *international* — Telstra's share fell from 100 per cent in 1992 to 65 per cent by June 1997, since which time it has fallen to around 46 per cent by June 1999.

Although Telstra's long distance telephony revenue declined in the year to June 2001 (table 4.5), the general price decline in this market segment would have at least partly offset any market share loss (see below).

Customer churn — switching between carriers

Another indicator of the degree of competition in a market is the extent to which customers respond to alternative service offerings by switching from one provider to another (customer churn). Telstra reported two pieces of information on customer churn:

- the number of customers churning between competing providers (including Telstra) for their preselected long distance traffic has increased from around 130 000 per month in mid-1997 to around 200 000 by early 2000.
- the number of commercial churns has increased from approximately 6 000 per month in early 1998 to 130 000 in early 2000.

Telstra concluded:

Such a pattern is direct evidence of the competitive nature of Australian telecommunications as all carriers seek to win customers from each other. In this regard, Telstra is putting significant resources into this competition and is certainly aiming to attract many customers currently with its competitors (sub. 24, p. 11).

Pricing trends — fixed-to-fixed national long distance and international

Information on pricing trends for domestic long distance and international services over the period 1996-97 to 1999-00 has been reported by the ACCC (2001a) based upon price indexes developed and compiled by the Communications Research Unit (CRU) within DCITA. The indexes (table 4.7), which reflect changes in *real* prices, indicate the following changes:

- *national long distance calls* — the average price paid by users fell by around 23.5 per cent between 1996-97 and 1999-00; and
- *international calls* — the average price paid by users fell by around 53 per cent between 1996-97 and 1999-00.

Table 4.7 **Indexes of prices of national long distance and international calls, 1996-97 to 1999-00^a**

	1996-97	1997-98	1998-99	1999-00
National long distance	100	90.3	84.7	76.5
International	100	85.9	65.4	47.0

^a CRU estimates based on data supplied by Telstra, Cable & Wireless Optus, AAPT and One.Tel.

Source: ACCC 2001c, figures 12 and 13.

Aside from all the problems associated with measuring average call prices,³ the ACCC study only captures the prices of the main incumbents and ignores some new entrants that have become increasingly important, particularly in the international call market. As Woodbridge noted:

³ Given the many ways in which national long distance and international call charges can differ (such as by time of day, distance between calling parties, and duration of call).

Given the large increase in their shares of the international call services market, new entrants are likely to have driven much of recent price declines. Not including them in the comparisons is likely to result in an underestimate of the price declines experienced by consumers (sub. 41, annexure A, p. 51).

But the important point to note is that the entry of new providers of national long distance and international services with lower price offerings than the incumbents, (particularly in international services), has been the driving force behind much of the recent price competition. The incumbents have had to respond to the increased competitive pressures by reducing their call prices.

Fixed-to-mobile calls

Before fixed-to-mobile calls were included in the single pre-selection basket in July 1999 (chapter 15), they were supplied by the carrier providing the local access service. Hence, there were only two providers of fixed-to-mobile calls — Telstra and Cable & Wireless Optus. However, the introduction of fixed-to-mobile pre-selection from July 1999 may have introduced competition into this market (chapter 15).

In relation to pricing trends, the CRU study (ACCC 2001c) estimated that the price of fixed-to-mobile calls increased by 5.9 per cent between 1996-97 and 1997-98, before beginning a downward trend — decreasing by 5.3 per cent and 8.1 per cent respectively in the subsequent two years (based on data supplied by Telstra, Cable & Wireless Optus, AAPT and One.Tel). Overall, the price fell by 7.9 per cent between 1996-97 and 1999-00.

One element of fixed-to-mobile call prices is the mobile termination charge. RSL COM (2000, p. 8) commented on a lack of competition in this component of fixed-to-mobile calls:

The dominant mobile networks utilise monopoly pricing of fixed-to-mobile calls in order to subsidise handset charges for mobile customers. As the three dominant mobile networks charge similar prices for fixed-to-mobile call termination, and there is no substitute available for these services, no competition can be said to exist in this market segment.

Other participants also commented on the high price of termination rates for fixed-to-mobile calls. For example, PowerTel stated that:

Mobile termination charges are also of concern, and this is reflected in the number of arbitrations notified. Notwithstanding claims by mobile operators that the industry is competitive, the distinction between retail competition on the one hand and access to the bottleneck facility (the end user connected to a particular mobile operator) must not

be lost ... there is considerable scope for detailed regulatory review of the current single rate termination charge imposed by all mobile operators (sub. 14, p. 8).

On the other hand, while there appears to be few competitive pressures on such terminating charges, it is generally acknowledged that the overall mobile market is effectively competitive. In that context, the high terminating charges may reflect the low price elasticity of terminating services and, therefore, may be a potentially efficient way of recovering the fixed costs of mobile networks (appendix D).

The ACCC (2000b) has concluded that retail and wholesale prices of fixed-to-mobile calls appear to be high relative to costs, suggestive of a lack of competition in these services.

Assessment of state of competition

The national long distance retail market is highly concentrated, with Telstra accounting for around 75 per cent of the market and the largest three providers (Telstra, Cable & Wireless Optus and AAPT) accounting for around 97 per cent. However, there is now a large number of competitors (accessed-based and resellers) that can be expected to increase their market share in the future as a consequence of the following market features:

- the entry of facilities-based competitors on major backbone routes should lead to stronger competition in the wholesale market for long-haul transmission services, and this should be reflected in more competitive retail offerings by Telstra's competitors;
- the inclusion of fixed-to-mobile calls in the long distance pre-selection basket is likely to result in Telstra's share of fixed-to-mobile services falling (and moving more in line with its share of fixed-to-fixed national long distance services); and
- increased competition in the local call market is expected to result in Telstra's share of fixed-to-fixed long distance services falling, since customers who change their provider for local calls also tend to select the same provider for long distance services.

The international call market has attracted many new entrants, with providers other than Telstra and Cable & Wireless Optus now accounting for around one-third of the retail market. The continuing downward trend in international call rates is also indicative of competitive pressures.

4.7 Mobile services

Nature of market and main players

The mobile telephony market encompasses calls from mobile phones to either fixed or other mobile phones and generated revenues of around \$5.5 billion in 1999-00 (Budde 2000a). As noted in chapter 3, the mobile services market is one of the fastest growing telecommunications markets.

The main competitors in mobile services can be classified as:

- *network operators* — there are three established national network providers (Telstra, Cable & Wireless Optus and Vodafone) and following the collapse of One.Tel, one surviving new entrant (Hutchison); and
- *resellers* — purchase end-to-end mobile services from network operators. For example, RSL COM and New Tel resell Cable & Wireless Optus global system for mobiles (GSM) services. Some network providers also engage in mobile service resale: for example, Hutchison acts as a reseller of Cable & Wireless Optus GSM and Telstra code division multiple access (CDMA) services.

A new type of player to emerge is the mobile virtual network operator, which offers mobile services to customers, has its own mobile network code, issues its own SIM cards, operates its own mobile switching centre, but does *not* have its own spectrum allocation (Ovum 2000a). For example, Virgin Mobile, a virtual network operator in the UK, launched services in Australia in late 2000. Virgin and Cable & Wireless Optus have formed a joint venture, with Virgin purchasing wholesale mobile capacity from Cable & Wireless Optus. Virgin is selling mobile services under its own brand name, and plans to offer additional services such as travel information and its own billing systems (SMH 2000).

Barriers to entry in mobile services

The main potential barriers to entry at the wholesale level in mobile services have been identified as (ACCC 2000g):

- *availability of spectrum* — the use of spectrum is regulated under the *Radiocommunications Act 1992*, and is allocated through an auction process. Spectrum licences enable operators to provide mobile services within specified frequencies and geographic regions.
- *provision of national coverage* — national coverage for customers can be achieved either by building a national network or a network with more limited geographic coverage and having roaming agreements with national operators.

-
- *sunk costs* — there are significant up-front investment costs associated with rolling out a mobile network, such as transmission towers (where these are not shared), base stations, switches and lines to link the switches and base stations. New operators also face relatively higher advertising and market costs to create brand awareness.
 - *customer switching costs* — mobile services generally involve users committing to contracts with their service providers for periods of 12 to 24 months, with cancellation fees applying if contracts are ended earlier. This makes it more difficult than otherwise for a new entrant to attract customers away from existing mobile operators. The current absence of mobile number portability is another factor making it more difficult for new entrants to attract customers because existing users of other networks who switch to new providers have to change their mobile phone number. However, the introduction of mobile number portability from September 2001 will remove this source of entry barrier.

But the overall conclusion is that these potential entry barriers have not been so high as to deter entry into mobile services. Two new players launched services on their own networks in 2000 — One.Tel in May 2000 and Hutchison in June 2000. However, with the subsequent collapse of One.Tel, the difficulty faced by a new entrant in capturing a sufficient market share for its network to be viable is likely to be an important factor in any future entry decision.

Trends in wholesale market shares

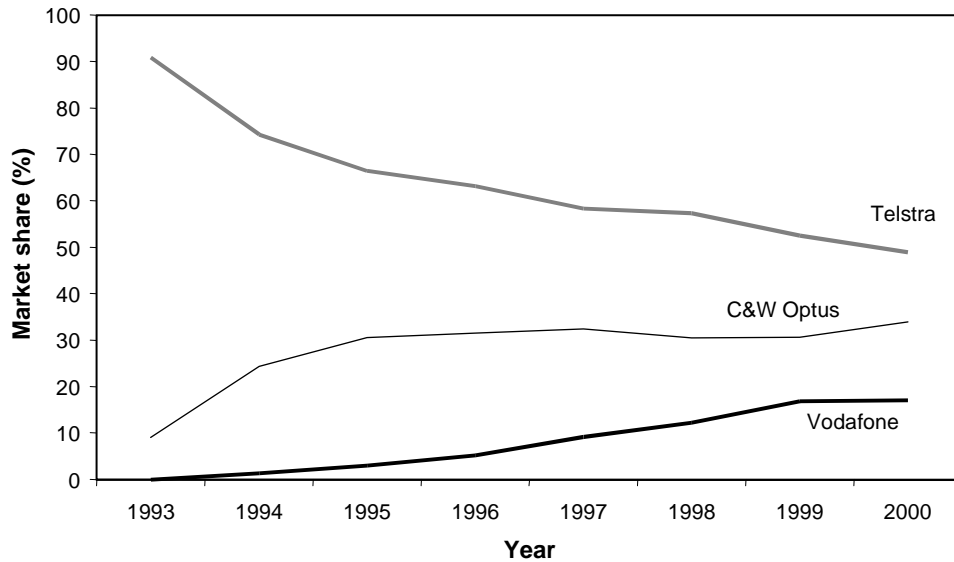
The available information on market shares in mobile services relates to the wholesale level — the network providers. The most notable changes in market shares (measured in terms of subscribers per network) for the three main operators in recent years have been (figure 4.2):

- Vodafone, which was the third mobile operator to launch services, has doubled its market share since 1997, largely at the expense of Telstra.
- Cable & Wireless Optus had a relatively stable market share of around 30 per cent since the mid 1990s, but in the twelve months to July 2000 increased its share to around 33 per cent.

In relation to the new entrants, One.Tel reported achieving a customer base of more than 171 000 at the end of March 2001, while Hutchison announced having around 102 000 customers on its ‘Orange One’ network at that time. The subscriber numbers and market shares for all the players up to end March 2001 are reported in table 4.8.

Figure 4.2 **Mobile services wholesale market shares, 1993–2000**

Share of subscribers as at 1 July



Data source: Budde 2000a, table 95.

At the end of March 2001, the Australian mobile market was characterised by five operators of GSM and/or CDMA networks, and a sixth (AAPT) was building a CDMA network and was expected to launch services during 2001. This number of network operators was relatively large compared to overseas countries:

- the US has seven mobile network providers; and
- Japan, Korea and the Netherlands each have five mobile operators, the UK and Germany each have four and France has three (ACA 2000b, Young 2001).

Table 4.8 **Mobile subscribers and wholesale market shares**

September 2000 to March 2001

Mobile carrier	Subscribers			Market share		
	Sept 2000	Dec 2000	March 2001	Sept 2000	Dec 2000	March 2001
	'000	'000	'000	%	%	%
Telstra	4 482	4 728	5 058	47.8	45.9	45.5
Cable & Wireless Optus	3 085	3 423	3 682	32.9	33.3	33.1
Vodafone	1 734	1 964	2 110	18.5	19.1	19.0
One.Tel ^a	40	102	171	0.4	1.0	1.5
Hutchison (Orange)	39	75	102	0.4	0.7	0.9
Total	9 380	10 292	11 123	100.0	100.0	100.0

^a Placed in administration in late May 2001.

Sources: Cable & Wireless Optus 2000d, 2001a, Lacy 2001a, Telstra 2001a, Hutchison 2001, ABN AMRO 2001.

Given the smaller subscriber base in Australia, the presence of six network operators would have had significant implications for the viability of the networks and the level of competition. Cable & Wireless Optus (2000d, p. 39) commented:

... the new entrants to the mobiles market will need to acquire significant [numbers] of customers to run a viable business. Some of these customers will be new customers who have previously not owned a mobile phone. However, a large number of these customers will be current mobile subscribers. This clearly means that competition in the mobiles market, while already intense, will get much more aggressive.

Vodafone also pointed out that:

The ability of new entrants to secure a disproportionately large share of new subscribers provides a real challenge to existing providers and maintains the extremely competitive nature of the industry (sub. 45, p. 7).

However, since March 2001, significant developments have occurred in relation to mobile network providers:

- on 3 May 2001, AAPT and Lucent Technologies announced that they had agreed to close down the rollout of the CDMA mobile network. AAPT had spent more than \$125 million on the rollout up until 31 December 2000.
- One.Tel was placed in administration in late May 2001. Its 'Next Generation' mobile network is now controlled by Lucent Technologies (which had built and funded the network).

In the wake of these developments, the Australian mobile network market is now characterised by:

- four mobile network providers operating five mobile networks — three GSM and two CDMA (with Telstra operating both GSM and CDMA); and
- three satellite systems providing mobile services — Inmarsat (Telstra), Mobilesat (Cable & Wireless Optus) and Globalstar (Vodafone).

The Government auctioned 3G mobile spectrum licences in the 2GHz band in March 2001. While the largest bidders were the incumbent mobile network operators, the auction also saw the entry of two new companies into the Australian market — Qualcomm and CKW Wireless. 3G Investments (Qualcomm) paid \$159 million for spectrum in all capital cities; and CKW Wireless paid \$9 million for unpaired spectrum in all capital cities. Qualcomm has announced plans to be among the early launchers of 3G services.

Retail competition

There are currently four mobile carriers offering services at both the wholesale and retail levels. In the retail market, there is competition between network providers and resellers of mobile services. The ACCC (2000g) has reported that there are seven carriers offering mobile calls at the retail level only. As well, there are other providers offering retail mobile services, such as Mobile Innovations, Dingo Blue (the Cable & Wireless subsidiary recently acquired by AGL) and the Seven Network's mobile phone company B Digital.

In late 1999, the ACCC (2000e) estimated that resellers held around 15 per cent of the mobile retail market, and while the current share may be somewhat different, it indicates the high degree of vertical integration in mobile services — with network operators accounting for around 85 per cent of subscribers at the retail level.

Pricing trends and product offerings

Mobile service providers compete in terms of multidimensional service plans. For example, plans can differ in relation to length of contract period, handset prices, connection charges, monthly access fees, call charges, and special options such as voicemail and short messaging services. Call charges in turn can depend on the flagfall charge, charge per time interval, time of day, distance, and whether or not a call is made to another customer on the same network. Hutchison has differentiated its 'Orange One' service by combining the features of a mobile phone and a fixed phone in the one handset — calls are charged at local (fixed line) rates when the caller is at home (LocalZone) and at mobile rates when calls are made outside the LocalZone.

Some of the growth in mobile subscribers has come from pre-paid services rather than customers on contracts, with pre-paid buyers tending to be lower value customers.

Because of the many ways in which mobile service providers can differentiate their retail product offerings, the calculation of price movements for mobile telephony is difficult.⁴ As the ACCC noted (2001a, p. 67), the prerequisites for mobile telephony, like the handset and access to the network and services, are sold jointly as bundles. Accordingly, the approach followed by the CRU in measuring price changes of mobile telephony was to measure the prices paid by consumers for these bundles of services. The most recent CRU study (ACCC 2001c) found that:

⁴ The Tasmanian Government claimed that the complexity of many mobile phone plans also makes it difficult for consumers to make an informed choice between rival product offerings (sub. 36, p. 7).

-
- the price of mobile telephony (GSM services) fell by 18.9 per cent between 1996-97 and 1999-00; and
 - the most substantial price falls have been relatively recent — the price fell by 3.4 per cent between 1996-97 and 1997-98, 3.9 per cent between 1997-98 and 1998-99 and 12.6 per cent between 1998-99 and 1999-00.

Ericsson (sub. 23) also indicated that technological developments such as the introduction of wireless application protocol (WAP) and the evolution of third generation (3G) services are likely not only to encourage greater competition in mobile services, but also to enhance their competitiveness and substitutability with fixed line services.

Assessment of state of competition

The mobile services market appears to exhibit characteristics of an effectively competitive market as evidenced by the following key structural and performance indicators:

- At the wholesale level, there are four mobile carriers operating five networks. This is a relatively large number of operators compared to other countries, particularly given the smaller subscriber base in Australia. With mobile penetration now approaching 60 per cent, the focus of competition is shifting from new customer acquisition to customer retention and securing a greater share of high spending customers.
- At the retail level, there is a high degree of vertical integration, with the network operators accounting for around 85 per cent of the market. However, there appears to be significant competition between the network operators and the resellers as evidenced by the increased range and features of product offerings and trend towards lower retail prices for mobile calls.

4.8 Fixed and mobile telephony

Because mobile services other than mobile-to-mobile calls involve origination or termination in fixed networks, it is useful to examine wholesale market shares in call origination and termination for the various categories of fixed and mobile calls (table 4.9).

From this perspective, the role of Telstra in fixed and mobile telephony becomes more apparent than just considering fixed and mobile telephony separately. With Telstra currently having a 95 per cent share of fixed local access services, it can also be expected to have close to this share of the following wholesale services:

- *origination* of fixed-to-fixed calls and fixed-to-mobile calls; and
- *termination* of fixed-to-fixed calls and mobile-to-fixed calls.

All but a small minority of end-users, therefore, either originate and/or terminate a service on the Telstra network — whether it be for a fixed-to-fixed local, domestic long distance, or international call, or a fixed-to-mobile or mobile-to-fixed call. As a result of this particular feature of wholesale telecommunication services, the ACCC assessed the current situation as follows:

... Telstra remains the only operator with a ubiquitous customer access network. Every other provider must interconnect to Telstra's network at some point in order to supply public carriage services and ensure any-to-any connectivity. Despite substantial inroads into Telstra's share of industry revenue, Telstra's market power remains extensive (sub. 16, p. 57).

Table 4.9 **Fixed and mobile telephony — wholesale market shares, early 2001^a**

	<i>Call origination</i>	<i>Call termination</i>
Fixed-to-fixed calls		
Telstra	95	95
Cable & Wireless Optus	4	4
Fixed-to-mobile calls^b		
Telstra	95	46
Cable & Wireless Optus	4	33
Vodafone	-	19
Others	-	2
Mobile-to-fixed calls		
Telstra	46	95
Cable & Wireless Optus	33	4
Vodafone	19	-
Others	2	-
Mobile-to-mobile calls		
Telstra	46	46
Cable & Wireless Optus	33	33
Vodafone	19	19
Others	2	2

^a For the fixed network, units are percentage shares of basic access lines while for the mobile network the units are percentage shares of subscribers. ^b At the retail level, customers who preselect a provider for fixed-to-fixed national long distance calls automatically have their fixed-to-mobile calls carried by the same provider. However, the wholesale provision of call origination is the same as for fixed-to-fixed calls.

Source: as for table 4.1 and table 4.8.

4.9 Internet services

The internet services market generated revenue of around \$1.4 billion in 1999-00 (Budde 2000a) and is the fastest growing telecommunications segment. While there is a very large number of internet service providers (ISPs) overall — currently more than 650 — there are different groups of providers offering services to different types of customers. This section focuses on the (narrowband) dial-up market — high speed services for residential customers are discussed in section 4.11.

Wholesale service providers

At the wholesale level, the main players can be classified as:

- *backbone providers* — operate networks connecting a large number of ISPs across broad regions and provide for access to ISPs overseas. There are currently four providers of backbone services in Australia — Telstra, Cable & Wireless Optus, connect.com.au (owned by AAPT) and UUNet (owned by WorldCom).
- *transit providers* — operate smaller networks aggregating a number of ISPs and providing interconnection with backbone providers.

Notable features of the structure of the wholesale internet market are:

- *highly concentrated* — more than 90 per cent of ISPs obtain their internet bandwidth and connectivity from either Telstra, Cable & Wireless Optus or connect.com.au, with Telstra being by far the major provider (AMX 2000). Indeed, according to one estimate, Telstra accounts for more than half of the wholesale internet market (Kidman 1999).
- *attracting new entry* — some of the newer carriers are seeking to become wholesale suppliers of internet bandwidth (such as PowerTel with its fibre network and Third Rail using wireless technologies) to compete with the existing backbone operators.

Retail internet market shares

At the retail level, ISPs provide internet access to residential and business customers and provide other services such as web hosting, design and advertising. There is a very large number of small ISPs that provide internet access at a point of presence (POP) within their own local calling area, and a smaller number of larger ISPs with a regional or national presence — some of the larger national providers have more than 50 POPs nation-wide. Details of the market shares of the main players at the retail level are given in table 4.10.

The main features of the retail internet market are:

- *high degree of vertical integration* — the major internet backbone providers also have large shares at the retail level.
- *leading position of carriers* — Telstra is also the first-ranked ISP and the other major ISPs also tend to be carriers. These providers can gain a competitive advantage by being able to offer cheaper internet access if customers elect to purchase a bundle of telecommunications services.
- *broadening of service offerings* — some ISPs are now offering internet-based telephony (voice over internet protocol, VoIP) for toll calls (national long distance, international and calls to mobiles) as part of their range of services.
- *concentration is increasing* — while the internet market has a very large number of service providers, the largest national operators are consolidating their share of the market. For example, the largest eight ISPs accounted for around 65 per cent of the residential subscriber base in 1999, 75 per cent in 2000 and an industry analyst expects this to increase to around 85 per cent in the next year or two (Budde 2000).
- *geographic penetration is increasing* — for example, in the year to June 2000, the number of urban centres and localities that had access to an ISP for the cost of a local call increased from 560 to more than 800 (ACA 2000b, p. 161).

Table 4.10 **Internet services (dial-up) — retail market shares^a**
July 2000

<i>ISP</i>	<i>POPs</i>	<i>Residential subscribers</i>	<i>Share of subscribers</i>
	No.	'000	%
Big Pond (Telstra)	72	600	23.7
OzEmail/UUNet	100	460	18.2
Cable & Wireless Optus	74	200	7.9
iPrimus	65	150	5.9
One.Net (One.Tel) ^a	35	140	5.5
TPG Internet	89	135	5.3
AOL/Connect.com (AAPT)	69	120	4.7
Austar/eisa	>40	91	3.6
Chariot Internet	84	50	2.0
Pacific Internet	13	35	1.4
Netspace	16	29	1.1
Others ^b	n.a.	520	20.6
Total	n.a.	2 530	100.0

^a Placed in administration at end May 2001. ^b n.a. = not available.

Sources: Budde 2000a, table 112; Cable & Wireless Optus 2000e; *Canberra Sunday Times*, 11 February 2001, p. 9; Austar sub. 60; ISPs' websites.

Prices and product offerings

Consumer selection of an ISP tends largely to be driven by price (ACA 2000b, p. 169). Users access the internet by selecting from a range of plans offered by ISPs, including: *casual* plans, where users pay a flat rate per hour of internet time used or amount of data downloaded; *monthly* plans, where users choose from a range of different hours/download options, depending on how often they expect to access the internet per month; and '*all you can eat*' plans, where users pay a charge per month for unlimited access.

Two trends intensifying competition in internet services are:

- 'free' access — where users incur no charges and providers offset costs of service provision through advertising revenues. At end June 2000, there were more than 300 000 subscribers to ISPs offering free internet access (ACA 2000b, p. 164). This represents around a 12 per cent share of the dial-up internet market.
- bundling of services — ISPs that offer other services (such as telephony) offer internet access at cheaper rates if internet services are taken as a bundle.

Customer churn and competitive pressures

A recent consumer satisfaction survey conducted by the ACA (2000b) indicated an appreciable degree of customer churn in internet services. Around 20 per cent of households and 17 per cent of small businesses surveyed reported that they had changed or attempted to change their ISP during 2000. The main reason for consumers changing service provider was cost, with reasons related to poor customer service next in importance. On the basis of these findings, the ACA (2000b, p. 173) concluded:

These relatively high rates of attempted change of ISP possibly reflect the high level of competition in the market. They may also reflect the ease with which most consumers can change ISPs.

A similar view was expressed by Telstra on competitive pressures in the supply of internet access services:

New ISPs have found it relatively easy to expand: ISPs other than Telstra, OzEmail, Optus and AOL increased their customer numbers from 360 000 in October 1997 to over 1.1 million in October 1999 ... With customers being relatively footloose, the competitive pressures on service providers have been very strong (sub. 24, p. 16).

Nevertheless, as noted above, concentration in the sector is increasing.

Assessment of state of competition

The ACA (2000a, p. 161) assessed the overall state of competition in the internet market as follows:

... despite some industry consolidation during 1999-00, there were more than 600 providers competing for consumers. The significant variation in the size of ISPs and the great number of ISPs suggests a healthy, competitive market.

While the internet services market is characterised by a very large number of ISPs, the degree of consumer choice varies from a wide range of alternative providers in urban areas to perhaps as few as only one ISP offering local call access in some regional and rural localities.

The recent introduction of high speed internet services — via HFC cable, satellite, wireless and DSL technologies — is likely to intensify competition among players. The providers that are among the first to offer such services, which is the case particularly for the main broadband network providers (Telstra and Cable & Wireless Optus), can be expected to capture market share. This is taken up in section 4.11 (broadband services).

4.10 Data services

Nature of market and main players

The data services market involves the transmission of data at high speeds, and is a rapidly changing and growing market. The main services provided include:

- private data networks — using services such as leased lines, frame relay (a high speed packet switched technology generally delivering access speeds from 128 Kbps to 2 Mbps), asynchronous transfer mode (ATM, a high bandwidth technology generally providing access speeds from 2 Mbps to 155 Mbps and up to 622 Mbps) and fully managed (end-to-end) IP solutions;
- high speed access to public data networks (such as the internet) — using technologies such as integrated services digital network (ISDN) and DSL; and
- other data services — such as facsimile.

The main users of data services are business and government organisations, with corporate customers tending to be concentrated in CBD areas. Because of this CBD focus, many new providers have built their own networks since 1997 or are currently building them. The main competitors in data services can be classified as:

- *facilities-based providers* — include those with extensive data networks such as Telstra, Cable & Wireless Optus, AAPT and PowerTel;
- *access-based providers* — combine some of their own network elements with services purchased from facilities-based providers; and
- *resellers* — purchase wholesale data services and develop packages of services to meet the needs of particular business customers.

Because of the wide range of services covered by the data market, there are differences in the number of providers of particular data services. For example:

- leased lines — while Telstra is the main provider of leased line services, there are other providers such as PowerTel (sub. 14, p. 1).
- ISDN services — Telstra provides more than 95 per cent of ISDN access (Vodafone sub. 15, p. 20).
- frame relay — according to a survey by Telsyte (2001), there were 17 providers in mid 2000 and two additional providers planning to offer services;
- ATM services — there were just two providers (Telstra and Cable & Wireless Optus) at the end of 1997, around ten in 1999 and 19 in mid 2000 (Evans 1999, Telsyte 2001); and
- managed IP services — there were 28 providers in mid 2000 (Telsyte 2001).

Market shares

One set of market share estimates for a broadly defined market — data services and enhanced voice market — are reported in table 4.11.

Table 4.11 Data services and enhanced voice retail market shares ^a
revenue shares, per cent

<i>Carrier/CSP</i>	<i>1997</i>	<i>1998</i>	<i>1999</i>	<i>2000 ^b</i>	<i>2001^b</i>
Telstra	66	58	50	43	38
Cable & Wireless Optus	7	8	8	12	14
Other CSPs	27	35	42	50	48

^a Data services include public data services, internet and online services, computer reservation services, value added networks, email, EFTPOS and facsimile. Also includes enhanced voice services, such as audiotext, voice mail and call centres. ^b Estimates.

Source: Budde 2000a, table 32.

This market appears to be one area of telecommunications where new players have been able to compete successfully and capture market share. Even before the regulatory changes of 1997, service providers other than Telstra and Cable &

Wireless Optus accounted for around one-quarter of the data services and enhanced voice market. Since that time, their share is estimated to have increased to around 50 per cent (Budde 2000a).

Recent information on market shares in some of the newer data areas, such as frame relay, ATM and managed IP services, are available from a survey of the main service providers by Telsyte (2001) (table 4.12).

Table 4.12 Data services market shares
per cent, July 2000

<i>Service/provider</i>	<i>Share of ports</i>
Frame Relay services ^a	
Telstra	41.8
AAPT	26.3
CITEC	13.6
Cable & Wireless Optus	8.5
Eclipse (Primus)	3.6
Others	6.2
ATM services ^a	
Telstra	47.4
Panaseer	21.0
Cable & Wireless Optus	17.6
PowerTel	7.3
Macrocom	3.7
Others	3.1
Managed IP services ^b	
AAPT	88.4
Neighborhood Cable	4.5
Telstra	4.2
Infonet	0.6
PowerTel	0.6
Others	2.3

^a Domestic services only. ^b Does not include retail/wholesale ISP ports.

Source: Telsyte 2001.

As at July 2000, there were at least 29 providers with product offerings in one or more of these three data services:

- the leading frame relay providers are Telstra, AAPT, Cable & Wireless Optus, CITEC, and Eclipse (a division of Primus), which have switching nodes in all capital cities and POPs in many regional centres.
- in ATM services, relatively important providers apart from Telstra and Cable & Wireless Optus are Panaseer, PowerTel and Macrocom; and

-
- the leading provider of managed IP services is AAPT, which runs VicOne — the largest secure private IP network in Australia. VicOne currently services over 700 000 users daily and links over 3 500 sites (<http://www.aapt.com.au>).

The frame relay, ATM and managed IP areas appear to be highly concentrated — the top three-ranked providers account for more than 80 per cent of domestic port numbers in each of the three markets. Nevertheless, they all have a relatively large number of providers — nearly 20 or more in all three areas — and as the markets are growing rapidly as demand for bandwidth increases, they are likely to attract even more entry.

Assessment of state of competition

Telstra appears to hold high market shares in the more traditional areas of the data market (such as leased lines and ISDN services). But as Telstra commented in relation to ISDN services:

The fact that Telstra has high market share for [ISDN services] simply reflects Telstra's early build of its ISDN network (1987) and that broadband technology has since moved on so there is no market interest in providing ISDN services (sub. 42, p. 6).

There are now many providers in the newer and faster growing data areas like frame relay, ATM and managed IP services. New entrants have been successful in these areas because they have been able to develop a wide variety of flexible, value added data services to meet the needs of specific corporate customers.

4.11 Broadband services — residential

Nature of market

The broadband services market has residential and business segments. The business segment overlaps with the data services market (section 4.10). Here, the focus is on broadband services to the residential market.

The services currently provided over broadband networks are mainly pay TV and high speed internet, though new communications and entertainment services (such as video on demand) are likely to become more available. Broadband services are provided by several access technologies, including cable, satellite, wireless (multichannel multipoint distribution services, MMDS), and DSL over copper wire. However, not all technologies are equally suitable for all services. Also, there is a considerable range in the speed of services offered as 'broadband' — for example, some providers of high speed internet services offer speeds varying from 64 Kbps to

400 Kbps (satellite) while others offer higher speeds of 512 Kbps to 10 Mbps (very high speed digital subscriber line, VDSL).

In this section, the competitive state of play in pay TV and high speed internet services is assessed. Regional aspects of pay TV arrangements are discussed in detail in chapter 17.

Pay TV services

Pay TV services commenced in Australia in 1995 following changes to the Broadcasting Services Act, which removed the previous prohibition. The delivery of pay TV services to end-users involves three functions (Cable & Wireless Optus sub. 54):

- the retail supply of pay TV services to subscribers;
- the wholesale transmission of pay TV programming; and
- the wholesale supply of programming to pay TV operators.

Here the first two aspects of market structure are examined. The third is discussed in chapter 17.

Retail pay TV operators

There are currently three main retail providers of pay TV services — Foxtel, Austar and Optus Television. In addition, there are several much smaller players, some of whom have only very recently commenced offering services (table 4.13):

- Neighborhood Cable — provides pay TV and broadband internet over its cable network in Mildura, and a similar network in Ballarat is due to open shortly; and
- TARBS (Television and Radio Broadcasting Services) Australia — provides foreign language channels via satellite, with Australia-wide coverage.

TransACT, which is rolling out a fibre optic cable (and VDSL) network in Canberra-Queanbeyan, is operating it as an ‘open’ network and providing carriage services to any company wishing to provide broadband content. TransACT customers have access to video on demand services provided by VOD Pty Ltd. This service permits customers to download their video of choice directly to their set top box. TransACT has also announced that a number of other broadband content providers will be providing services over its network, including:

- PrimeStar Communications — which is planning to offer a range of pay TV packages; and

- EasyTV — which is operated by Total Television Australia (a joint venture between Cable and Telecoms and UK-based Yes Television), and is planning to offer ‘television on demand’. This service not only offers customers the advantages of pay TV but also the ability to view their choice of program at a time suitable to them.

Table 4.13 Pay TV service providers — delivery systems and coverage

<i>Retail operator</i>	<i>Wholesale transmission</i>	<i>Service areas</i>
Foxtel (50 per cent owned by Telstra)	Telstra Multimedia (HFC cable)	Most of Sydney, Melbourne, Brisbane, the Gold Coast, and parts of Adelaide and Perth (cable passing 2.5 million homes).
	Optus/Austar joint venture (Optus B3 satellite)	Areas where cable is not installed in Sydney, Melbourne, Brisbane, Adelaide and Perth. Also Canberra, Geelong, Newcastle and NSW Central Coast, and parts of WA.
Austar	Windytide (HFC cable)	Darwin (cable passing 18 000 homes).
	Optus/Austar joint venture (Optus B3 satellite)	Regional NSW, Qld, Vic, SA, Tasmania and NT.
	Austar (MMDS)	Larger regional city centres, also Hobart.
Optus Television	Cable & Wireless Optus (HFC cable)	Areas of Sydney, Melbourne and Brisbane (cable passing 2.2 million homes).
Neighborhood Cable	Neighborhood Cable (HFC cable)	Mildura and Ballarat.
TARBS	PanAmSat-8 (satellite)	Australia-wide service.

Sources: ACA 2000b, <http://austar.net.au>, <http://www.foxtel.com.au>, <http://www.neighborhoodcable.com.au>, Cable & Wireless Optus sub. 54.

Another provider is Access1, which differs from others in that it offers TV via satellite delivered to a customer’s PC — a TV channel is selected from the Access1 website and customers then disconnect from the internet and continue watching TV over their PC (<http://www.access1.com.au>).

Wholesale transmission of pay TV services

Pay TV services are currently delivered via four technology platforms — HFC cable, VDSL, satellite and wireless (MMDS). Details of the platforms used by the main providers are reported in table 4.13.

There is a high degree of vertical integration between the retail pay TV operators and wholesale transmission services. For example, in relation to the main three operators:

- Telstra Multimedia (100 per cent owned by Telstra), operates the broadband cable over which Foxtel is delivered (and Telstra owns 50 per cent of Foxtel);

- Cable & Wireless Optus owns and operates the broadband cable over which Optus Television (100 per cent owned by Cable & Wireless Optus) is delivered; and
- Austar owns and operates the broadband cable (via its subsidiary Windytide) and MMDS network over which its pay TV services are delivered.

There are currently two satellites used to deliver pay TV services in Australia — Optus B3 and PanAmSat-8. In May 1998, Cable & Wireless Optus and Austar formed a joint venture for the provision of satellite carriage services for pay TV, using the Optus B3 satellite. This satellite platform provides wholesale transmission of pay TV services for both Austar and Foxtel. Optus itself does not provide a satellite retail pay TV service to areas not covered by its HFC cable network. PanAmSat-8 is used to transmit services for TARBS.

Subscriber numbers and household reach

The pay TV market can best be described as a national market with geographic sub-markets. The relative sizes of the three main providers in terms of their subscriber base and shares of the national market are given in table 4.14.

Table 4.14 Pay TV services — customer reach and national market shares
at end June 2001

<i>Operator</i>	<i>Household reach^a</i>	<i>Subscribers</i>	<i>Penetration of markets served</i>	<i>Share of total subscribers</i>
	million	'000	%	%
Foxtel	4.7	744	15.8	52.2
Austar	2.1	432	20.6	30.3
Optus Television	2.2	250	11.4	17.5
Total	7.2	1 426	19.8	100.0

^a Number of households in geographic markets served by terrestrial and satellite platforms. The total is the number of households, not the sum of the household reach of the three operators, because some have overlapping service areas.

Sources: Collins 2001; <http://www.austar.net.au>; ACA 2000b; Telstra 2001e; Austar 2001b.

Foxtel has the largest potential market in terms of population coverage, with an overall reach via cable or satellite of approximately 4.7 million households. Austar, with its focus on regional and rural Australia, has a geographic reach of approximately 2.1 million homes (served by MMDS and satellite) while Cable & Wireless Optus' HFC network passes approximately 2.2 million homes in Sydney, Melbourne and Brisbane.

Foxtel has the largest share of the national market at around 52 per cent (end June 2001). Also shown in table 4.14 is market penetration — the ratio of the number of

subscribers to the operator's geographic household reach. Austar has the highest market penetration at nearly 21 per cent.

Geographic scope of competition

There is a geographic aspect to the extent of competition between the three main providers. This means that in the geographic markets in which the main players operate, their market shares are much higher than those reported in table 4.14.

In relation to cable pay TV services, Foxtel and Optus Television compete in their overlapping cabled areas in metropolitan Sydney, Melbourne and Brisbane — Austar does not service these areas. However, Austar purchased B-band microwave spectrum from TARBS in October 2000, giving it a platform to deliver pay TV and other services to capital city markets.

Of Foxtel's overall subscriber base of around 744 000 (end June 2001), cable subscribers totalled 477 000 and satellite subscribers 268 000 (Telstra 2001e). As noted in table 4.13, Foxtel's geographic coverage and number of households passed by cable is greater than that of Cable & Wireless Optus (2.5 million homes compared to 2.2 million). To obtain an estimate of the market shares in the geographic markets in which both Foxtel and Cable & Wireless Optus compete — that is, the metropolitan areas of Sydney, Melbourne and Brisbane — it is necessary to estimate Foxtel's subscriber base in these three cities. Assuming that the difference in household cable coverage between the two operators is accounted for by the non-overlapping cities served (Gold Coast, and parts of Adelaide and Perth in the case of Foxtel) and given that Foxtel also has satellite subscribers in non-cabled areas of Sydney, Melbourne and Brisbane, the likely market share estimates are as follows:

- Foxtel — is estimated to have 65–70 per cent of subscribers in metropolitan Sydney, Melbourne and Brisbane; and
- Cable & Wireless Optus — is estimated to have 30–35 per cent of subscribers in those cities.

The geographic scope of service delivery in relation to Austar and Foxtel currently appears to be one of market division:

- Austar delivers pay TV to regional areas of all states (except WA) and the NT, and capital cities of Darwin and Hobart; and
- Foxtel provides satellite pay TV services to homes not passed by its cable network in Sydney, Melbourne, Brisbane, Adelaide and Perth, as well as Canberra, Geelong, Newcastle and the NSW central coast, and most of WA.

Hence, Austar does not service Foxtel's capital city markets and similarly Foxtel does not service Austar's regional and rural markets. It appears that the only region where Austar and Foxtel compete is the Gold Coast.

Neighborhood Cable, which serves Mildura and Ballarat, competes with Austar in those cities, but its subscriber base is very small in comparison.

Content — the key competitive edge

In geographic markets where there is more than one pay TV operator, competition is influenced by factors such as price, brand, marketing, service support, and the ability to offer a bundle of services (such as internet and telephony along with pay TV). But the main way in which pay TV providers compete is via content — in the words of some participants 'content is king'.

The terms of reference for this inquiry were expanded to include 'the implications of current pay television programming arrangements for the development of telecommunications competition in regional Australia, and whether any additional regulatory measures are needed to facilitate access to pay television programming'. These issues are specifically addressed in chapter 17.

High speed internet services

Broadband residential internet access is provided by several delivery technologies — cable, wireless (MMDS), satellite, and DSL over copper wire (table 4.15). However, in the case of wireless and satellite delivery, in general it is currently a one-way high speed service — users download data at broadband rates but upload data through the normal telephone line.

Some of the delivery platforms for pay TV have become important for providing a broader range of services:

- Cable & Wireless Optus' broadband cable network also delivers telephony and high speed internet services;
- Telstra's broadband cable network also delivers high speed internet services; and
- of the three delivery technologies Austar uses to provide pay TV services, currently only its MMDS platform offers (one-way) high speed internet services (sub. to Besley inquiry, p. 1). Austar's future plans include providing two-way MMDS broadband internet services, IP telephony services over the MMDS spectrum and upgrading its Darwin cable system to support broadband internet services (sub. 60, pp. 1–2).

Neighborhood Cable provides high speed internet services over its HFC networks in Mildura and Ballarat, while NetSpeed offers high speed internet services via the TransACT fibre network in Canberra.

There are also currently eight ISPs offering high speed satellite services (whirlpool.net.au). For example, Access1, which describes itself as a Australia's first MSP (Multimedia Service Provider), offers one-way high speed internet access via a PSTN/satellite service. Telstra describes its satellite service as a 'clip-on' high speed service that enables users to download at high speeds in association with their dial-up service. The number of high speed internet providers via DSL is also growing rapidly — there are currently around 80 DSL providers (whirlpool.net.au).

Table 4.15 High speed internet services — selected providers

<i>Provider/service</i>	<i>Delivery platform</i>	<i>Coverage</i>
Telstra (BigPond)	HFC cable Satellite/PSTN ^{a, b} ADSL	Sydney, Melbourne, Brisbane, the Gold Coast. Areas not covered by cable or ADSL. Urban and major rural centres.
Cable & Wireless Optus (Optus@Home)	HFC cable	Metropolitan areas of Sydney, Melbourne, and Brisbane.
Austar (chello)	MMDS/PSTN ^a	28 regional areas.
Neighborhood Cable	HFC cable	Mildura and Ballarat.
Access1	Satellite/PSTN ^a	POPs in NSW, ACT, Qld, SA, WA and Vic.
ihug	Satellite/PSTN ^a	Metropolitan areas of Sydney, Melbourne, Brisbane, Adelaide and Wollongong.
iinet	HFC cable ADSL	Residential estate in Perth (Ellenbrook). Selected suburbs of Perth.

^a Data is downloaded at broadband rates but the return path is via the normal telephone line. ^b As part of Telstra's successful tender to provide untimed local calls and untimed local call access to the internet in 'extended zones' in rural and remote Australia, it is planning to offer all extended zone customers an 'always on' two-way satellite based internet service with a choice of access speeds and prices (Alston 2001b).

Sources: Telstra 2000a, Cable & Wireless Optus 2000b, Austar sub. 60, <http://www.austar.com.au>, <http://www.ihug.com.au>, <http://www.access1.com.au>, <http://www.iinet.net.au>.

High speed internet services are relatively recent — for example, Cable & Wireless Optus launched its high speed cable modem internet service in December 1999. Because of this, providers are still in the early stages of building their subscriber numbers and market share information is generally unavailable.

However, some limited information on market targeting and take-up has been reported. For example, Telstra has indicated that it has targeted more than 150 000 broadband connections (cable modem) over the 12-18 months to end December 2001 and 1 million within five years (Telstra 2000b, p. 7). Austar launched its chello broadband service to regional Australia in March 2000, but is reported to have signed up fewer than 1 000 subscribers in the period since (Grigg and Collins

2001). In May 2001, the Optus@Home cable broadband service reported having more than 30 000 subscribers.

Assessment of state of competition

Telstra has stated that ‘the pay television services market is competitive’ (2000a, p. 35). However, the degree of competition differs between geographic segments. In relation to the main three providers, the only contested pay TV markets appear to be metropolitan Sydney, Melbourne and Brisbane (where Optus Television competes with Foxtel) and the Gold Coast (where Austar competes with Foxtel). All other geographic market segments are predominantly served by either Austar or Foxtel. The smaller providers compete with one or more of the main operators in the geographic markets they contest. Control of programming content by pay TV operators is also an important factor influencing competition — this issue is examined in chapter 17.

The high speed internet market is attracting entry by many providers using a range of delivery technologies. Important determinants of market share are ‘first mover advantages’ and geographic reach. In these areas, the carriers with broadband networks in place to deliver other services (such as pay TV and telephony) have been first to enter, though as the deployment of high speed services via DSL gathers momentum, this will intensify competition among existing and new competitors.

The implications of these broadband networks are wider than just competition in pay TV or high speed internet services. Because of technological convergence, these delivery platforms can affect competition in local access and telephony as well — the Cable & Wireless Optus broadband network and TransACT for, example, are currently providing telephony services. That issue is also addressed in chapter 17.

4.12 Has effective competition developed sufficiently to dismantle regulations?

This chapter has examined the existing state of competition in telecommunications markets — *with* regulation. On the basis of observed outcomes in relation to key elements of market structure, behaviour and performance, it appears that the extent to which effective competition has developed varies across the different market segments. The more competitive telecommunications markets appear to be:

- mobile services;
- internet services;

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- newer types of data services (such as frame relay, ATM and managed IP services); and
 - long distance telephony (in particular, international calls).

In the period of open competition since July 1997, there has also been considerable deployment of new infrastructure by the incumbents and entrants. New carriers have deployed networks mainly in CBD areas and inter-capital city routes, but also to some extent in metropolitan areas, and regional and rural areas. The new networks that have been deployed on long-haul routes, and those underway or in the pipeline, can be expected to encourage greater competition in the provision of wholesale transmission capacity. This in turn is likely to have a favourable effect on competition in downstream markets, such as domestic long distance and international calls, and data and internet services.

Effective competition is less well developed in:

- local access services; and
- local telephony.

Telstra's ownership, by way of vertical integration, of the ubiquitous copper local loop, gives it control of the main fixed customer access network in Australia. This is likely to remain so for the foreseeable future. At June 2001, Telstra accounted for around 95 per cent of local access services, with Cable & Wireless Optus accounting for most of the remainder.

Telstra's share of local access will continue to be under pressure in the future as a result of increased uptake of direct connections to the Cable & Wireless Optus HFC network, further direct connection of business customers to networks of new entrants deployed in CBDs and the coming onstream of new cable-based and wireless local access networks currently being deployed by competitors. But even so, the vast majority of users will either originate and/or terminate a service on the Telstra network — whether it be for a fixed-to-fixed local, domestic long distance or international call, or a fixed-to-mobile or mobile-to-fixed call.

In retail local telephony, most competition to Telstra is currently provided by resellers of Telstra's services (local call resale). Sustainable competition is dependent on Telstra's local call wholesale service provided to competitors as well as its access prices for the unconditioned local loop service.⁵

⁵ Appendix D also discusses the role of local and domestic PSTN originating and terminating access services for the carriage of local calls.

Against this background, and Telstra's ongoing vertical integration, the problem for policymakers is to surmise whether competition would be effective or workable in the *absence* of regulation. This is a threshold question that determines whether there are any continued grounds for a telecommunications-specific competition regime, including an access regime. Counterfactual assessments of this kind invariably involve qualitative judgments. Evidence presented in this chapter together with the nature of existing technologies and costs and projected technology changes provide a basis for an assessment.

Relevant factors to consider are the continued importance of Telstra's local loop for terminating calls (and to a lesser extent, originating calls), as well as Telstra's presence in other markets (such as mobile and broadband cable), its large subscriber base and the importance of bundling for consumers. The consensus among inquiry participants was that, in the absence of regulation, the local loop still bestowed market power on Telstra, although there were disagreements about how long this would persist (box 4.3).

Overall, the Commission judges that, in the absence of *any* effective access arrangements (whether that be Part XIC or Part IIIA of the TPA), Telstra would have market power in some key telecommunications markets for some years. With freedom to price access to any of its facilities, Telstra would be able to influence the state of competition in network facilities downstream of the local loop. For example, the cost of fixed network long distance phone calls is affected significantly by access charges. If Telstra were to be unconstrained in its terminating or originating PSTN access price for a rival carrier offering long distance calls, then it could limit the market share of any rival long distance service provider.⁶

There are also problems for rivals investing in an alternative ubiquitous local loop because:

- the sunk costs associated with constructing a ubiquitous fixed local loop (or a wireless loop) are large; and
- network effects imply alternative local loops that are not locally ubiquitous and/or that are not linked to other networks are of limited value to customers if interconnection is not mandated.

⁶ The effect on rival originating and terminating services (whether fixed or mobile) would not necessarily be as great, so long as the existence of Part IV of the TPA mean that access was provided. This is because of the scope for rivals to set reciprocal high terminating charges (so long as incoming calls on rival terminating networks were greater than or equal to outgoing calls) and to use international transit arrangements.

Because of these considerations, while the existing state of competition is greater than some years ago, this partly reflects the impact of the competition regulations that are in place. In the absence of any regulatory oversight, it is likely that competition would be weakened significantly. That justifies some continued oversight, albeit not necessarily a telecommunications-specific regime. That issue is taken up in chapter 8.

5 Anti-competitive conduct

Box 5.1 Key messages

Part XIB of the TPA establishes an anti-competitive conduct regime for telecommunications markets additional to that applying generally to all markets under Part IV. There are two central differences: Part XIB makes use of an *effect or likely effect* test, whereas Part IV uses a *purpose* test; Part XIB, but not Part IV, allows the ACCC to issue competition notices to firms it alleges are engaged in anti-competitive conduct. Such notices reverse the onus of proof. They provide strong incentives for firms to modify their conduct, even if those firms consider the conduct is not anti-competitive, rather than fight the ACCC in the courts.

Appropriate deterrence of, and action against, anti-competitive conduct can improve community welfare. The question is whether Part XIB contributes positively to that outcome given other regulation in general and the generic provisions of Part IV in particular.

Many of the characteristics of the telecommunications industry and its market settings are not unique, but the combination appears to be. Given the present state of competition, regulatory provisions are needed to facilitate speedy action against alleged anti-competitive conduct in the telecommunications sector. As well, there may be greater incentive, and ability, for some telecommunications providers to act anti-competitively than firms in other industries.

In comparison to Part IV, Part XIB has the advantages of being speedier and more able to deal, if necessary, with several cases simultaneously at reasonable administrative and compliance cost. Further, it should better detect and deter anti-competitive conduct. Part XIB has the potential negative effect of encouraging regulatory error and overreach and deterring acceptable pro-competitive conduct — but on the limited public information available, this had not been a problem to date. However, Part XIB lacks procedural fairness and transparency and has been used in some cases where other mechanisms, such as access regulation, could have been more appropriate.

On balance, the Commission supports retention of Part XIB pending the development of more sustainable competition in telecommunications. This support is conditional on the introduction of an appeal mechanism intended to enhance procedural fairness.

As Part XIB should only be a transitional measure, it should be further reviewed in three to five years.

Anti-competitive conduct is difficult to define and difficult to detect. Although regulatory action against such conduct can bring benefits, incorrectly taking action against competitive conduct or using inappropriate remedies can bring costs.

Central questions in telecommunications competition regulation concern whether:

- the risk of anti-competitive conduct is higher in telecommunications than in other industries and sectors;
- the consequences of anti-competitive conduct are worse;
- the characteristics of telecommunications suggest that generic anti-competitive conduct regulation would be ineffective.

Even if the answers are ‘yes’, however, alternative regulation may not necessarily bring better outcomes overall — the benefits needs to be set against any additional net costs of regulatory error.

In addressing these questions, this chapter defines and discusses competition, anti-competitive conduct and its regulation in general terms, before focusing on anti-competitive conduct in the telecommunications sector. Then after developing assessment criteria, it describes and contrasts the relevant generic provisions of the *Trade Practices Act 1974* (TPA — Part IV) with the existing sector specific anti-competitive conduct provisions (Part XIB of the TPA), looks at regulation in some other countries, assesses the issues against those criteria and discusses policy options.

Most participants supported the separate anti-competitive conduct regulation for the telecommunications industry set out in Part XIB. Indeed, several called for it to be strengthened. Relatively few participants — these included Telstra, the Institute of Public Affairs, Ericsson and R. S. Gilbert — called for its repeal. Telstra nominated a deadline of 30 June 2002 for repeal (sub. 38, p. 6).

5.1 Competition, anti-competitive conduct and regulation

Competition generally has some important virtues. First, it promotes economic efficiency in several ways: it places discipline on the costs of producing goods and services (that is, technical or productive efficiency); from a community perspective, the most valued goods and services are likely to be produced (resource allocative efficiency); as well, competition helps to ensure efficiency is maintained over time (dynamic efficiency). Second, competition constrains prices. Third, competition reduces the concentration of economic power in society.

Behaviour that adversely reduces competition often raises concern in the community. For example, a firm with some market power can engage in predatory pricing whereby it reduces its prices (even below costs) in the short term, hoping to drive out its competitors and thus enable it to increase prices, and overall profits, in the longer term. A firm can refuse to supply its products or services to its competitors, or only offer to do so at ‘unreasonable’ prices. Firms can collude to agree on prices or otherwise reduce competition.

Generally, anti-competitive conduct results in long run prices that are higher than otherwise, with both efficiency and distributional effects:

- higher longer term prices could affect market demand and a lack of competition could enable the supplying dominant firm to relax efforts to improve production efficiency — these are efficiency effects;
- when the price responsiveness of demand — its demand elasticity — is low, much of the effect of higher prices is a transfer from consumers to the shareholders of that firm — a distributional effect.

However, as emphasised by the Independent Committee of Inquiry into Competition Policy (the Hilmer Report), competition is not an end in its own right:

Competition policy is not about the pursuit of competition for its own sake. Rather, it seeks to facilitate effective competition in the interests of economic efficiency while accommodating situations where competition does not achieve economic efficiency or conflicts with other social objectives. These accommodations are reflected in the content and breadth of application of pro-competitive policies, as well as in the sanctioning of anti-competitive arrangements on public benefit grounds (Hilmer 1993, p. 6).

Patent or trade mark protection for intellectual property offers an example where behaviour that reduces competition is not necessarily undesirable. Such protection enables firms to set prices higher than those that would prevail under competition and recover the costs of innovation. Under competition, a firm’s unprotected intellectual property could be copied easily, reducing the incentives for innovation. An argument in the recent Microsoft case in the United States is that Microsoft’s actions, while reducing competition, may actually benefit consumers by providing a better product at lower cost (Klein 2001, p. 60).

In some markets, a single supplier may be desirable. Artificially increasing facilities-based competition in areas of natural monopoly, for example, may increase overall costs and reduce efficiency.

Because behaviour that reduces competition does not always require a regulatory response, anti-competitive conduct regulation is often structured in two parts:

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- although some forms of behaviour are prohibited per se;
 - for most, the competition regulator is given scope for judgment and discretion in deciding whether action is justified.

The TPA uses both approaches. Under both Part IV and Part XIB, certain forms of conduct such as price fixing arrangements, some types of exclusive dealing and resale price maintenance are explicitly defined as anti-competitive.

Other forms of conduct, such as eliminating or substantially damaging a competitor, preventing entry or deterring competitive conduct, are tied to the demonstrated use of market power. Section 46 of Part IV refers to taking advantage of market power, as do major provisions of Part XIB.

Tying certain forms of anti-competitive conduct to the demonstrated use or misuse of market power raises several difficult challenges for regulators:

- defining a benchmark against which to assess conduct, while recognising that not all behaviour that reduces competition is necessarily undesirable;
- devising a threshold test to assess when to act: for example, whether action should be taken when purpose is established or whether it should be delayed until an adverse effect has become evident or is likely to occur; and
- instituting processes that allow appropriate scope for judgment while minimising the chance of error.

Quantifying the benefits and costs of regulatory intervention, allowing for the risks of error and the effects on deterrence, is very difficult. First, as discussed above, welfare reducing anti-competitive conduct is difficult to define. Second, markets and competition are dynamic rather than static. Third, much depends on sound judgment in the implementation of the regulations in practice.

The Hilmer report summed up the considerable challenges of anti-competitive conduct regulation as follows:

The central conundrum in addressing the problem of misuse of market power is that the problem is not well defined nor apparently amenable to clear definition ... Even if particular types of conduct can be named it does not seem possible to define them, or the circumstances in which they should be treated as objectionable, with any great precision ... Faced with this problem ... the challenge is to provide a system which can distinguish between desirable and undesirable activity while providing an acceptable level of business certainty (Hilmer 1993, p. 69).

5.2 Establishing assessment criteria

Although much depends on how regulation is implemented in practice, the Commission recognises that appropriate deterrence of, and action against, anti-competitive conduct can improve community welfare. At issue is whether Part XIB contributes positively to that outcome given the other available courses of action such as Part XIC of the TPA, the access provisions of the Telecommunications Act and the generic anti-competitive conduct provisions of Part IV.

AAPT contended that the issue facing the Commission was one of developing proposals for change to the existing regime, rather than building a regulatory regime from the ground up:

It is insufficient for the Commission to conclude that position B may be better than position A, it needs to conclude that position B is sufficiently and demonstrably better than position A, that it is worth the potential costs and risks of changing from A to B (sub. DR100, p. 4).

However, the Commission does not agree with this proposition. In the Commission's view, the Commission needs to assess whether, taking Part IV as given, the continued existence of Part XIB of the TPA (perhaps with modification) confers a net benefit on the community as a whole. This is consistent with the general principle that regulation should only be put in place if it confers such a benefit.

The central criteria relevant to this assessment fall into five intertwined categories, including three foreshadowed above:

- The characteristics of telecommunications, if any, that distinguish this sector from others and justify sector-specific regulation in addition to generic regulation.
- A 'benchmark' against which to assess behaviour. For example, when is a low price predatory rather than a reflection of vigorous competition?
- A 'threshold' test. In Part IV, a test of 'purpose' is used, whereas the more expansive test of 'effect or likely effect' is used in Part XIB.
- Regulatory error, encompassing the probability of error; the associated deterrence effects; and the costs of errors and incorrect deterrence. These significantly depend both on the design of regulation and the way that it is administered.
- Administrative and compliance costs.

Assessing regulatory error is not simple. There are three main types:

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- taking action when it is not warranted (a ‘false positive’ or Type I error);
 - not taking action when it is (a ‘false negative’ or Type II error); and
 - incorrectly deterring firms from pro-competitive behaviour — here, regulatory action is not taken but the regime has the adverse effect of deterring acceptable conduct.

A fourth type of error is less likely: that is, incorrectly encouraging firms to take anti-competitive conduct.

In addition, error arises when a need for regulatory action is correctly identified, but incorrect action is taken.

The main categories of error are not necessarily independent — for example, a higher probability of Type I error may be associated with a lower Type II error, and vice versa. And the seriousness of regulatory errors, including incorrect deterrence, depend on their economic impacts, not just their probabilities.

Sections 5.3 and 5.4 present relevant background information before an assessment against these criteria is given in section 5.5. Policy options are considered in section 5.6.

5.3 Regulatory approaches

The telecommunications industry in Australia is subject to regulations governing anti-competitive conduct that are additional to, and different from, those applying to industry generally. After a summary of the generic provisions of Part IV, this section describes the main features of Part XIB. The two are then contrasted (sections 5.5 and 5.6 provide more detail where relevant). Some features of anti-competitive conduct rules applying to the telecommunications sector in some other countries are briefly summarised.

Australia

In Australia, special provisions apply for the anti-competitive conduct regulation of the electricity and gas industries in some circumstances. For example, as noted by BHP Billiton (sub. DR103), under the *Victorian Gas Industry Act 1994*, a regime similar to that of Part XIB applies to anti-competitive conduct in the gas industry. However, the telecommunications industry is the only sector for which detailed additional anti-competitive conduct legislation currently applies under the TPA.

The Australian Competition and Consumer Commission (ACCC) is responsible for administering the TPA, including its telecommunications-specific provisions.

Main features of Part IV of the TPA

Part IV of the TPA prohibits some forms of specified behaviour per se. Other specified forms are prohibited where there is the purpose and/or effect of lessening competition/damaging competitors. In addition, section 46 provides that ‘a corporation that has a substantial degree of power in a market shall not take advantage of that power for the *purpose* of ... ’ eliminating or substantially damaging a competitor, preventing entry into a market, or deterring or preventing competitive conduct.

In section 46, purpose stands alone — there is no requirement for any effect or likely effect before regulatory/legal action can be taken against the alleged anti-competitive conduct. Nevertheless, as discussed below, purpose can be inferred from a firm’s conduct or other relevant circumstances — this means that purpose can possibly be established from effect.

Many of the steps necessary under a Part IV investigation also apply under Part XIB: ie defining markets, assessing market power, and assessing whether advantage was taken of that power. However, there are some significant differences (see below). In particular, court action (in the Federal Court) is more likely to be required under Part IV to stop alleged anti-competitive conduct than under Part XIB.

A recent ACCC publication sets out statistics relating to usage of Part IV of the TPA (ACCC 2001e). The data do not include private cases that are settled out of court or discontinued and are not therefore published in the official case reports. With this caveat, over the period 1988–98, only about 50 section 46 court cases were reported, of which only two related to telecommunications. Further, in only two cases, neither relating to telecommunications, had a monetary penalty been imposed by the court.

Main features of Part XIB

As well as being subject to Part IV of the TPA, telecommunications is subject to Part XIB.

Part XIB has operated since 30 April 1997 and applies specifically to telecommunications markets. According to the ACCC, Part XIB is ‘intended to act as a deterrent’ to anti-competitive conduct (sub. 16, p. 7). It appears to be focused

on stopping behaviour considered to be anti-competitive rather than on obtaining penalties and damages (also see below).

Part XIB took over from, but relaxed, a stricter set of regulations that had been contained in the *Telecommunications Act 1991* to constrain the conduct of a dominant carrier in a telecommunications market. The easing of regulation was to some extent temporary — it was tightened by important amendments made in 1999 (operative from 5 July 1999).

Under the ‘competition rule’ set out in section 151AK of Part XIB, a carrier or carriage service provider must not engage in anti-competitive conduct (box 5.2). This is defined (in section 151AJ) as:

- taking advantage of market power with the *effect or likely effect* of substantially lessening competition; or
- contravening specified sections of Part IV of the Act.

Box 5.2 Extracts from Part XIB of the Trade Practices Act

From Section 151AJ

A carrier or carriage service provider ***engages in anti-competitive conduct*** if the carrier or carriage service provider:

- (a) has a substantial degree of power in a telecommunications market; and
- (b) either:
 - (i) takes advantage of that power with the effect, or likely effect, of substantially lessening competition in that or any other telecommunications market; or
 - (ii) takes advantage of that power, and engages in other conduct on one or more occasions, with the combined effect, or likely combined effect, of substantially lessening competition in that or any other telecommunications market.

A carrier or carriage service provider ***engages in anti-competitive conduct*** if the carrier or carriage service provider:

- (a) engages in conduct in contravention of section 45, 45B, 46, 47 or 48; and
- (b) the conduct relates to a telecommunications market.

From Section 151AK

A carrier or carriage service provider must not engage in anti-competitive conduct. (This rule is to be known as the ***competition rule***.)

After investigation of alleged anti-competitive conduct, either on its own initiative or in response to a complaint, the ACCC can decide to issue a ‘competition notice’. There are two types of notice, known as a ‘Part A’ notice and a ‘Part B’ notice. A Part A notice can be issued where the ACCC has reason to believe that a carrier or carriage service provider has engaged, or is engaging, in anti-competitive conduct. Such a notice is not required to specify any particular instance of anti-competitive conduct. In contrast, a Part B notice, also issued with a reason to believe test, must set out particulars of the alleged contravention.

In effect, each is a separate notice, not two parts of the one notice. In practice, however, a Part B notice is unlikely to be issued unless the alleged anti-competitive conduct has already been the subject of a Part A notice. A competition notice procedure is not available under the generic Part IV but, because some sections of Part IV are referenced in Part XIB, action against behaviour in contravention of those specified Part IV sections can be taken either under the administrative procedures relevant to Part IV or under the competition notice procedures relevant to Part XIB.

- A Part A notice has a maximum life of 12 months, although a fresh notice relating to the same matter can be issued.

Once a Part A competition notice has been issued, the ACCC may issue an advisory notice advising how the firm can change its conduct to avoid contravening the Act. Such an advisory notice is not legally binding.

The intention of a Part A notice is to allow the ACCC to quickly identify conduct it considers is in contravention of the competition rule, open the gate for court action against the conduct and thereby warn the notice recipient that it considers that the recipient should cease the conduct.

A Part A notice acts as a ‘gatekeeper’ to the commencement of penalties and damages proceedings. Other than for an injunction, court proceedings under Part XIB — either by the ACCC or a person who suffers loss or damage — can only be instituted where the ACCC has issued a Part A competition notice. Further, and importantly, those proceedings can only relate to conduct that occurred at a time that a Part A notice was in force. (Anyone, including the ACCC and, since the 1999 amendments, firms that might be disadvantaged, can approach the Court for an injunction against alleged anti-competitive conduct, even in the absence of a competition notice.)

- Under the TPA, a Part B notice is taken to be prima facie evidence of the matters in that notice. According to the Explanatory Memorandum, Trade Practices Amendment (Telecommunications) Bill 1996, p. 13, ‘It will be a matter for the carrier or carriage service provider to whom the notice relates to lead evidence to rebut this prima facie evidence’. Thus, a Part B notice may make it easier for the

ACCC to succeed in court action against alleged contravention of the competition rule.

The ACCC is not required to issue a competition notice, even if it considers that there may have been anti-competitive conduct occurring:

... there may be some circumstances where other responses are likely to lead to a more effective or appropriate outcome than issuing a competition notice (ACCC 1999d, p. 2).

In deciding whether or not to issue a competition notice, the ACCC has formulated four 'key outcomes' it seeks. These are:

1. compliance with the competition rule (and other provisions of the TPA) and, in particular, the cessation of anti-competitive conduct;
2. improvement in market conduct generally by carriers and carriage service providers;
3. the protection of consumers from the adverse effects of anti-competitive conduct, and a community informed about the operation of the TPA in telecommunications markets and the implications for business and consumers; and
4. efficient and effective use of the [ACCC's] resources (ACCC 1999d, pp. 2–3).

In regard to each of these outcomes, the ACCC has set out positive and/or negative factors to which it will have regard in considering whether to issue a competition notice (ACCC 1999d, pp. 3–4).

There are also provisions for exemption orders where the ACCC is satisfied that the resultant public benefit outweighs any public detriment of lessened competition, or the conduct will not breach the competition rule.

Part XIB also includes provisions relating to tariff filing and record keeping (chapter 6). These provisions are designed to help the ACCC administer Part XIB, as well as other areas of the TPA, including Part XIC relating to access.

Some of the provisions described above only came into effect with the passing of amendments to Part XIB in 1999 (box 5.3).

Transparency under Part XIB

The ACCC has indicated the importance of its administrative decisions being made in accordance with procedural fairness and natural justice:

The [ACCC] will make the decision to issue a competition notice after giving proper, genuine and realistic consideration to the merits of the case, and deciding whether it has

reason to believe that the carrier or carriage service provider concerned has contravened the competition rule. The [ACCC] will make a reasonable and unbiased decision in good faith and based on the facts available (ACCC 1999a, pp. 19–20).

Box 5.3 The ACCC’s comparison of the pre and post July 1999 competition notice regime

Prior to July 1999

- required to prove that a use of market power, by itself, had the effect of substantially lessening competition
- ACCC required to be satisfied that there was a contravention and provide procedural fairness before issuing a notice, and set out detailed particulars of the contravention in the notice
- recipient could delay court proceedings by seeking judicial review of the notice and partially modifying conduct so that the subsequent conduct was not of a kind described in the notice
- the notice did not particularise the conduct that was the subject of the court proceedings so was of limited evidentiary relevance

1999 amendments

- use of market power can be combined with other conduct of the carrier/CSP
- reduced the standard of proof for issuing a notice to a ‘reason to believe’
- separated the gatekeeper and evidentiary role of the notices (Part A and Part B notices)
- reduced the level of detail required in a Part A notice so that the subsequent conduct is more likely to be of a kind described in the Part A notice
- allowed Part B notices to be issued in relation to the conduct that is the subject of the proceedings
- prevented the notice from being stayed if judicial review is sought
- enabled the ACCC to issue an advisory notice
- allowed private parties to seek an injunction without the need for a competition notice

Source: ACCC sub. 16, p 23.

However, there is only limited transparency of Part XIB action. Although a competition notice has to be publicly notified (section 151AR), a Part A notice does not need to include detailed particulars of the alleged contravention of the competition rule (ACCC 1999a, p. 8). Further, there appear to be no requirements for the ACCC to publish its reasons for a decision to issue or not issue a notice, either to the firm that is the subject of a notice, or more generally.

There are no requirements for public transparency in a number of other areas including the receipt of a complaint, the commencement of investigations or their conclusion. The ACCC does not even need to inform a firm that it is the subject of a complaint nor that it may be seeking information from others. There are no requirements for public inquiry or draft reports or, indeed, for any report at all.

Comparison of Part IV and Part XIB of the TPA

As the ACCC points out, both Part XIB and Part IV are judicial enforcement models that prescribe general rules of conduct that are enforceable by the courts. The ACCC (sub. 16, p. 24) outlined a number of important differences:

- unlike Part IV, Part XIB prohibits a use of market power that has an anti-competitive effect [or likely effect] rather than purpose;
- proceedings (other than for an injunction) cannot be instituted under Part XIB unless the ACCC has issued a Part A competition notice and the alleged conduct is of a kind dealt with in the notice;
- the evidentiary burden is reversed (a Part B competition notice under Part XIB is prima facie evidence of the matters in the notice);
- a competition notice places greater public pressure on the recipient to modify its conduct; and
- the pecuniary penalty in Part XIB (\$10 million plus \$1 million per day) is potentially greater than in Part IV (\$10 million).

Action under Part XIB does not necessarily prevent action under Part IV for the same incident of alleged anti-competitive conduct, nor does action under Part IV necessarily prevent it under Part XIB. As noted above, there is some overlap between the two parts in their definitions of anti-competitive conduct, although the regulatory processes differ. However, although proceedings may be instituted under both parts in relation to the same conduct, a person is not liable for more than one pecuniary penalty.

Essentially, there is little difference between the two parts in relation to access to the courts. However, an important difference relates to the availability of penalties and damages. Whereas in Part IV these can be related to the entire period of anti-competitive conduct, under Part XIB they can only relate to the period after the issue of a Part A competition notice (sections 151BY and 151CC).

Reasons for sector specific anti-competitive conduct regulation

The 1997 changes were part of the program of liberalisation of the telecommunications industry that began in 1991. Nevertheless, the Government considered that total reliance on the general provisions in Part IV of the Act would not achieve its objectives for the telecommunications industry. This was for a number of reasons. These included the view that Part IV would not encourage competition sufficiently in telecommunications markets, and that it left considerable scope for anti-competitive conduct, with the possibility of anti-competitive cross-subsidies. Further, there were questions of horizontal and vertical integration of firms and the fast pace of change:

Telecommunications is an extremely complex, horizontally and vertically integrated industry and competition is not fully established in some telecommunications markets. There is considerable scope for incumbents to engage in anti-competitive conduct because competitors in downstream markets depend on access to networks or facilities controlled by the incumbents. Furthermore, the possibility of anti-competitive cross-subsidies by incumbents from non-competitive markets to markets in which competition exists or is emerging is a particular threat to the establishment of a competitive environment.

Total reliance on Part IV of the TPA to constrain such anti-competitive conduct might, in some cases, prove ineffective because of the state of competition in the telecommunications industry and the fast pace of change in this industry. There may be difficulty, for example, in obtaining evidence of predatory behaviour supported by inappropriate internal cost allocation by horizontally or vertically integrated firms. Anti-competitive behaviour in telecommunications could cause particularly rapid damage to competition because of the volatile state of the industry during the early stages of competition. Against this background, Part IV alone may prove insufficient to deal with anti-competitive behaviour in telecommunications at this time (Explanatory Memorandum, Trade Practices Amendment (Telecommunications) Bill 1996, p. 6).

The Government envisaged, however, that the telecommunications-specific regulations in the TPA would be transitional in nature, and the intention was that, once competition was established in telecommunications markets, the industry would be governed by the same regulations as apply to other industries:

It is intended that competition rules for telecommunications will eventually be aligned, to the fullest extent practicable, with general trade practice law. Part XIB will apply for the period from 1 July 1997 until some future review determines that competition is sufficiently established that the Part or some provisions of the Part are no longer needed (Explanatory Memorandum, Trade Practices Amendment (Telecommunications) Bill 1996, p. 7).

Indeed, Part XIB (section 151CN) specifically provides that ‘before 1 July 2000, the Minister must cause to be conducted a review of the operation of this Part’. This is the genesis of the current review being undertaken by the Commission.

International experience

Many other countries are taking action to promote competition in their telecommunications sectors. In many, as in Australia, the policy measures include telecommunications-specific access arrangements. However, a number of approaches are taken to dealing with anti-competitive conduct: some countries use generally applicable competition regulation, while others use licence conditions, or both. Further, some countries reduce the scope for such anti-competitive conduct through requirements for vertical separation of the incumbent or effective accounting separation requirements.

In their general competition legislation, many countries list specific forms of behaviour that are inherently considered to be anti-competitive. Action can often be taken against other specified forms of behaviour if an adverse purpose and/or effect can be established. Most countries also adopt a catch-all provision intended to ban anti-competitive conduct — in some cases, the catch-all lists specific examples. This may be expressed in various ways — in contrast to Australia, they may refer to *dominance* rather than *market power*. For example:

- New Zealand (section 36 of the Commerce Act 1986) describes it as ‘taking advantage of market power’. (This replaced, from 26 May 2001, the previous test of ‘use of a dominant position in a market’.) There must be a ‘purpose’ of restricting entry, preventing or deterring competitive conduct or eliminating competition. Purpose may be inferred from conduct or from other relevant circumstances.
- Under Canadian legislation (sections 78 and 79 of the Competition Act) ‘abuse of dominant position’ requires the practice of ‘anti-competitive acts’. This is not defined although some examples are listed, all of which have a purposive element to the behaviour. Before action can be taken, however, effect must also be established. Thus, the overall test is one of purpose and effect.
- Countries whose competition legislation is directly based on the EU Treaty, such as the UK (section 18 of the Competition Act 1998) and Ireland (section 5 of the Competition Act 1991) also list some examples of ‘abuse of [a] dominant position’, but do not define the concept comprehensively. The legislative examples use concepts such as ‘unfair’, ‘prejudice to consumers’ and ‘competitive disadvantage’. In the UK’s case, abuse of a dominant position in a market is prohibited if it may affect trade in the UK; for Ireland, it is prohibited if it is abuse of a dominant position in trade. AAPT commented that ‘an examination of the classic cases on abuse of dominant position in EC law illustrates that the primary focus is the type of behaviour carried out by a dominant firm and not the purpose behind it’ (sub. DR100, p. 48).

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- In the United States, section 2 of the Sherman Act prohibits ‘monopolisation’ of a market. According to Hilmer 1993 (p. 65), the offence has traditionally required the possession of monopoly power and the intention to acquire or maintain that power. AAPT considered that it is ‘clear from a review of the cases ... that [the issue] revolves around an assessment of the efficiency of the conduct, ie, a weighing of its competitive or anti-competitive effect’ (sub. DR100, p. 54).

Examples of countries that use licence conditions to help to minimise anti-competitive conduct are the UK and Hong Kong. According to Cable & Wireless Optus, in the UK, BT’s licence prohibits activities that ‘have, or are likely to have, the object or effect of preventing, restricting or distorting competition’ (sub. DR95, p. 22). In Hong Kong, the Fixed Telecommunication Network Services licence granted by the Telecommunications Authority under the Telecommunications Regulations contains a number of conditions relating to the market conduct of the licensee, including a broad prohibition on engaging in anti-competitive behaviour. Here, the general test is ‘purpose or effect’ — the guidelines state that purpose alone may be sufficient for a breach to occur, and some specific forms of prohibited conduct are listed. As well, there is a prohibition against ‘abuse of a dominant position’. The test for this is ‘purpose’.

Of these countries, Australia appears unique in setting specific telecommunications anti-competitive conduct regulation within the context of its generic trade practices legislation with an effects test, devoid of purpose. Nevertheless, other countries use tests of ‘purpose’, ‘purpose and effect’, or ‘purpose or effect’ in screening for anti-competitive conduct, as well as ex ante preventative measures. The ACCC commented that:

It is clear ... that, while the approach to prohibiting the abuse of market power does vary between jurisdictions, it cannot be said that the ‘effects’ test in s. 151AJ is out of step with international norms (sub. DR114, p. 20).

5.4 Experience under Part XIB

Competition notices have been issued in relation to three matters since the introduction of Part XIB in 1997. Of these, one matter was dealt with subsequent to the 1999 amendments.

The two cases for which competition notices were issued pre the 1999 amendments relate to internet peering agreements and to commercial churn. Each took a year or more to resolve (box 5.4).

Box 5.4 **Competition notices issued**

Internet peering agreements

July 1997	Complaints received by ACCC relating to Telstra's conduct regarding internet peering
May 1998	Competition notice issued to Telstra (to come into effect in June 1998 to allow Telstra time to cease the conduct)
June 1998	Notice revoked
June 1998	Revised notice issued
June 1998	Telstra initiates court action to have notice set aside
June 1998	Submissions sought by ACCC on whether the revised notice should be revoked
June 1998	Notice revoked. Telstra discontinues court action

Commercial churn

August 1997	Complaints received by ACCC relating to Telstra commercial churn process (the process for transferring an end-user to another provider)
August 1998	Competition notice issued to Telstra (to come into force at end September)
October 1998	Notice revoked
October 1998	Revised notice issued relating to the original conduct
December 1998	Three additional notices issued relating to Telstra's conduct after it had made changes to its transfer conditions
December 1998	ACCC instituted Federal Court proceedings against Telstra
April 1999	Another notice issued dealing with conduct covered by earlier notices and, in addition, further conduct
April 1999	Further proceeding instituted against Telstra — trial scheduled for March 2000
February 2000	Telstra agrees on a \$4.5 million package for service providers. Accordingly, the matter was settled

Broadband ADSL

September 2001	Competition notice issued 7 September with date of effect 12 weeks later
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Source: ACCC sub. 16, pp. 28–9; sub. 40, attach. 5, pp. 1–2; ACCC 2001f.

This delay may well have contributed to the Government's decision to amend the Part XIB provisions in 1999. According to the ACCC:

The Government was concerned that the regime was not providing the expeditious mechanism for addressing anti-competitive conduct that was envisaged and made a number of amendments to the regime ... (sub. 16, p. 22).

The third case relates to broadband ADSL. The ACCC issued a Part A competition notice to Telstra on 7 September 2001 with effect 12 weeks from that date (ACCC 2001f).

The ACCC's submissions illustrate the steps generally involved in deciding to issue a competition notice. In regard to internet peering, for example, the ACCC's competition notice alleged that:

- there is a market for internet access services;
- Telstra has a substantial degree of power in this market;
- Telstra had taken advantage of this power by charging internet access providers (IAPs) for access but not paying for a similar service; and
- this conduct substantially lessened competition by raising the costs of rival IAPs and thereby hindering their ability to attract end-users and content providers and to compete with Telstra (sub. 16, p. 28).

Similar steps were taken in the commercial churn case. The central allegation was that Telstra took advantage of market power 'by requiring carriage service providers to either use a manual system that is slow, inefficient and costly or, alternatively, use an automated process that requires them to accept liability for the customer's debts to Telstra or pay a fee of \$15 per line' (sub. 16, p. 29).

As Telstra partially modified its conduct so that it was not of a kind described in a notice, the ACCC needed to repeat some of its administrative process (all these notices were issued before the 1999 amendments came into effect).

Telstra, however, disputed that it had behaved anti-competitively in either of these cases (sub. 24, p. 27).

In a submission to the Commission, Optus alleged that Telstra's conduct in relation to the supply of Flexstream (ie broadband ADSL) can be characterised 'as a price squeeze and a constructive refusal to supply' (sub. DR95, p. 23). In particular, it claimed that (at least in June 2001) 'the wholesale product [of Telstra] is more expensive than the retail downstream product' (sub. DR95, p. 24).

The ACCC considered that Telstra's conduct 'denies competitors the ability to differentiate the performance and functionality of their services from the Telstra

retail service and to compete fairly with Telstra's retail price' (ACCC 2001f). More specifically, Telstra (sub. DR117, p. 4) noted that the ACCC has alleged it had acted anti-competitively by:

- not making available a layer 2 ADSL service to parties wishing to obtain such a service on wholesale terms from Telstra; and
- pricing the layer 3 wholesale ADSL service (known as 'Flexstream') in a manner that, given current retail prices, allows competitors buying wholesale ADSL service 'only a small positive or negative margin'.

In regard to the first allegation, Telstra commented:

Telstra finds it difficult to understand the basis on which an administrative agency, with no substantial technical expertise, can seek or threaten draconian penalties on a highly technical matter without disclosing any cost-benefit analysis of the implications of altering the service architecture (sub. DR117, p. 4)

and, in regard to the second:

Telstra sees equally little foundation for the ACCC's allegations with respect to pricing ... the ACCC chooses to view the world on the basis that Telstra is under an obligation to supply the wholesale service at charges such that, for any given Telstra retail prices, wholesale customers can 'compete with Telstra's retail services without incurring significant financial losses'. Such an approach is, in Telstra's view, completely inconsistent with any concept of competitive neutrality, much less economic efficiency (sub. DR117, pp. 4–5).

Since 1997, there have been over 130 complaints received by the ACCC alleging anti-competitive conduct. Of these, only 15 reached the 'reason to suspect' threshold (sub. DR114, p. 13). Box 5.5 lists the dates and topics of the 'major' investigations carried out to August 2000, excluding the internet peering, commercial churn and broadband ADSL cases. An ACCC report into telecommunications competition safeguards (ACCC 2001d, p. 13) indicates that, during 2000, it investigated complaints that Telstra inadequately provisioned services connecting its declared PSTN services with other telephone networks ('switchports').

The ACCC (sub. 16, p. 30) indicated three main reasons why competition notices were not issued:

- it had formed the view that it did not have a 'reason to suspect' that a contravention of the competition rule had occurred;
- it had formed the view that there had been no contravention of the competition rule; and

- some matters were resolved through further commercial negotiation without the need for continued involvement of the ACCC.

There have been no applications for exemption orders relating to anti-competitive conduct under Part XIB. No advisory notices have been issued.

Box 5.5 Other 'major' investigations under Part XIB (to August 2000)

Date	Matter	Allegation against	Outcome
1997	International audiotex	Telstra	No breach
1997-98	PhoneAway	Telstra	No breach
1997-98	One.Tel/Optus GSM	Optus	Reason to suspect, resolved by commercial negotiation
1997-98	Telstra's confidentiality requirements	Telstra	No breach
1997-98	One.Tel override	Optus	No breach
1998	Permitted attachment private lines ^a	Telstra	Behaviour modified to meet ACCC's concerns
1997-98	ISDN and OnRamp Xpress services	Telstra	Insufficient evidence
1998-99	Telstra's capped \$3 STD product	Telstra	No breach
1999	Payphones	Telstra	Resolved by commercial negotiation
1999	Payphones and smartcards	Telstra	Resolved by commercial negotiation
1998-99	Internet third line forcing	Ninemsn	No breach

^a Simple leased line services that provide transmission at voice frequency, where the customer is expected to supply equipment to be used at either end of the line.

Source: ACCC sub. 16, pp. 31–5.

Summary

The characteristics of the telecommunications industry anti-competitive conduct actions/investigations since 1997 can be summarised as follows:

- the complaints were generally against Telstra, with two against Cable & Wireless Optus, and one against Ninemsn;
- there was no acknowledgment by Telstra of any anti-competitive conduct;
- in the main, investigations were initiated after complaint to the ACCC;
- of the more than 130 complaints, only 15 reached the formal investigative stage;
- in only three cases were competition notices issued — of these one case was dealt with since the 1999 amendments;
- all notices relating to the internet peering and commercial churn cases have now been revoked;
- each case took considerable time to investigate and resolve;
- there have been no competition notices issues in respect of those parts of Part XIB that are common to Part IV;
- no other action has been taken in regard to telecommunications under Part IV by the ACCC;
- no injunctions have been sought by the ACCC; and
- no cases have been to trial, and no penalties have been imposed, although some court action was initiated by Telstra and the ACCC (each was subsequently discontinued when the cases were resolved).

This apparent lack of extensive action, however, does not necessarily imply that the provisions have not had an effect, in the sense that they may well have led to modifications of behaviour.

5.5 Assessment

An assessment of the benefits and costs of Part XIB against the criteria presented in section 5.2 can now be given, drawing on the background information set out in sections 5.3 and 5.4.

Characteristics of telecommunications

As noted above, the Government justified special provisions for telecommunications for a number of reasons including: the transition from a dominant incumbent to deregulated, competitive, markets; the considerable scope for anti-competitive conduct; the possibility of anti-competitive cross subsidies; horizontal and vertical integration of firms; and the fast pace of change in the sector. Although the argument was contested by Telstra (see below) and the Institute of Public Affairs in their submissions, many participants argued that the features of the telecommunications industry justified a special approach. For example, Cable & Wireless Optus considered that there were ‘unique economic characteristics of electronic communications markets’ including:

... (a) the incumbent’s control of bottleneck facilities, particularly the local loop, which competitors must access to compete effectively; (b) the ease of cross-market leverage which strongly favours vertically integrated incumbent operators; and (c) network effects and network externalities which favour incumbent operators with larger networks (sub. 8, p. 5).

A particular characteristic of networked industries such as telecommunications is the possibility of ‘first mover advantages’ (chapter 2). That is, the positive externalities associated with large existing networks can give incumbents an inherent advantage in newer rapidly developing market areas. In itself, this is not anti-competitive. However, the danger is that such incumbents use anti-competitive conduct to deny or restrict the access of other players to their existing networks and/or services (even for a short time) while they themselves expand into newer markets, and that this first mover advantage becomes unassailable. Cable & Wireless Optus claimed that:

Economic theory suggests that in network industries, anti-competitive tactics can be crucial, even outcome determinative, regardless of whether an industry’s cost structure is conducive to competition, or an entrant is more cost efficient than the entrenched incumbent (sub. 8, p. 35).

Similarly, PowerTel considered that:

In a market where product offerings and technology are changing rapidly, if the incumbent is able to delay processes required for the provision of access or the deterrence of anti-competitive conduct, then by the time the matter has been resolved, the industry will have moved on (sub. 35, p. 10).

But Telstra argued that telecommunications markets could not be distinguished from other markets and thus Part XIB is seriously flawed:

... there is no longer (if there ever was) a valid distinction between ‘telecommunications’ markets and other markets. An analytical approach based on such a distinction — as taken by Part XIB — is seriously flawed (sub. DR101, p. 43).

Further, Professor Janusz Ordovery, in a report prepared at the request of Telstra, argued that the economics of the telecommunications sector are not unique (sub. 43, pp. 16–22). He contended that many industries share the features that have been identified as the distinguishing characteristics of telecommunications, including:

- lumpy and sunk investment;
- scale and scope economies;
- network externalities;
- bottleneck facilities;
- rapid structural and technological change; and
- vertically integrated incumbents.

When considered one-by-one, the characteristics of the telecommunications industry cited by some participants in support of Part XIB do not appear unique to telecommunications. For example, other industries share features such as lumpy investment and scale economies. Some other industries, such as electricity, gas and post are also in stages of transition to competitive markets. And, whatever the industry or sector, horizontal and vertical integration would make gathering evidence difficult.

However, despite convergence, or perhaps partly because of it, there may be greater incentive, and ability, for some telecommunications providers to act anti-competitively than firms in other industries. For example, Telstra wields market power in many market segments. As well, by forcing firms to supply on terms and conditions they would not otherwise agree to, the Part XIC access provisions and provisions of the Telecommunications Act increase incentives for anti-competitive conduct. Other telecommunications providers, such as Cable & Wireless Optus and AAPT and even some small providers of terminating access, for example, may also have some market power in dealing with Telstra, in market areas where Telstra's capacity to reciprocate has been limited by regulation (chapter 9).

It is the combination of characteristics in telecommunications and the scope for anti-competitive conduct that may well be unique. A case can be argued that, given the present state of competition, there is a need for regulatory provisions to facilitate speedy action against alleged anti-competitive conduct in the telecommunications sector were such conduct to occur. As well, anti-competitive conduct regulation for the telecommunications sector should be 'scalable' in the sense of being able to deal, if necessary, with several cases simultaneously at reasonable administrative and compliance cost. There is the special danger in the telecommunications sector that anti-competitive conduct, where it occurs, could have the effect of foreclosing entry into newly developing market segments. In this situation, as noted by C7 (in a

slightly different but relevant context), ‘a claim for damages down the track ... is often little recompense’ (sub. DR107, p. 7).

But does Part XIB facilitate speedy action? And is it scalable? The evidence suggests that Part XIB does not operate as quickly as originally hoped. The ACCC commented that:

Contrary to industry and public expectations, the competition notice regime [prior to the 1999 amendments] did not provide an expeditious mechanism for responding to conduct that hindered the development of a competitive telecommunications market (sub. 16, p. 73).

The ACCC commented that:

... it should be recognised that there will almost always be a considerable delay in instituting proceedings for a breach [of Part XIB] or section 46 due to the complex nature of the elements of the provisions and the type of information required to prove these elements (sub. 40, p. 42).

Cable & Wireless Optus noted that investigations of complaints have taken from 9 to 27 months before the issues were resolved (sub. 8, p. 184). Other participants that criticised the speed of the process included the Australian Telecommunications Users Group (ATUG) and Telstra:

While the existing Competition Notice procedure has merit, experience has shown it to be very slow ... (ATUG sub. 4, p. 6).

The Part XIB cases discussed above [internet peering, commercial churn] provide substantial evidence of the lack of speed involved in the regime (Telstra sub. 24, p. 30).

Although Vodafone noted that the ACCC has now indicated a timeframe for the issue of Part A competition notices (section 5.6) it considered this may not be quick enough:

Given the fact that the telecommunications industry is changing and evolving with remarkable rapidity, a time delay of 6 months between the occurrence or commencement of potential anti-competitive conduct and the issue of a part A competition notice may be considered to render such a measure less than fully effective (sub. 15, p. 26).

PowerTel noted that although the process can be lengthy, at least discussion can commence quickly:

Part XIB is useful where, although it is a lengthy process to get the regulator to make a decision, at least having the ability to move quickly if they wish and to take up the issue with Telstra, or whoever it may be, tends to at least move you somewhere down along the path you want to be towards some sort of commercial resolution (trans., p. 276).

Further, in comparison to Part IV the operation of Part XIB is significantly faster. Primus noted that a decision had been reached in the Boral case some seven years after it commenced: ‘this ... would be completely unacceptable in the telecommunications industry where the nature and structure of the market is changing at a rapid rate’ (sub. DR109, p. 4). The ACCC considered that, following the 1999 amendments, Part XIB generally provides a more ‘expeditious mechanism’ than Part IV (sub. 40, p. 42). According to the ACCC, there is ‘considerable delay in enforcing a breach of Part IV’:

... recent experience is that the time between instituting proceedings and obtaining final court orders is a minimum of 12 to 18 months and up to 6 years. This delay invariably benefits the incumbent ... (sub. 16, p. 75).

A caveat must be placed on this conclusion — that is, if Part XIB action were to be pursued right through the courts, it might well be as time consuming as Part IV would have been. In practice, however, as discussed below, Part XIB is more likely than Part IV to avoid court action, with all its attendant administrative and compliance costs, such as the costs of delay and potentially high legal costs. It would appear to be easier for the ACCC to pursue several cases simultaneously under Part XIB than under Part IV.

The benchmark

Both Part IV and Part XIB use the same benchmark: that is, conduct is assessed against behaviour that would be profit maximising in a competitive market. Telstra argued that: ‘regulators ... will inevitably make mistakes in attempting to second guess the outcomes that market forces would otherwise have generated’ (sub. 38, p. 8). However, as the benchmark is the same for both sets of regulation, it is not further discussed in this section, although relevant issues are considered in section 5.6.

Purpose or effect

A potentially important issue in defining anti-competitive conduct is the question of ‘purpose’ (Part IV) or ‘effect or likely effect’ (Part XIB). Which performs best as a threshold test under the competitive market benchmark?

Many participants supported an effect or likely effect test. PowerTel argued:

In an industry with an entrenched player such as Telstra, where the aim is to foster competition, if the effect of conduct is anti-competitive, even if the purpose was not, it is a matter of concern from both a competition perspective and from a public policy perspective (sub. 35, p. 16).

While considering that there might be little difference in practice (sub. 38, p. 25), Telstra supported the purpose test rather than the effects test:

Telstra is not convinced that the purpose test under section 46 of the Act is deficient, nor that any supposed deficiency is cured by an effects test ... An investigation of purpose is a more practical and limited exercise than an examination of effect, because an effect on competition involves complex issues of the extent of any lessening of competition ... (sub. 24, pp. 30–1).

In his submission, R. S. Gilbert, a former Deputy Chairman of the Trade Practices Commission, opposed the effects test as:

That is quite discriminatory, in that it could prevent Telstra from competing with other carriers in ways that are regarded as quite legitimate in other industries ... This clearly must have an inhibiting effect on Telstra's ability to compete with Optus and other new entrants to the industry. And competition law shouldn't favour some competitors over others, or keep some participants 'down' in an attempt to bring others 'up' (sub. 28, p. 3).

The Hilmer report opposed an effects test for misuse of market power under section 46 of Part IV, arguing that:

A firm that succeeds in aggressive competitive conduct may drive other firms from the market and achieve a position of pre-eminence for an extended period. It does not necessarily follow, however, that the competitive process will be damaged by the conduct or that the potential for competition will be diminished, even if the immediate manifestations of the successful competitive conduct may suggest it (Hilmer 1993, p. 70).

ATUG commented that both tests were essential:

The Australian concept of including examination of both intent and effect in reviewing an issue of alleged anti-competitive conduct is considered essential, if industry growth and sensible competition are to develop (sub. 4, p. 6).

From an economic point of view, the effect of conduct can be more important than its purpose. In introducing Part XIB, the Government's Explanatory Memorandum stated:

Reliance on a 'purpose test' alone risks a focus on the perceived morality of conduct rather than its economic effect (p. 10).

The Commission notes that the economic rationale for anti-competitive conduct regulation is to prevent conduct that is regarded to be against the public interest, and that this objective stands irrespective of the intent of the carrier or carriage service provider involved. Under the competitive market benchmark, the effect or likely effect test better focuses on the policy objective.

However, questions arise as to which test has greater practical success in detecting and deterring anti-competitive conduct and about the implications for regulatory error.

Section 46(7)

The operational differences between section 46 and Part XIB in regard to purpose and effect may not be as large as might be supposed. This is because, under section 46(7), the existence of a prohibited purpose may be inferred from the circumstances even though there is no direct evidence of it:

... a corporation may be taken to have taken advantage of its power for a purpose referred to in subsection (1) notwithstanding that, after all the evidence has been considered, the existence of that purpose is ascertainable only by inference from the conduct of the corporation ... or from other relevant circumstances.

As the Hilmer report noted:

Purpose may be ascertained by inference from the conduct of the firm with market power or of any other person, or from any other relevant circumstances (Hilmer 1993, p. 65).

Taperell and Dammerly (1996, p. 51) referred to the New Zealand *Clear* case¹:

In the *Clear* case, the Privy Council took the view that if a firm uses market power it can readily be inferred from that fact alone that it has a prohibited purpose. For example, if a firm refused to supply goods or services in circumstances where that would not make commercial sense unless it had market power, it might be readily inferred that, in the absence of some alternative explanation, its purpose, or at least one of its substantial purposes, was to deter or prevent competitive conduct.

Nevertheless, an observed effect would not necessarily establish purpose — under section 46 in practice, even if an effect were observed, it would be necessary to argue that purpose existed. Under Part XIB, in contrast, an effect or likely effect could be sufficient to establish anti-competitive conduct, even in the absence of purpose.

Breadth of test

Effect or likely effect, as under Part XIB, is more expansive than *purpose*. Almost by definition, a firm setting out with a purpose of engaging in anti-competitive conduct expects there at least to be a likely effect on competition; and sometimes

¹ *Clear Communications Ltd v Telecom Corporation of New Zealand Ltd* (1995) 1 NZLR 358.

there may be a likely effect without there having been a purpose. As discussed below, this more expansive nature has implications for regulatory error.

Failure to do a positive act

The ACCC considered that the effects test in Part XIB had enabled action to be taken where the alleged anti-competitive conduct was in fact a failure to do a positive act. It considered that its action in the internet peering and commercial churn cases would not have been possible under Part IV:

The effects test is particularly required where the use of market power alleged to have substantially lessened competition is in fact a failure to do a positive act ... The action taken by the ACCC in the internet peering and commercial churn matters would not have occurred under Part IV (sub. 16, p. 75).

The ACCC contended that, in its experience:

... it is particularly difficult for a court to infer intent where a firm's conduct substantially lessens competition but the firm has not been 'jockeying for sales' or otherwise engaged in a positive act to 'injure' its competitors ... it is particularly difficult to infer purpose in the absence of an 'aggressive' or 'positive act' (sub. 57, pp. 5-6).

Telstra considered the ACCC's statement was 'clearly inaccurate' (sub. 38, p. 30) and noted that under section 4(2) of the TPA 'conduct' includes the doing or refusing to do any act. It contended that action could have been taken in the internet peering and commercial churn matters under Part IV or even Part XIC relating to access (sub. 24, p. 33). Indeed, Ergas (1999, p. 24) commented that Part XIC would have 'imposed greater discipline on the process, in terms of neutrality of treatment and of rigour in the setting of access charges'.

Certainly, according to the ACCC, in *Queensland Wire Industries Pty Ltd v The Broken Hill Pty Co Ltd*, the High Court was able to infer a prescribed purpose from the evidence that BHP had not offered any business justification for its refusal to supply Y-bar to Queensland Wire and that this refusal was inconsistent with its normal selling policy in relation to its other products (sub. 57, p. 3). The ACCC noted, however, that since then the Federal Court has decided only three reported cases in which the Trade Practices Commission or the ACCC had alleged a contravention of section 46 (ACCC 2001e, Appendix A).

Further, and somewhat in contradiction to its comment quoted above, the ACCC contended that 'Part XIB is less effective where the preferred outcome is an order requiring some positive act' (sub. 16, p. 77). It indicated that 'this is the primary reason why pricing issues that may constitute a constructive refusal to supply have

been solely addressed under Part XIC rather than ... Part XIB' (sub. 16, p. 77). It commented:

Courts will restrain a person from committing or repeating a particular act but judges are understandably reluctant (and are not well placed) to order a person to do a 'positive act' such as providing access at a particular price or replacing inefficient technology (sub. 57, p. 6).

Indeed, as noted by the ACCC (sub. 57, p. 7), the Hilmer Report preferred an access regime (such as that now in Part IIIA of the TPA, or possibly in Part XIC) for refusal to deal cases, rather than amendment of the provisions of the TPA dealing with anti-competitive conduct (ie Part IV).

The ACCC itself commented that:

If an order to stop certain conduct and provide compensation is sufficient, then Part XIB may be appropriate. However, if the preferred outcome is a 'positive act' then Part XIC may be the preferable 'regulatory tool' (sub. 57, p. 7).

A possible caveat from the ACCC was that 'Part XIB will have a significant role in maintaining the status quo until action can be taken under Part XIC' (sub. 16, p. 77).

In its response to the draft report, the ACCC stated that it rejects the notion that relevant anti-competitive conduct action can be pursued under either Part XIC or Part IV. The issue with regard to Part IV is discussed above. However, in regard to Part XIC its argument rested on the fact that the relevant service may not have been already declared (sub. DR114, pp. 16–7). However, the time taken to declare a service and set regulated access prices under Part XIC need not be longer than that taken for Part XIB action, given that Part XIB action so far has taken a period of months to years. Further, the changes proposed by the Commission elsewhere in this report would enhance the time effectiveness of Part XIC.

It is a reasonable proposition that, in administering regulation, the ACCC should adopt the same interpretation that a court is likely to adopt. If this proposition is accepted, the ACCC's own arguments strongly suggest that it would have been more appropriate for the internet peering, commercial churn and broadband ADSL cases to have been dealt with under Part XIC rather than Part XIB as, in each case, a 'positive act' was required as an outcome. To this extent, the differences between purpose and effect are not significant.

As discussed below, however, administration of Part XIB brings strong incentives for a firm to change behaviour and avoid court action. In this sense, Part XIB, with its effect or likely effect test, *is* effective in bringing about a 'positive act'.

Other considerations of proof

The ACCC contended that ‘in the absence of a “smoking gun”, it is generally easier to prove effect than intent as a firm can obscure its intent’ (sub. 57, p. 3). Nevertheless, it commented that the effects test is ‘by no means easy to prove’:

A court is required to look at the relevant market, assess the extent to which there would have been competition in the market but for the conduct and determine whether the lessening, preventing or hindering of competition is substantial (sub. 57, p. 3).

Section 46 gives the option of focusing on the purpose of alleged anti-competitive conduct in relation to damage to a *competitor* rather than damage to *competition*. In this regard, a contravention of section 46 may be easier to prove than a contravention of Part XIB. (Of course, some damage to *competitors* could be expected as a by-product of welfare-enhancing *competitive* conduct.)

Conclusion

The significance of differences between the purpose test in section 46 of Part IV and the effect or likely effect test in Part XIB *if a particular issue were to be contested in the courts* is uncertain. Nevertheless, with the competitive market benchmark, an effects test has the advantage of focusing on the economic rationale for anti-competitive conduct regulation.

It is more expansive in scope, with implications for regulatory error.

The ACCC argued that an effects test was needed to deal with those cases where there had been a failure to do a positive act. It is far from clear, however, that appropriate and successful action could not be taken under Part IV or Part XIC, albeit under somewhat different regulatory processes and with implications for timing. Moreover, it can be argued that the internet peering, commercial churn and broadband ADSL cases were essentially access matters, better suited to the access provisions of the TA, an industry code under the TA or Part XIC processes rather than Part XIB.

Regulatory error

Good regulation and its implementation should minimise the possibility of regulatory error. However, as noted above, a reduction in one type of error may be associated with an increase in another. Further, not all errors are equally serious.

Taking action when it is not warranted (probability of Type I error)

Because of its more expansive nature, and its relative speed, scalability and lower administrative costs, Part XIB has potentially higher Type I error than Part IV. That is, potentially more conduct that is actually pro-competitive would be found to be anti-competitive under Part XIB.

Whether this potential negative has materialised in practice, however, is difficult to assess given the lack of publicly available information about the reasons for the ACCC's actions.

Certainly, Telstra argued that it had not behaved anti-competitively in the internet peering and commercial churn cases, but that it had felt pressure to change its market behaviour. It stated that 'the current provisions are an open-ended licence for abuse, with the ACCC being only too willing to rely on the discretion they provide' (sub. DR101, p. 11). In regard to peering:

... the blunt pressure from the ACCC threatening to issue a competition notice caused Telstra to enter into negotiations with the IAPs which culminated in peering agreements even though none of the IAPs had a comparable network or a comparable volume of traffic at the time to qualify it as a 'peer' of Telstra (sub. 24, p. 27)

and in regard to commercial churn:

Although Telstra maintained that it had not breached the competition rule, Telstra felt obliged to reduce its prices further below its costs as a result of the regulatory pressure brought to bear by the ACCC under its Part XIB powers (sub. 24, p. 27).

Others, however, including the ACCC, Cable & Wireless Optus and AAPT stated that the ACCC's actions under the Part XIB provisions had been broadly effective in identifying and stopping anti-competitive conduct and acting as a deterrent. For example, the ACCC considered that the internet peering and commercial churn matters were 'concluded successfully' (sub. 16, p. 72). In the internet peering matter, Telstra signed reciprocal agreements with three internet access providers. And according to the ACCC, in the other matter, Telstra's 'churn processes improved significantly' (sub. 16, p. 72). The ACCC has also undertaken a number of other investigations. In those cases where the ACCC formed a view that anti-competitive conduct may have taken place, the matters were resolved by a change in market behaviour or commercial negotiations. In commenting on the internet peering and the commercial churn cases, Cable & Wireless Optus said:

The two competition notices produced tangible, immediate consumer benefits (sub. 8, p. 119).

As noted above, there is limited evidence on which to assess the correctness of ACCC's actions and the views of participants are mixed. Further, the internet

peering, commercial churn and broadband ADSL cases may well have been more appropriately progressed through policy instruments other than Part XIB. Nevertheless, at face value it appears that *some* ACCC regulatory action in at least the internet peering and commercial churn cases was merited:

- With internet peering, Telstra appears to have been using its market power to refuse to pay for services provided to it by other backbone/transit providers.
- Given the declaration of various elements of the CAN under access regulation, it seems reasonable to require Telstra to provide commercial churn at a reasonable cost. Otherwise, the intent of those access declarations would have been frustrated.

Further, although the available information on which to base a firm conclusion is insufficient, there appear issues to examine in the broadband ADSL matter.

On the record so far, although Part XIB may not have been the most appropriate instrument to use, the probability of Type I error overall appears low.

Not taking action when it is warranted (probability of Type II error)

Part IV action would necessitate court proceedings involving significant delay and cost. In contrast, no Part XIB actions to date have proceeded to a court examination of whether anti-competitive conduct has in fact occurred. Perhaps in response to the incentives discussed below, Telstra has modified behaviour that the ACCC alleged to be anti-competitive rather than go to court.

In practice, therefore, it is easier for the ACCC to take action under Part XIB than under Part IV. While Part IV might be able to deal adequately with the major cases, provided speed was not of the essence, Part XIB would appear to be better suited to deal with the relatively large number of less important cases that make up the spectrum of anti-competitive behaviour.

Nevertheless, some participants argued that the Part XIB provisions had only limited effectiveness. Macquarie Corporate Telecommunications commented:

Part XIB has not been directly effective, even after the 1999 amendments, and to date there have been no successful XIB actions (sub. 11, p. 12).

[Part XIB] ... has been unable ... to deter subtle forms of anti-competitive behaviour (trans., p. 121).

Others also stated that not all areas of potentially anti-competitive conduct were successfully addressed by existing provisions. AAPT stated:

Telstra has engaged in instances of anti-competitive conduct which have not been adequately addressed under Part XIB ... (sub. 7, p. 22).

Telstra said that Part XIB had been applied asymmetrically and had overlooked anti-competitive conduct by other firms. For example, it cited the case of Optus, which ‘has failed to provide Telstra with mobile origin location information’, and claimed that the ACCC ‘refuses to do anything about it’ (sub. 24, p. 49):

This asymmetric application of regulation is not only extremely costly for Telstra, it deprives the industry of a process to deal with multi-carrier issues (sub. 24, p. 49).

Overall, despite these comments about additional areas where action under Part XIB could be taken, conduct that is in fact anti-competitive is more likely to be made the subject of regulatory action under Part XIB than it would be made the subject of regulatory action if only Part IV were available. Thus, Part XIB would have a lower probability of Type II error than Part IV.

Probability of incorrect deterrence

Under Part XIB, heavy court penalties — up to \$10 million plus \$1 million per day — are available once a Part A competition notice has been issued. As well, a Part B notice in effect imposes the onus of proof on the recipient. Together, these features of Part XIB place considerable pressure on the recipient of a competition notice to modify its behaviour, even if it does not consider that to be anti-competitive. The main feasible alternative could be to continue with the alleged anti-competitive conduct while endeavouring to establish its ‘innocence’ in court. Given the time generally taken to resolve issues in the courts, and the potentially high daily penalty, this strategy could ultimately prove to be a very expensive exercise if the court rejected the notice recipient’s arguments. Other alternatives would appear to be ruled out: an exemption is not feasible because the competition notice clearly indicates the ACCC’s belief that the behaviour is against the public interest; court action to prevent the issuing of Part A and Part B notices under Part XIB is generally not possible (section 151AQA).

Thus, compared to action under Part IV, the competition notice system, including the reversal of the onus of proof with a Part B notice, would discourage firms alleged to undertake anti-competitive conduct from testing the issue in the courts.

These incentives created by the competition notice regime of Part XIB have both positive and negative effects on deterrence.

On the positive side, it would appear that Part XIB would better deter anti-competitive conduct than Part IV alone. Indeed, in view of the very small number of

actions under Part IV across the economy as a whole and the considerable delays and costs involved, it could be argued that Part IV would provide little or no effective deterrence of anti-competitive conduct by firms in a fast moving sector such as telecommunications.

Currently, there can be no penalties or damages under Part XIB for behaviour that occurs prior to a Part A competition notice. Even so, Part XIB still could provide deterrence during the 6–24 months it takes for such a notice to be issued. A provider might be deterred by the prospect of the negative publicity that would surround such a notice — indeed, Telstra noted that ‘significant costs in terms of brand damage can arise from the threatened, and actual, use of Part XIB (sub. DR101, p. 37). Further, some forms of anti-competitive conduct, such as predatory pricing, might need to continue for a longer period to benefit a firm. As well, the very existence of Part XIB makes it easier for regulation to be toughened up if that were thought necessary or desirable — in itself, this ‘silent policeman’ effect would deter anti-competitive conduct.

Several participants commented on this positive deterrent effect.

In its response to the draft report, the ACCC quoted with approval from an article by Ayres & Braithwaite ‘Regulatory agencies will be able to speak more softly when they are perceived as carrying big sticks’ (sub. DR114, p. 9). In other words, the ACCC supported regulation, such as Part XIB, that channels most of the regulatory action into the realms of persuasion and self regulation (sub. DR114, p. 9). However, as discussed below, a ‘big stick’ can just as likely force unacceptable as acceptable outcomes. The ACCC also commented that the current remedies, including the monetary penalties, ‘continue to remain valid and an important deterrent’ (sub. DR114, p. 14).

AAPT noted that:

... the fact that the provisions have rarely been used does not necessarily imply that they have been ineffective — indeed, that fact is equally consistent with the proposition that they have reduced the incidence of anti-competitive conduct which might otherwise have taken place (sub. 7, p. 22).

Similarly, the Small Enterprise Telecommunication’s Centre believed that:

The low number of competition notices issued under Part XIB is an indication of the effectiveness of the special regulations in changing carrier behaviour (sub. 33, p. 6).

ATUG considered that ‘far from being ineffective ... Part XIB has had a deterrent effect on the larger players in the industry’ (sub. DR69, p. 7). And SPAN commented that the Part XIB provisions exercise ‘a restraint on anti-competitive behaviour’ (sub. DR78, p. 1).

Some claimed there was a positive influence on investment. For instance, AAPT considered that the current regulation had a beneficial effect on its preparedness to invest:

AAPT's preparedness to invest was influenced by the fact that there were specific provisions in Part XIB that protected carriers from a misuse of market power (sub. 7, p. 23).

The ACCC commented that 'strong enforcement provisions also provide new entrants with a degree of comfort in making substantial capital investments' (sub. DR114, p. 13). Further, it stated that 'Telstra's level of capital expenditure has remained relatively constant in the years following deregulation' (sub. DR114, p. 12). The Commission notes, however, that Telstra's capital expenditure has fallen by over seven per cent in the latest year (chapter 3) although, of course, there are broader economic forces at play.

PowerTel submitted that given Telstra's 'relatively superior performance' on EBITDA criteria, 'an inference can be drawn that Part XIB does not operate to impede investment decisions and risk taking' (sub. DR102, p. 6). ATUG argued that there has been no deterrent effect *on investment* since Part XIB was introduced — 'if anything, the deterrent against anti-competitive conduct has been positive in *promoting* overall levels of investment in industry' (sub. DR87, p. 3).

However, for the same reasons, discussed above, that it is likely to deter anti-competitive conduct, Part XIB is more likely than Part IV to deter acceptable competitive conduct. A 'big stick' can just as likely force unacceptable as acceptable outcomes.

The ACCC and ATUG pointed to exemption orders as a way for a firm to ensure that its proposed conduct does not breach the competition rule (sub. DR87, p. 6). However, exemption provisions do not reduce the risk of incorrect deterrence — as an application for exemption would be judged by the ACCC essentially on the same criteria that it would apply to assessing an alleged instance of anti-competitive conduct.

Telstra commented on 'the discouragement of normal commercial pro-competitive activity, innovation and investment' (sub. 24, p. 51). It indicated that there had been disincentives in areas of possible investment:

... Part XIB operates as a disincentive for Telstra to invest in new or innovative technologies. For example, Telstra's plans to 'broadband the nation' were substantially delayed ... (sub. 24, p. 49).

Judging from the number of formal investigations by the ACCC (just 15 reached the investigative stage), compared to the number of complaints it has received (over

130), it appears that the ACCC is cautious in commencing a formal investigation. Telstra, for instance, in putting forward its argument about asymmetric application of Part XIB, indicated several instances where it considered the actions of its competitors should have been investigated but were not (sub. DR101, pp. 26–8). Further, leaving aside conduct such as internet peering and commercial churn that had been investigated by the ACCC, Telstra was unable to point to any particular instance in which competitive behaviour by it had been deterred by the ACCC’s administration of Part XIB.

The demonstrated record of the ACCC should give a reasonable indication as to where it draws the line between acceptable and unacceptable conduct. And, in the final analysis, there is no penalty under Part XIB for continuing with any form of behaviour in the absence of a competition notice from the ACCC.

Until the present time, at least, the probability of Part XIB as currently administered incorrectly deterring clearly competitive conduct would be low.

Costs of errors

Leaving aside any differences in the associated administrative and compliance costs, the economic impact of any particular instance of regulatory error, or of incorrect deterrence, under Part XIB should be the same as if those errors had occurred under Part IV. Therefore, the overall costs of regulatory error under Part XIB compared to Part IV would depend mostly on the relative probability of error, rather than on the costs of individual errors.

In this regard, the above discussion suggests that the probability of Type I error (that is, of taking action when it is not warranted) under Part XIB, although low, would be higher than under Part IV. The opposite is true for Type II error (that is, of failing to take action where it is warranted). Potentially, therefore, the aggregate costs of Type I error are higher with Part XIB, but those of Type II error are lower, compared to Part IV.

As noted above, the ACCC to date appears to have been cautious in investigating and taking action against alleged anti-competitive conduct under Part XIB. It has issued competition notices in only three cases. This suggests that, even though more cases are investigated than would be under Part IV, the ACCC is only prepared to investigate the more serious cases under Part XIB. However, given the ACCC’s limited resources, it is more likely to arrive at correct conclusions when few cases are investigated, rather than many. Overall, the aggregate costs of Type I error are likely to be lower than they would be if more cases were pursued.

Potentially, the greatest cost of error might arise if there were a high probability of incorrect deterrence. Of course, these costs are not possible to quantify. As discussed above, the Commission considers that, as presently administered, the probability of incorrect deterrence under Part XIB is likely to be low. This does not mean that the associated cost would be as low as under Part IV operating alone.

A final type of error arises where anti-competitive conduct is correctly identified but wrong action is taken in response. Arguably, this might have been the situation in the internet peering case. Rather than the ‘sender keeps all’ solution agreed with the ACCC, it might have been better just to require internet backbone/transit providers to pay each other directly for the services they obtained from each other. However, the public information about the ACCC’s reasoning and conclusions on this case is limited. Thus it is not possible to reach a firm conclusion on the merits of the action taken, nor of any associated cost of error.

Administrative and compliance costs

Few data are available about the administrative and compliance costs associated with Part XIB. Comments from participants, however, indicate that they may be far from trivial. Telstra commented that the parties to the commercial churn matter expended ‘prodigious sums of money on legal and economic advice and management time and energy’ (sub. 24, p. 29). PowerTel considered that ‘causing the ACCC to issue a competition notice involves the complainant in a lengthy and expensive process’ (sub. 35, p. 24). Hutchison Telecommunications and One.Tel also commented on potentially significant monetary and time costs of seeking action under Part XIB.

As Part XIB is likely to deal with more cases than Part IV, aggregate administrative and compliance costs could tend to be higher. However, given Part IV action involves often lengthy and expensive court action, administrative and compliance costs under Part XIB, per case, are likely to be significantly lower than under Part IV.

Summing up

It has not been possible to undertake a full benefit–cost analysis of the merits of anti-competitive conduct regulation for telecommunications additional to that applying generically under the TPA. However, assessed against a range of relevant criteria, the Commission concludes that, as currently administered, and at this stage in the development of competition, the net benefits of Part XIB are likely to be positive.

In the light of this conclusion, the next section draws out policy recommendations giving special consideration to issues of procedural fairness.

5.6 Policy options

In the draft report, the Commission put forward two options covering anti-competitive conduct regulation for the telecommunications sector:

- option 1: repeal the anti-competitive conduct provisions of Part XIB; and
- option 2: amend Part XIB to modify its undesirable features. The Commission suggested some possible changes for consideration by participants.

In response, most participants reiterated their original positions. That is, Telstra and a few others strongly supported option 1. Other carriers and many other participants strongly opposed option 1. Little consideration was given by either side to the suggestions put forward in option 2 — if anything, those opposing option 1 called for the strengthening of Part XIB.

In the Commission's view, the submissions of participants overstate both the costs and benefits of Part XIB, relative to Part IV. On the one hand, Telstra is strongly opposed to Part XIB but is unable to demonstrate convincingly what competitive actions may have been deterred. On the other, some submissions almost suggest that removal of Part XIB would give Telstra an open licence for abuse — yet under Part IV, firms would still have the option to seek a court injunction against anti-competitive conduct. And countries without special purpose anti-competitive conduct provisions — such as New Zealand — still reap benefits from liberalisation. Such extreme views from both sides add to the difficulty of balanced assessment.

A number of implicit and explicit reasons for supporting option 1 were put forward in the draft, including:

- the inherent difficulty of defining anti-competitive conduct in any objective sense;
- the belief that Part XIB has enhanced opportunity for regulatory error and overreach;
- an impression that the gains from successful action may be largely distributional rather than efficiency related;
- complexity and slowness of administration;
- the availability of alternative regulatory mechanisms; and

-
- growing competition in the telecommunications sector.

In its response to the draft report, the ACCC stated its belief that regulatory overreach had not occurred. It pointed to the lack of court action under Part XIB and to the ‘very design of Part XIB, with a 3-stage process [to alleviate] concern about potential error’ (sub. DR114, pp. 13–4). However, the lack of court action tells little about overreach — as discussed in the previous section, Part XIB provides strong incentives for a provider to modify behaviour even if it disagrees that it is anti-competitive. Nevertheless, in the draft report the Commission merely pointed to the *potential* for regulatory overreach, rather than to *actual* overreach. And, as also discussed above, the record shows that the ACCC is cautious in taking Part XIB action.

In the draft report, the Commission also expressed the view that repeal of Part XIB would not be inconsistent with Australia’s international trade obligations. In response to the draft report, DFAT commented, however, that while it ‘does not wish to overstate the risk’, this was ‘open to debate’ (sub. DR84, p. 2) (box 5.6).

Of course, taken individually, none of these reasons justifies abolition of Part XIB. But, taking them together, the Commission expressed the view in the draft report that option 1 was to be preferred. Since the draft, however, the Commission has further assessed the advantages and disadvantages of Part XIB. In the light of the discussion in the previous section against the criteria listed in section 5.2, on balance the Commission now supports the retention of Part XIB pending the development of more sustainable competition — this support is *conditional on the introduction of an appeal mechanism such as that discussed below*, which is intended to enhance procedural fairness.

RECOMMENDATION 5.1

The Commission recommends that the anti-competitive conduct provisions of Part XIB of the TPA be retained, subject to the introduction of an appeal mechanism such as that proposed in recommendation 5.2.

The following discussion considers some of the features of Part XIB and ways of improving them without detracting from Part XIB’s advantages in terms of speed and scalability.

Scope of anti-competitive conduct regulation

One possible way to reduce the costs of regulation would be to restrict the scope of its application to those firms or telecommunications market areas considered to have the greatest risk of anti-competitive conduct. But would this be possible

without significantly widening the opportunity for anti-competitive conduct in other areas?

Box 5.6 Repeal of Part XIB and Australia's international obligations

AAPT commented that it was 'arguable' that Australia's commitments under the GATS and, in particular, the WTO Reference Paper on Telecommunications would not be met by Part IV of the TPA alone (sub. 41, pp. 28–35).

DFAT noted that the Paper 'does not specify the adoption of particular regulatory regimes or institutional structures' (sub. 46, p. 1). It considered that 'the current obligations with respect to competitive safeguards could be met through the application of Part IV of the TPA' (sub. 46, p. 2).

However, it raised the possibility that Australia could potentially be found in breach for example 'if a firm was found not to be liable under Part IV where it was acting anti-competitively but intention could not be established' (sub. 46, p. 3). There were two reasons for this according to DFAT (sub. DR84, p. 1):

- the examples of anti-competitive practices set out in the Reference Paper do not require an anti-competitive purpose; and
- 'in WTO practice it is generally accepted that in determining whether a measure is inconsistent with commitments under WTO Agreements, it is necessary to examine the measure's practical effect. For example, if a measure is discriminatory in effect, although not in intention, then this alone can be sufficient for such a measure to be considered inconsistent with WTO commitments'.

DFAT commented that it did not wish to overstate the risk that a repeal of Part XIB could have implications for Australia's international obligations:

Clearly the matter is open to debate as there are arguments that Part IV alone would continue to constitute 'appropriate measures' for the prevention of 'anti-competitive practices' (sub. DR84, p. 2).

Vodafone considered that 'Part XIB should be limited to dealing specifically with the conduct of Telstra' (sub. 15, p. 27). And Ericsson Australia considered that there 'is no further need for continuing industry specific regulation in the mobile market' (sub. 23, p. 4).

Macquarie Corporate Telecommunications suggested that a competition notice should be available where a carrier or carriage service provider has a 'dominant position or is in control of an element essential to a party seeking interconnection' (sub. 34, p. 21). Macquarie considered this would lessen or remove the need to define 'telecommunications markets' and 'substantial market power' on an individual case basis:

Defining markets and market power is a complex, time consuming and often inherently imprecise task that in effect limits the [ACCC's] jurisdiction due to delay and uncertainty (sub. 34, p. 21).

The probable effect of Macquarie's proposal, however, would be to confine anti-competitive conduct regulation in many segments of telecommunications just to Telstra. As noted above, however, Telstra already has its own concerns about possible anti-competitive conduct by others and claimed that 'the Part XIB regime has been asymmetrically applied to date, exacerbating the costs that the regime otherwise generates' (sub. DR101, p. 26).

Further, the test under section 46 is one of misuse of market power, not dominance. It is noted that the concept of misuse of market power was introduced into section 46 of the TPA in 1986. This replaced the previous concept of 'monopolization' which limited action to a corporation that is in a position 'substantially to control a market'.

Restricting Part XIB just to Telstra could rule out using that part if Telstra were to be suspected of collusion with other firms. However, the generic anti-competitive conduct provisions may be adequate to deal with that possibility. Cable & Wireless Optus considered that:

If there is some sort of oligopolistic, collusive-type bargain, Part IV of the Act is probably a reasonable way of dealing with that (trans., p. 78).

In conclusion, changing the scope of Part XIB, to focus on Telstra, on dominant providers or to restrict market coverage, would have implications for regulatory error and the associated costs. As noted above, however, a reduction in one category of error (eg Type I) could be associated with an increase in another (eg Type II). Thus, on the information available, there is no certainty that a change in the present scope of Part XIB would be beneficial. Accordingly, the Commission does not support any change.

Powers of the ACCC

The ACCC is charged with administering many of the provisions of the TPA. In regard to anti-competitive conduct, it has power to investigate on its own initiative or in response to complaints, reach judgments and, under Part XIB, issue competition notices. It also has power to initiate court proceedings directed at bringing anti-competitive conduct to an end and to seek penalties for anti-competitive conduct.

However the ACCC has no legislative power itself to require a carrier or carriage service provider to take the conduct necessary to address anti-competitive concerns (sub. 16, p. 76). As mentioned above, the ACCC contended that the courts are reluctant to order a person to undertake a positive act:

Part XIB is thus more likely to result in a court prohibiting the conduct that was the subject of the proceedings as opposed to setting a clear standard of required conduct (sub. 16, p. 77).

The ACCC suggested that these ‘limitations’ could be addressed under ‘an administrative model where the ACCC could prescribe standards of conduct having regard to competition and public interest criteria’ (sub. 16, p. 77):

Although enforcement would still depend on court action, an effective outcome is more likely to be achieved as the ACCC could clearly set out required standards of conduct that are necessary to promote competition and the Court would be in a position to order compliance with these standards (sub. 16, p. 78).

Some other participants also suggested the ACCC should have expanded power to stop alleged anti-competitive conduct. For example, AAPT considered that the ACCC should be given powers to issue ‘cease and desist’ orders, either in conjunction with a Part A or B notice, or even pending investigation (sub. 7, p. 25 and sub. 41, pp. 22–3). However, AAPT suggested there should be safeguards:

The burden of proof is on the regulator to demonstrate that a cease and desist order is warranted. The agency must normally give the subject of the proposed cease and desist order notice ... an opportunity to respond (sub. 7, p. 25).

Similarly, PowerTel considered it would be appropriate to introduce a new mechanism that enables the ACCC to issue ‘stop orders’ where it reasonably suspects anti-competitive behaviour (sub. 14, p. 6). The Australian Consumers Association contended that:

... providing the ACCC with powers to require parties to cease and desist from anti-competitive conduct while a resolution is sought would increase incentives to resolve competition issues ... (sub. 30, p. 7).

And ATUG suggested that the ACCC needed powers to allow it to investigate a circumstance quickly and promptly hand down an interim decision (sub. 4, p. 5).

However, it appears from the ACCC’s submission that the power it seeks could extend to more than merely an ability to require the carrier or service provider to stop alleged anti-competitive conduct. The ACCC gave this example:

... a notice could be issued which required a carrier/CSP to: discontinue tying the supply of one good or service with another good or service; enhance or replace technology; introduce a compliance program; or alter the terms and conditions on which a specified good or service is supplied or acquired (sub. 16, p. 78).

Telstra, in submitting that Part XIB should be repealed, argued that there was no argument for any strengthening of the ACCC's powers. Telstra considered that concerns relating to perceived delay or the perceived inability of competition notices to act as a cease and desist power:

... are fully addressed by the ACCC's current ability ... to apply to the courts for an interim injunction (sub. 24, p. 33).

Further, in contrast to the views of the ACCC and AAPT, Telstra considered that cease and desist arrangements would raise 'continuing issues of constitutional validity' (sub. 42, p. 16):

... such a scheme would place judicial power in the hands of an administrative body and ... be unconstitutional (sub. 42, p. 17).

The Commission does not support strengthening of the ACCC's powers under Part XIB given the potential for action under the effect or likely effect test, the availability of advisory notices, the high penalties available if action is not modified following a Part A competition notice, and the scope to approach the courts for an injunction against alleged anti-competitive conduct.

Allowing for appeal

One of the major drawbacks of Part XIB is the effective absence of appeal.

As discussed above, on the record so far, the ACCC's actions under Part XIB appear to have merit. Nevertheless, the competition notice regime, which reverses the onus of proof, coupled with the provisions for penalty, deter a firm from going to court. Rather than take the risk of penalties of up to \$1 million per day some years down the track after protracted legal action, a firm will modify its behaviour even if it considers it competitive. This either prevents a competition notice being issued, or brings about the withdrawal of a competition notice — in either case, there is then nothing for the firm to test in court. As a result, the current provisions of Part XIB much reduce the likelihood of court review of the ACCC's judgments and actions.

The Commission believes that the effective absence of appeal adversely affects procedural fairness and is a serious flaw in current arrangements. As well, it might reduce the discipline on the ACCC to ensure rigorous analysis and encourage the use of Part XIB where Part XIC or action under the TA might be more appropriate. As Telstra stated, in a general comment on merits review: 'merits review is ... a key element in ensuring the integrity of decisions and minimising the scope for regulatory overreach' (sub. DR101, p. 66).

In seeking to overcome these drawbacks, however, the Commission would not want to suggest amendments that would detract from the advantages of Part XIB in preventing anti-competitive conduct.

A remedy would be to give a firm the option to challenge in court the merits of, and reasons for, a competition notice even after its withdrawal. While a firm would still need to modify its behaviour to avoid the risk of high penalties — such change of behaviour should not be taken as an admission of guilt — this option would allow it to have the merits reassessed in court. Where a firm instituted such court action, the ACCC should be required to produce a Part B competition notice covering the alleged anti-competitive conduct, if it had not already done so. A Part A notice is not a sufficient basis for court action, as it does not have to be specific about the alleged anti-competitive conduct in question.

There should be no penalties or damages, either way, arising out of such court action, except that the winner should bear the loser's legal and court costs.

With an appeal mechanism in place, the ACCC will want to be more certain of its case before it issues a Part A notice. However, given the non-specific nature of such a notice, and the caution with which the ACCC currently approaches Part XIB action, adopting the suggested appeal mechanism should not greatly extend the time required. Indeed, the Commission considers that the ACCC should be able to retain its current 5 month indicative timeframe for issuing Part A competition notices. Firms might, however, delay any behavioural modification until such a notice were issued rather than, as they might do now, modify behaviour earlier.

Such an appeal process should enhance the quality of the ACCC's work, reduce the chance of regulatory error and overreach, and provide greater procedural fairness to telecommunications providers.

It would also have the advantage of encouraging the ACCC to use the most appropriate regulatory instrument to the task at hand. This is because, with the possibility of court action, the ACCC would need to make its decisions on the same basis as the court is likely to adopt. If such an appeal mechanism had been available, the internet peering, commercial churn and broadband ADSL cases may well have been progressed under the arguably more appropriate access provisions of Part XIC or the TA, rather than the anti-competitive conduct provisions of Part XIB.

RECOMMENDATION 5.2

The Commission recommends that Part XIB of the TPA be amended to allow for appeal against the merits of a competition notice, even after its withdrawal.

In the draft report, the Commission suggested that consideration should be given to whether a party that considers itself to have been unreasonably or unlawfully accused of anti-competitive conduct should be able to take direct court action for a remedy. The Commission considered that such a remedy would address Telstra's concerns about a possible one-way bet:

Part XIB is essentially a 'one way bet' as far as complainants are concerned. Their costs are socialised; the worst that can happen is that the ACCC decides not to proceed with a complaint (sub. 24, p. 29).

It also raised the issue of whether penalties and damages should be available where it can be proved that mistakes of fact or errors of judgment have been made by the ACCC.

Given the above recommendation for an effective court appeal mechanism and for greater transparency (see below), the Commission will take these suggestions no further.

Standard and onus of proof

Before issuing a competition notice, the ACCC goes through a preliminary phase directed at establishing whether it has 'reason to suspect' anti-competitive conduct, an investigative phase and then a decision making phase during which the ACCC decides whether it has 'reason to believe':

... in good faith and on reasonable grounds, that the carrier or carriage service provider has engaged, or is engaging in anti-competitive conduct ... (ACCC 1999a, p. 14).

Telstra considered that the 'reason to believe' threshold was too low:

The ACCC need not be satisfied that there is an actual contravention of the Act and is not required to investigate matters in detail. The experience with the issue of section 155 notices is that the 'reason to believe' threshold is very low indeed ... In light of the very serious consequences of a competition notice for the notice recipient, Telstra submits that the ACCC should be required to be at least 'affirmatively satisfied' [ie the standard of proof a court would require] that the alleged conduct is in fact a contravention of Part XIB (sub. 24, p. 50).

The Commission, however, notes that there is a requirement on the ACCC to be satisfied that there is an actual contravention:

- in accordance with the TPA, the ACCC must have reason to believe that the party *has* engaged, or *is* engaging, in anti-competitive conduct rather than reason to believe that the party *may have* engaged, or *may be* engaging, in such conduct; and

-
- the onus is on the ACCC to assess whether a firm has ‘taken advantage’ of market power against the ‘benchmark of what would be acceptable in a competitive market’ (box 5.7).

Box 5.7 What does it mean to ‘take advantage of’ market power?

... taking advantage of market power is, in most cases, indicated where the carrier or carriage service provider has engaged in conduct which would not be profit maximising in a competitive market (ie in the presence of one or more efficient competitors).

... It follows from this that conduct which would be profit maximising in a competitive market will not usually involve the use of market power. For example, achieving efficiencies through economies of scale or through the use of new technologies will generally be profitable regardless of whether a carrier or carriage service provider has market power. Equally, matching a competitor’s price is merely acting as a carrier or carriage service provider would in a competitive market. Eliminating an inefficient rival will normally be no more than would occur in a market where competitive forces were acting normally.

Source: ACCC 1999a, p. 40.

As noted in section 5.4, the ACCC commented that this is ‘by no means easy to prove’. Similarly, Cable & Wireless Optus noted some inherent difficulty with the ‘taking advantage’ test because ‘the acceptability of the carrier’s conduct is measured against the benchmark of what would be acceptable in a competitive market’ (sub. 8, p. 122). It requested the onus of proof be reversed in regard to ‘taking advantage’ — this was supported by the Communications Law Centre (sub. DR116, p. 6).

However, in conclusion, even the ‘reason to believe’ test provides significant hurdles for the ACCC to overcome before a competition notice can be issued. The Commission considers there would be little, if any, advantage in moving to an ‘affirmatively satisfied’ test.

Currently, a Part B competition notice is taken to be prima facie evidence of the matters set out in the notice. If a matter goes to court, the provider to which the notice relates needs to provide evidence to rebut the prima facie evidence. Such a reversal of the usual onus of proof advantages the ACCC as against the provider.

Cable & Wireless Optus, contended that ‘reversing the onus of proof is a legitimate anti-trust tool that is used in a number of overseas countries’ (sub. 8, p. 123). Further, reversing the onus of proof could be considered as a way of simplifying the evidentiary requirements faced by a regulator. Macquarie Corporate Telecommunications commented on what it considered were ‘the unworkable evidentiary requirements of the provisions [pre the 1999 amendments]’ (sub. 11, p. 20).

Telstra considered that the competition notice system was inherently unfair:

... lacking in procedural fairness and natural justice principles which should be the foundations for all laws (sub. 24, p. 57).

The competition notice regime would contain strong incentives for a provider to modify alleged anti-competitive conduct even if such reversal were removed. Given the Commission's concern to improve transparency and procedural fairness, it considers that the provisions for Part B competition notices should be amended so that the normal burden of proof applies. In this case, if court action ensues — either during the currency of a competition notice or after the withdrawal of such a notice — the onus would be on the ACCC to justify its allegations rather than on the firm to rebut them.

RECOMMENDATION 5.3

The Commission recommends that Part XIB of the TPA be amended so that a Part B competition notice no longer constitutes prima facie evidence of the matters set out in the notice.

Improving transparency

The lack of transparency associated with Part XIB action (section 5.3) limits the ability of telecommunications providers, as well as the community generally, to analyse and comment on the decisions of the ACCC in an informed way. It also reduces the opportunity for providers to learn from experience — greater transparency would assist firms to understand what types of conduct may, or may not, be considered anti-competitive by the ACCC. Further, limited transparency might hide any problem of asymmetry in the application of Part XIB.

Transparency would be enhanced if the ACCC were required to issue a public report in all cases in which it proceeded to formal investigations of a telecommunication provider's conduct, even where a Part A or Part B competition notice were not issued. Limiting reports to those cases where formal investigation proceeds would guard against giving undue publicity to untested complaints. Such reports need not be lengthy but would need to cover an outline of the allegations against a provider, the provider's response, the main facts as perceived by the ACCC, as well as its conclusions. As well, these reports should justify the use of Part XIB rather than other possible regulatory mechanisms such as Part XIC. Commercial-in-confidence material should not be disclosed in the report.

Such reports would need to be issued within a reasonable time of the conclusion of formal investigations. Legislation could provide that the reports themselves would

not be able to be the subject of court proceedings. This would facilitate their speedy publication and protect from legal argument what essentially are intended to be documents aimed at improving transparency.

RECOMMENDATION 5.4

The Commission recommends that the ACCC be required to issue a public report for all allegations of anti-competitive conduct that proceed beyond the ‘reason to suspect’ phase into the investigative phase. Each report should include a justification of the use of Part XIB in preference to other possible regulatory mechanisms such as Part XIC.

As noted above, all the cases for which competition notices have been issued may well have been more appropriately progressed through policy instruments other than Part XIB. For example, pricing issues in regard to broadband ADSL have all the symptoms of a ‘classic’ access dispute. Part XIC deals with investment issues more satisfactorily than Part XIB, and the approach to pricing explicitly set out in Part XIC of the TPA, with its checks and balances, potentially offers a more satisfactory and transparent solution than a negotiated ‘settlement’ reached between Telstra and the ACCC under Part XIB. Telstra commented that:

... the very high penalties threatened [under Part XIB], can and are, used by the ACCC to elicit concessions that a more transparent and accountable process could never have secured (sub. DR117, p. 7).

The ACCC’s preference for Part XIB rather than Part XIC rested on the argument that the relevant service may not have been already declared and that delay could be caused (sub. DR114, pp. 16–7). This, of course, is an argument for improving the time effectiveness of Part XIC rather than choosing regulation, such as Part XIB, which may be deficient in other ways. In any case, the time for declaration and setting access prices under Part XIC need not necessarily be longer than that needed for investigations under Part XIB, which, in cases to date, has taken from months to years. Further, the changes proposed by the Commission elsewhere in this report would enhance the time effectiveness of Part XIC

The Commission considers that the ACCC should develop and publish guidelines setting out the relevant considerations for deciding whether to take action under Part XIB of the TPA in preference to Part XIC or some other regulatory mechanism. There would be benefit for allowing for public input into the preparation of these guidelines.

RECOMMENDATION 5.5

The Commission recommends that the ACCC be required to develop and publish, after public consultation, guidelines for deciding which regulatory mechanism is most appropriate in particular cases.

Under Part XIB, the ACCC annually reports publicly about competition in the telecommunications industry. The Commission considers transparency would be enhanced if these reports were to include more information about the ACCC's actions under Part XIB, while preserving commercial-in-confidence information. This could include:

- time series data about complaints: eg the number received, the number for which 'reason to suspect' anti-competitive conduct is found, the number for which 'reason to believe' anti-competitive conduct is found;
- details of competition notices issued and withdrawn;
- reporting of outcomes: eg withdrawn, found to have no substance, settled by commercial negotiation, settled by agreement with the ACCC before/after issuance of competition notices, settled after court action;
- data about advisory notices;
- information about exemptions applied for, exemptions granted, etc;
- information about appeals;
- indications of the time taken to progress matters under Part XIB; and
- estimates of administrative cost.

RECOMMENDATION 5.6

The Commission recommends that the ACCC include a much greater range of information about activity under Part XIB in its annual publication on 'Telecommunications competitive safeguards' or, at least annually, in some other suitable public document.

The gatekeeper provisions and damages

At present, penalties and damages under Part XIB are only available for anti-competitive conduct that is subject to a competition notice and that continues after the notice is issued.

PowerTel suggested, and AAPT and ATUG agreed, that this procedure should be changed:

... Section 151BY should be amended to enable an affected party to commence court proceedings for a breach of the competition rule prior to the issue of a competition notice (sub. 14, p. 6).

Under Part IV, an affected party can apply directly to the courts for damages without having to wait for action from the ACCC. Action under section 46 would, however, require the establishment of purpose.

Action under Part XIB might be preferred by some private complainants as it would allow them to concentrate on effect or likely effect rather than purpose. However, at present with Part XIB, an affected party can only take court action seeking damages if the ACCC has issued a Part A competition notice. And damages can only be sought in respect of behaviour specified in the notice that continues after the notice has been issued.

However, given the characteristics of the telecommunications industry (section 5.5), an argument can be made that, in some market areas, significant, perhaps even irreversible, change can occur in the 5 months or so minimum period likely to be taken by the ACCC to investigate allegations of anti-competitive conduct and issue a Part A notice. Further, the existing Part XIB provisions provide incentives for parties accused of anti-competitive conduct to delay proceedings as much as possible during the investigatory phase, as there is no penalty for anti-competitive conduct occurring during that time.

The existing provision unfairly affects telecommunications competitors of the firm whose behaviour is under scrutiny. Such competitors can be as equally harmed by conduct occurring before the issuance of a competition notice as after it. The Commission considers that the gatekeeper provisions of Part XIB should be amended so that damages are available for the full period of proven anti-competitive conduct. There is not the same need for similarly amending the provisions relating to penalties (but see below).

Not all complaints of alleged anti-competitive conduct investigated by the ACCC lead to a competition notice. Nevertheless, the Commission considers that a firm that considers it has suffered damage should be able to take action under Part XIB for compensation. Of course, the very fact that the ACCC has not issued a competition notice could weaken any case and such action is likely to be very infrequent.

RECOMMENDATION 5.7

The Commission recommends that Part XIB of the TPA be amended so that damages are not restricted to conduct that occurs while a competition notice is in

force and that action for damages is allowed irrespective of whether a competition notice is in force.

Preventing undue delay

The ACCC contended that, until the 1999 amendments to Part XIB, the recipient of a competition notice could delay court proceedings by seeking judicial review of the notice and partially modifying its conduct so that the subsequent conduct was not of a kind described in the notice (box 5.3). In both the internet peering and commercial churn cases, the ACCC had to revoke competition notices and issue new notices after Telstra modified its behaviour, but not so much as would satisfy the ACCC that anti-competitive conduct had ceased. Indeed, in the commercial churn example, the ACCC ultimately issued a series of six notices.

This difficulty may have been ameliorated by the 1999 amendments. Macquarie Corporate Telecommunications suggested these responded to industry concerns of delay:

[the] framework was further strengthened in mid-1999 by the parliament on the basis of industry concerns of an overwhelming pattern of behaviour by Telstra characterised by non-cooperation and delay (including through expensive litigation) (sub. 34, pp. 10-11).

In particular, a Part A competition notice, which does not need to include detailed particulars of the alleged contravention of the competition rule, should, according to the ACCC, be issued in a shorter timeframe than required previously (ACCC 1999a, p. 8). In August 1999, the ACCC published indicative timeframes for dealing with allegations of anti-competitive conduct. These involve a preliminary phase of 30 days leading up to a 'reason to suspect' decision, an investigative phase of a further 3 months leading up to a 'reason to believe' decision, and then a decision making phase of a further 30 days leading up to the possible issuing of a Part A notice. This is a total of about 5 months.

In administering Part XIB, the ACCC has indicated that it expects that relevant information will be provided to it in accordance with its timeframes. An ACCC 1999 information paper on anti-competitive conduct states:

... information must be provided in a timely manner. To meet the indicative timeframes, the [ACCC] requires the cooperation not only of the complainant but also of interested parties and the carrier or carriage service provider alleged to be contravening the competition rule (ACCC 1999a, p. 19).

It is clear that the ACCC has power to obtain relevant information under the general powers of section 155 of Part XII, used in the commercial churn case, and the tariff

filing and record keeping powers in Part XIB. However, the penalties for delay in providing information under section 155 — the section most likely to be used to gather specific information in cases of alleged anti-competitive conduct — are very low — only up to \$10 000 for a body corporate. These would do little to reduce the incentives, noted above, for those accused of anti-competitive conduct to delay the investigative stages. As well, section 155 delay can have important ramifications for other regulation, eg Part XIC.

Davnet suggested that ‘gaming or unreasonable delay’ could itself be made ‘actionable XIB conduct’ (sub. 13, slide 10). However, the ACCC could presumably already factor ‘gaming and unreasonable delay’ into its decision making process, in assessing ‘reason to believe’. A more direct approach would be to increase significantly the penalties for failure to provide information to specified, reasonable, deadlines.

The Commission considers that the penalties under section 155 should be substantially increased. In its response to the draft report, the ACCC commented that this may have the effect of increasing timeliness for Part XIB case resolution (sub. DR114, p. 8).

RECOMMENDATION 5.8

The Commission recommends that the maximum penalty for delay in providing information under section 155 of the TPA be increased substantially.

ACCC resources

If the ACCC is to be the decision maker, in the first instance, of allegations of anti-competitive conduct, particularly with a gatekeeper role, then it is obvious that it needs to devote sufficient resources to the required tasks. iiNet contended the:

... ACCC needs more resources to examine instances of alleged anti-competitive behaviour and make immediate rulings (sub. 5, p. 2).

And the Australian Consumers’ Association considered that the ACCC:

... must be resourced sufficiently to play its part in quickly and effectively advancing the cause of competition in telecommunications (sub. 30, p. 7).

Other participants, however, did not directly comment on this issue. Further, the lack of apparent action does not necessarily mean that the ACCC’s resources are too limited. As the ACCC noted:

The [ACCC] may not proceed with a complaint, even where it has a reason to suspect that there is a contravention of the competition rule, if the matter is not of sufficient

priority having regard to the costs of proceeding with the investigation (ACCC 1999a, p. 17).

The Commission notes that the 2001-02 Commonwealth Government budget provided substantial additional resources to the ACCC.

Further, modifying the gatekeeper role of the ACCC under Part XIB, as mooted above, could ease any resource constraint by opening up direct court action for damages under Part XIB by parties affected by the alleged anti-competitive conduct of others.

Further review

In introducing Part XIB, the Government envisaged that it would be transitional in nature pending the establishment of competition in the telecommunications sector. Certainly, if sustainable competition develops further, the justification for special anti-competitive conduct provisions would lessen. This is because such competition will reduce the scope for anti-competitive conduct in the first place and, in the second, reduce the need for speed in dealing with it.

For this reason, the Commission considers that Part XIB should be again reviewed, within three to five years. Such a review could also take account of the impact of continuing convergence on the need for sector-specific anti-competitive conduct regulation (sub. DR114, p. 11).

The precise timing would depend partly on the pace at which sustainable competition develops in telecommunications. As well, it should depend partly on the record of the ACCC in dealing with anti-competitive conduct matters. As discussed above, so far the ACCC appears to have been cautious in anti-competitive conduct investigations and, based on the limited information publicly available, its investigations have merit. However, the proposed appeal mechanism as well as the requirement for public reporting should provide a better basis for judgment on the appropriateness of the ACCC's investigations and conclusions. If problems become evident, the proposed review could be conducted earlier rather than later. If, on the other hand, the ACCC's actions are largely confirmed, the review could be held at the end of the suggested period.

RECOMMENDATION 5.9

The Commission recommends that the anti-competitive conduct provisions of Part XIB of the TPA be reviewed within a timeframe of three to five years.

6 Information provisions and reporting requirements

Box 6.1 Key messages

The ACCC has been given telecommunications-specific information gathering powers and is required to report on certain matters, including competition safeguards.

These information gathering powers are:

- Tariff filing directions, under Part XIB of the TPA, which require a carrier or carriage service provider with a substantial degree of market power to file certain tariff information with the ACCC. There are also tariff filing arrangements specific to Telstra.
- Record keeping rules that currently require selected carriers (Telstra, Cable & Wireless Optus and Vodafone) to report quarterly to the ACCC. Revised record keeping rules, which came into effect from July 2001, will mean a significant change to the reporting requirements and will extend their coverage.

In addition, the ACCC is required to report on competitive safeguards and telecommunications charges and possibly competition (if requested by the Minister).

The ACCC has general information gathering powers under section 155 of the TPA. These allow the ACCC to obtain information, documents and evidence when investigating possible contraventions and in connection with some of its adjudicative and telecommunications functions.

Although the provision of information to the ACCC imposes costs on telecommunications providers, the Commission recognises that the ACCC requires information gathering powers to perform its functions. The Commission makes no specific recommendations on the tariff filing and record keeping requirements.

In introducing the *Trade Practices Amendment (Telecommunications) Bill 1996*, the Government stated that:

The ACCC will need strong information-gathering powers to enable it to effectively administer competition regulation in the telecommunications industry (second reading speech, p. 5).

This chapter examines the tariff filing powers given to the ACCC under Part XIB of the TPA and briefly describes the more general information gathering powers of the

ACCC set out in section 155 of Part XII of the Act. (In chapter 5, it is proposed that the penalties for failing to comply with section 155 be strengthened.)

The chapter also examines other information related aspects of Part XIB, including the power of the ACCC to make rules about how records must be kept by telecommunications providers and the requirement for the ACCC to report on certain matters, including competition safeguards.

6.1 Tariff filing directions

Currently, where the ACCC is satisfied that a carrier or CSP has a substantial degree of power in a telecommunications market, it may direct the carrier or CSP to file certain tariff information with the ACCC.

The Government, when introducing the Trade Practices Amendment (Telecommunications) Bill 1996, said:

Its power [ACCC] to direct carriers and carriage service providers ... to file tariff information will allow the ACCC to examine carrier and carrier service provider conduct in telecommunications markets (second reading speech, p. 5).

A tariff filing direction may require a carrier or CSP to:

- provide information to the ACCC about charges for specified goods or services within the scope of the direction;
- give specific information to the ACCC within 7 days (or such shorter period as the ACCC determines) before imposing a new charge, or varying or ceasing to impose charges for goods or services within the scope of the direction; and
- give specific information to the ACCC on imposing new charges, or varying or ceasing charges for goods and services (ACCC website: <http://www.accc.gov.au/telco/telinf/telewo14.htm>).

The ACCC must provide written reasons for issuing a tariff filing direction. This direction may specify the period it is in force, otherwise it is of indefinite duration. The ACCC is able to vary or revoke a tariff filing direction.

Tariff information provided to the ACCC can be made available for public inspection and purchase only if the ACCC is satisfied that the disclosure of the information would result, or be likely to result, in a benefit to the public; and that the benefit would outweigh both:

- the detriment to the public constituted by any lessening in competition that would result, or be likely to result, if the information were disclosed; and

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- any substantial prejudice to the commercial interests of a person that would result, or be likely to result, if the information were disclosed.

Should the ACCC decide to make the information obtained under a direction publicly available, the person from whom the information has been obtained may apply to the Australian Competition Tribunal for a review of its decision. The legislation specifies that it is an offence for a carrier or CSP to provide false or misleading tariff information intentionally or recklessly to the ACCC.

The general tariff-filing provisions under Division 4 of Part XIB have not been used by the ACCC. It indicated that it has, however, considered whether to make such directions in relation to two matters. One instance related to a request by an industry participant to make a tariff filing direction under Division 4. On another matter, the ACCC made a direction on an informal basis to Telstra for the provision of certain information of a kind that Telstra could otherwise have been directed to provide. This assisted the ACCC in determining whether Telstra had breached the competition rule (sub. 16, pp. 30, 37). The ACCC advised that ‘the [general tariff filing] provision requires a fairly detailed analysis of market power to be undertaken before it is invoked, and the information can readily be obtained under section 155 of the Trade Practices Act’ (sub. 16, p. 80).

Tariff filing — Telstra

In addition to the general filing direction powers, Telstra is required (under Division 5 of Part XIB) to provide the ACCC with information for certain categories of tariffs for a basic carriage service.

The ACCC indicated that a strict interpretation of Division 5 would have been administratively burdensome on both Telstra and the ACCC. Accordingly, it has exempted particular services offered by Telstra from tariff filing on the basis of the limited potential likelihood for anti-competitive conduct, the information already available to the ACCC through the access regime and the previous tariff filing arrangement between Telstra and AUSTEL under the pre-1997 regime (sub. 16, p. 37).

This standing arrangement requires Telstra to provide the ACCC with relevant information only for certain limited categories of tariffs (box 6.2). However, Telstra must provide details on other services within 7 days if the ACCC makes a request.

Box 6.2 Tariff filing — Telstra

The current arrangement requires Telstra to provide:

- its Standard Form of Agreement (SFOA) on a weekly basis, along with a list of all amendments (additions, variations and withdrawals) that have taken place during that week;
- a monthly summary report of any non-standard form of agreement (non-SFOA) that it entered into for that calendar month; and
- a briefing to the ACCC where it has introduced, varied or withdrawn a significant tariff. The ACCC may also request a briefing to obtain information about any amendments to Telstra's SFOA or where further detail is required on a non-SFOA.

The SFOA sets out the terms and conditions, including retail prices, for products and services Telstra provides to its residential and business customers.

Source: Sub. 16, p. 37.

6.2 Section 155 of the Trade Practices Act

Section 155 of the TPA confers administrative powers on the ACCC to obtain information, documents and evidence when investigating possible contraventions (enforcement) and in connection with some of its adjudicative and telecommunications functions (regulatory). These general powers extend to 'designated telecommunications matters': ie the performance of a function or the exercise of power by the ACCC conferred by or under Part 20 of the Telecommunications Act, Part 6 of the Telstra Corporation Act, or Part XIB or Part XIC of the TPA.

A notice issued under this section can require the recipient to:

- furnish information in writing within the time and in the manner specified;
- produce documents; and
- appear before the ACCC to give evidence and produce documents (ACCC 2000k, p. 4).

Use of section 155 requires the ACCC to have 'reason to believe' that:

- a person has information, documents or evidence about a matter that constitutes or may constitute a contravention; or
- a person has engaged in conduct that constitutes or may constitute a contravention under relevant parts of the Telecommunications Act, Telstra Corporation Act or TPA.

As an example, the ACCC used its powers under section 155 to obtain information relevant to its investigation of alleged anti-competitive conduct by Telstra in regard to commercial churn (section 5.3).

6.3 Record keeping rules

Under section 151 of the TPA, the ACCC has the power to make record keeping rules and require that carriers and CSPs comply with these rules. The rules may specify what records are kept, how reports are prepared and when these reports are provided to the ACCC. (The ACA has power under the Telecommunications Act to require record keeping rules. These rules, however, are likely to relate to issues of performance and quality, rather than accounting separation as discussed below.)

The Explanatory Memorandum for the Trade Practices Amendment (Telecommunications) Bill 1996 stated:

The information ... will assist the ACCC in the exercise of its powers to give competition notices, to arbitrate access disputes, to administer the operation of Rules of Conduct about dealings with international telecommunications operators and to regulate Telstra's charges under Part 6 of the Telstra Corporation Act 1991 ... (p. 23).

Revised record keeping rules were implemented from July 2001. These replace the Chart of Accounts and Cost Allocation Manual arrangements (COA/CAM) developed by AUSTEL. A key feature of the COA/CAM system was horizontal accounting separation that required specified carriers to provide financial data for each of their major retail services regularly to the ACCC. That reporting regime required the provision of financial data by Telstra, Cable & Wireless Optus and Vodafone.

A number of limitations with the COA/CAM system have been identified by the ACCC, including:

- inadequate vertical and horizontal separation between upstream network services and contestable downstream activities;
- unidentifiable internal costs at the access level; and
- that some service definitions had become obsolete.

According to the ACCC, the first two limitations made it difficult to compare the cost of a carrier providing a service to an access seeker with the cost of the carrier providing a similar service to its own retail operations (ACCC 2000l).

The ACCC chaired an industry working group¹ to develop a full vertical and horizontal financial separation model. Arthur Andersen was engaged to further develop this model to capture financial information for all declared services including retail, internal and external wholesale services and practical guidelines for the establishment of the revised record keeping rules. In November 2000, the ACCC released for comment the draft Telecommunications Industry Regulatory Accounting Framework (RAF) setting out further developed record keeping rules. The finalised framework, issued in May 2001 (ACCC 2001g), is briefly summarised in box 6.3, and the reporting requirements in box 6.4. The new rules represent a significant change to the reporting requirements for the telecommunications industry and significantly extend their coverage.

Box 6.3 Regulatory accounting framework

Briefly, the proposed regime provides:

- a comprehensive regulatory reporting architecture specifying the services that reporting carriers and CSPs are required to report against;
- details of the information to be provided for each service, particularly the revenues, costs and capital associated with each service. This includes a detailed description of the financial statements required for each service;
- principles to be applied by reporting carriers and CSPs in developing detailed allocation methodologies in compliance with the rules;
- details of the specific reports required;
- rules reporting carriers and CSPs must follow in developing their manuals;
- specific reporting cycles; and
- audit and compliance framework for ensuring the accuracy and appropriateness of the information provided to the ACCC.

Source: ACCC 2000m, 2001i.

According to the ACCC, the primary objective of the RAF is to provide for ‘accounting separation for major vertically integrated carriers’:

That is, carriers are required to report separately on the retail and wholesale businesses. This information will assist the [ACCC] with investigations of possible anti-competitive conduct, in arbitrations on the terms and conditions of access to declared telecommunications services and in assessing any undertakings offered by an access provider on the terms and conditions of access to a declared service (ACCC 2001h).

¹ This working group, established in 1998, comprised representatives of Telstra, Cable & Wireless Optus, Vodafone, AAPT, BT and Primus under the auspices of the Telecommunications Access Forum.

Another stated objective is to provide the ACCC with ‘a base of regular and audited financial information’ to assist it in its other regulatory functions (ACCC 2001h).

In designing the record keeping rules to apply under the RAF, the following services have been of particular importance to the ACCC:

- all declared services, as these may be subject to undertakings and access pricing disputes;
- selected retail services, particularly those that are large and/or growing in importance, as these are likely to be the subjects of anti-competitive conduct complaints; and
- selected internally provided wholesale network services, as this provides a basis for separating upstream from downstream activities and for comparing declared services with internally provided services (ACCC 1999e).

Box 6.4 sets out the core reporting requirements and usage reports required.

An important issue was determining which carriers and/or carriage service providers should be subject to the RAF. The ACCC has decided that Telstra and Cable & Wireless Optus will be required to report fully under the new regime, while AAPT, Primus and Vodafone will only need to meet some of its provisions (ACCC 2001g).

Box 6.4 Reporting requirements of the RAF

The following statements and reports are required:

- capital adjusted profit and loss statements;
- capital employed statements;
- fixed asset statements
- allocation of costs, revenues and capital employed;
- weighted average cost of capital report; and
- service usage reports

Services covered by the RAF are listed in its schedules.

Source: ACCC 2001i.

6.4 ACCC reporting functions

In accordance with Division 11 of Part XIB, the ACCC has reported to the Minister on competitive safeguards in each financial year since 1996-97. In addition, the ACCC has also reported to the Minister on telecommunications charges in Australia, as required by Division 12 of Part XIB.

In its report on International Telecommunications Market Regulation (PC 1999c), the Productivity Commission commented that providers could be encouraged to pass on more of the benefits of reform to other service providers and to business users if the ACCC were to extend its public reporting further than proposed. It could include the prices paid by users for dedicated lines and data services. In its response at the time, the ACCC indicated that it would consider the extent to which leased lines and data services met its criteria for extending its price monitoring: relative importance, extent of substitutes and degree of policy concern.

The ACCC decided that leased lines should be included in the report on telecommunications charges, given the growing importance of these services and complaints made to the ACCC about pricing of this service. The 1999-00 report may provide only limited information on leased line services due to some difficulties in obtaining data. However, the ACCC will be examining ways of overcoming these problems.

Under Division 12A, the Minister may make a written determination to the ACCC to monitor and report on particular matters relating to competition in the telecommunications industry. This ministerial report provision has not been used.

6.5 Participants' views

Effectiveness and justification for the information gathering powers

The ACCC 'suggests no particular amendments to the information provisions and reporting requirements' in discussing the scope for improving the effectiveness of the provisions. It added:

The effectiveness of the information-gathering provisions cannot be judged solely by the history of their use ... The Telstra-specific tariff filing provisions, the record-keeping rules and the telecommunications charges report have operated effectively. The general tariff-filing and ministerial report provisions have not been used. The competitive safeguards report duplicates material contained in other ACCC publications (sub. 16, pp. 80-1).

AAPT stated it ‘believes that the current information-gathering powers are adequate and the ACCC should be encouraged (and appropriately resourced) to utilise these powers more extensively’ (sub. 7, p. 28).

Other participants supported use of the information-gathering powers by the ACCC. For example, iiNet said:

Record keeping is an essential part of planning for a telecommunications business, and access to reliable public information would assist rational investment in new infrastructure. While there is a cost to companies in collating such data, and a price to be paid for greater public awareness and accountability, ultimately the national interest in establishing an efficient telecommunications industry outweighs lesser costs (sub. 5, p. 2).

PowerTel also felt that the record keeping rules and tariff filing obligations should be retained. It said:

Efficient record keeping rules are essential to redress information asymmetry and for the ACCC to identify anti-competitive conduct and administer Parts XIB and XIC of the Act (sub. 35, p. 24).

Macquarie Corporate Telecommunications stated:

The lack of information on the cost of providing services can, in part, be addressed by imposing reporting obligations on access providers. This may be addressed by the recent Record Keeping initiatives by both the ACA and ACCC. Costing information is imperative for pricing principles to be of use and allow parties to determine the appropriate pricing of services (sub. 44, p. 2).

In regard to tariff filing, Cable & Wireless Optus commented that in its view:

... the tariff filing requirements have not had much practical value. However, as the requirements do not apply automatically, it may be appropriate to retain these powers as an additional safeguard available to the ACCC (sub. 8, p. 125).

Cable & Wireless Optus was more supportive of the record keeping rules, considering them ‘essential to address the information asymmetries that characterise the telecommunications industry and reinforce the incumbent’s market power’ (sub. 8, p. 124; sub. 63, p. 17).

The Queensland Government said that there should be no lessening of the requirements in relation to tariff filing and record keeping rules since the ‘absence of information considerably impedes the development of efficient market outcomes’ (sub. 39, p. 8). In addition, as a major customer, it indicated that it has found that carriers often attempt to use their power to limit pricing and service information across government with a view to reaping benefits from differential pricing of similar services across agencies.

AAPT said:

In AAPT's experience, information asymmetry will in most instances support or cloak anti-competitive conduct of carriers which possess market power (sub. 7, p. 27).

In responding to the Arthur Andersen Report of April 1999, Telstra indicated that it supported the general architecture for the record keeping rules and has undertaken financial systems changes in order to accommodate the anticipated new rules. Telstra indicated at the August 2000 hearings that 'we've putting these arm's-length transfer pricing arrangements in place that reflect what's happening externally' (trans., p. 22). As well as preparing it for the implementation of the record keeping rules, Telstra expected that the process would remove issues of perceived delay or unequal treatment between Telstra retail and other access seekers (trans., p. 11). However, at the May 2001 hearings Telstra indicated that the process had not been yet been implemented due to a number of 'severe and challenging' practical difficulties (trans., p. 297). In any case, Telstra considered that the record keeping rules would provide 'a significant degree of transparency to the regulator' about its underlying costs (trans., p. 296).

Telstra expressed concern about the administrative burden which would be imposed by the ancillary reports (of the record keeping rules) proposed by Arthur Andersen, which would include general reporting requirements for usage of PSTN network assets and specified other services. It felt that such information should be sought by the ACCC through special studies as required. However, such reports are not included in the record keeping rules at this stage. Telstra expressed similar reservations about possible requirements for non-financial information. It submitted that:

Telstra's general concern with the RKR's is that the ACCC is implementing the RKR's requirements without sufficient regard to costs of compliance and without due consideration to whether the costs of providing the information are outweighed by the benefits to the ACCC of obtaining the information ... this situation could be remedied with a legislative requirement that the ACCC balance these considerations when issuing RKR's (sub. 42, p. 22).

In relation to its tariff filing obligations (for both section 4 and 5), Telstra's view is that these obligations are onerous and unnecessary and should be removed from the Act. It said:

In spite of the administrative burden of complying, to Telstra's knowledge the tariff filing information has in only a handful of instances been relied upon by the ACCC to inform it in relation to specific investigations or inquiries (sub. 42, p. 22).

Telstra pointed out that the ACCC has never made any enquiries about its standard filings and only a limited number about its non-standard tariffs. It indicated that details about charges for its basic carriage service is provided on its internet site,

with updates notifying any changes. Thus, it suggested that the ACCC can obtain such information by using its existing powers under the Act, namely the record keeping rules, or section 155.

Speed

The ACCC pointed to the need to obtain timely information to perform its functions:

Their existence [the information-gathering powers] provides some insurance that information required for the efficient exercise of the ACCCs functions can be obtained quickly and efficiently. In a number of recent matters, the ACCC used the provision concerning record-keeping rules as a reserve power or threat where information tailored to a specific problem was required (sub. 16, p. 80).

AAPT also referred to the need for a speedy resolution of action that may be considered anti-competitive:

... it is vital that the regulator be able to act quickly to stop anti-competitive conduct and an important means by which this can be achieved is by the regulator being confident that relevant information is available (sub. 7, p. 27).

Scope

Some participants made suggestions for changing the scope of the information-gathering powers of the ACCC.

PowerTel believed that the record keeping rules could be improved with the following modifications:

(a) the extent of information required to be disclosed by a participant should be closely related to the degree of market power the participant enjoys; and (b) a broader range of information should be able to be obtained including information relating to internal costs, for example, the accounting treatment given to these costs (sub. 35, p. 25).

Cable & Wireless Optus also proposed that the ACCC should only apply record keeping rules to operators with substantial market power in respect of services to which that market power relates (sub. 8, p. 125).

One of the criteria considered by the ACCC in deciding who should report was power in a market where a declared service is supplied. In addition, one of the RAF's primary objectives is to facilitate accounting separation of carriers and CSPs likely to raise competition issues (ACCC 2000l).

Cable & Wireless Optus also stated that in regard to network information, it proposed that Part 4 (of the *Telecommunications Act 1997*) should be rolled into the record keeping rules under Part XIB to avoid the duplication of information disclosure requirements (sub. 8, p. 169). However, as discussed in chapter 11, the provisions relating to network information serve a different purpose to the record keeping rules.

Publication of information

Some participants saw value in making information on telecommunications matters available to the public. For example, iiNet said:

If the information to be provided is available to the public, directly or indirectly, the expense of record keeping is a small part of the cost of participation in an industry in which there is a compelling national interest and a need to promote competition for the benefit of new entrants and consumers (sub. 5, p. 2).

However, as some participants pointed out, there have been considerable delays in finalising new record keeping rules; these have delayed consideration of the question of disclosure.

Similarly, Macquarie Corporate Telecommunications saw the benefits of disclosure as providing all parties with the opportunity to provide their views on the validity of the legal and factual arguments raised by other parties (sub. 11, p. 17).

The Queensland Government recommended that information held by the ACA and ACCC should be made public to ensure that lack of information is not an impediment to competition (sub. 39, p. 9).

Cable & Wireless Optus proposed that Part XIB should be amended in regard to the record keeping rules as follows:

... the ACCC's discretion not to require public disclosure of information on the basis of commercial confidentiality should be removed or, alternatively, there should be a stronger presumption in favour of publication (sub. 8, p. 126).

Cable & Wireless Optus noted that other countries such as the UK, Ireland and Hong Kong require accounting separating for their telecommunications incumbents. According to Cable & Wireless Optus, some of these are made publicly available, for example for BT in the UK (sub. DR95, p. 20).

If more information about prices and the underlying costs of provision of telecommunications were made more readily available publicly, greater pressure could be placed on providers to pass on reform benefits. However, there is a need to protect commercially sensitive material relating to costs and other data such as

returns and profitability provided to the ACCC. To this end, the ACCC has noted that ‘any information published is likely to be limited to aggregate data’ (ACCC 2000l). The ACCC recently noted that it ‘... has powers to provide or require access to the reports, which it is not using at this time’ (ACCC 2001h, p. 2).

6.6 Conclusions

There is a need to balance the information requirements of the ACCC against the implementation and administration costs to carriers and CSPs of complying with its powers. In addition, there is the question of whether there is a need to provide on-going data or whether the ACCC could obtain the information required on an ad hoc basis (for example, using section 155 of the Trade Practices Act).

The ACCC has indicated the tariff filing information provides benefits by allowing it to:

- determine whether changes cause any anti-competitive concerns;
- build up historical information, which can assist in regulatory and enforcement issues; and
- provide answers to consumers’ queries about changes made by Telstra to the terms and conditions associated with its retail product offerings.

Under section 481 of the *Telecommunications Act 1997*, Telstra must provide the ACA with a copy of any changes to the SFOA as soon as practicable after the change comes into effect (ACCC communication). Thus, in comparison with the perceived benefits to the ACCC of obtaining the information, the Commission notes that the passing of this information to the ACCC occurs at minimal cost.

Further, the ACCC advised that the information obtained under the record keeping rules and the data in the report on telecommunications charges is aggregated and is only available after some time lag. Thus, it is not comparable with the tariff filing information that is available at the time of the price change.

In regard to the record keeping rules, the ACCC outlined the rationale for these rules in its draft report of April 1999 as the following:

Given the current imbalances in market power evident in the telecommunications industry, and the multitude of ways in which this market power could potentially be abused, the ACCC will have to continue actively monitoring and intervening in this industry for some time. The ACCC’s two functions, assessing anti-competitive behaviour and guaranteeing access to network services, both rely on specific forms of information to be discharged successfully (ACCC 1999e, p. 13).

The ACCC has advised that it intends to review its telecommunications information gathering powers, including the tariff filing directions, and how they will report on that information. This was prompted by the lack of timely notification of price increases in line rental by Telstra made in early 2001 and difficulties of collecting data for its 1999-00 report on telecommunications charges.

The Commission recognises the need for the ACCC to obtain the information it requires to perform its functions. The record keeping rules provide the ACCC with a mechanism to obtain systematic information from selected carriers and CSPs on an ongoing basis. These should assist the ACCC in dealing expeditiously with many issues that arise since it will not need to go through an initial data gathering exercise. In addition, it will allow the ACCC to assess more easily the results and effectiveness of Telstra's separation of its business operations.

The record keeping rules have been the subject of a number of draft ACCC reports inviting public comment. Participants to the Productivity Commission inquiry, who commented on this aspect, expressed support for the general requirements of the proposed record keeping rules. The Commission notes that only Telstra and Cable & Wireless Optus will be subject to all the record keeping provisions, with three other carriers subject to reduced requirements.

In conclusion, the Commission recognises that the collection and provision of information to the ACCC imposes costs on telecommunications providers. Nevertheless, as noted above, there is a need for the ACCC to obtain information to perform its functions. The Commission makes no specific recommendations on the tariff filing and record keeping requirements. However, particularly as the record keeping rules are new, it would be prudent to review again the benefits and costs of the reporting requirements in a few years time — this might be conveniently handled in association with the review of the anti-competitive conduct provisions of Part XIB, as proposed in chapter 5.

RECOMMENDATION 6.1

The Commission recommends that the information provision and reporting requirements of Part XIB of the TPA be reviewed in association with the review of the anti-competitive conduct requirements of Part XIB proposed in recommendation 5.9.

7 Telecommunications access: current arrangements and their use

Box 7.1 Key messages

The telecommunications-specific access regime (Part XIC of the TPA) — administered by the ACCC — sets out the criteria for determining which services are covered (these are called ‘declared’ services) and their conditions of access. Once a service is declared, a provider may submit an *undertaking* to the ACCC on the terms and conditions to apply for all access seekers. If no undertaking is in place, and parties cannot agree commercially on terms and conditions, then they may notify the ACCC of a dispute between them. This triggers the *arbitration* process, under which the ACCC may make a binding private determination on the terms and conditions to apply between the two parties.

The use of Part XIC since its inception in 1997 is summarised below:

- Overall, thirteen services have been declared, the majority of which focus on fixed services. This is likely to represent the bulk of the existing services to be declared.
- All four undertakings submitted to the ACCC by Telstra have been rejected.
- A high proportion of wholesale access contracts are negotiated commercially. Arbitrations tend to be over high volume (and revenue) services where there is less facilities based competition. Firms involved in arbitration tend to be large firms.
- There have been 43 disputes on the terms and conditions of access under Part XIC notified to the ACCC, which has made 17 interim and 5 final arbitrations. Two of the final arbitrations are currently under appeal. Although the arbitrations are private, other public documents reveal that ACCC prices have been around fifty per cent lower than prices offered commercially, with the gap between regulatory and commercially offered prices narrowing over time.

Delay is an issue in the administration of the regime. Some declarations have taken longer than the indicative time limits in ACCC guidelines. Assessments of undertakings have taken around one and half years, and some decisions have been made after initial terms and conditions have expired. Eighteen arbitrations are yet to be finalised.

7.1 Introduction and guide to access in the inquiry

This chapter is one of five examining the telecommunications-specific access regime found in Part XIC of the *Trade Practices Act 1974* (TPA). The regime is very complex — and as noted in chapter 2, the details in the structure and operation of competition legislation can make a large difference to the effectiveness and efficiency of the regime. This chapter accordingly sets out some of the basic features of the access regime and concentrates on how it has functioned over its short life.

The remaining four chapters evaluate the regime. Chapter 8 scrutinises the rationales for and alternatives to the access regime, while chapter 9 investigates its scope. Chapter 10 assesses the institutions and processes governing the regime, covering the detailed working of Part XIC. Chapter 11 considers the role played by the access pricing decisions of the ACCC.

Some regional aspects of access are also considered in chapter 17, while chapter 12 examines the quite separate (but largely ignored) access regime for telecommunications that is specified by carrier licence conditions. The Commission is currently also conducting a parallel inquiry into the general access regime, Part IIIA of the TPA. Relevant findings from that inquiry are used when discussing access issues generally and when making judgments about whether telecommunication specific provisions for access are required in addition to Part IIIA.

What is an access regime?

An access regime is a regulatory arrangement that dictates the circumstances in which an owner (or operator) of assets is obliged to allow others to use those assets.

7.2 The telecommunications access regime

The right of service providers to obtain access to certain telecommunications services in Australia has existed since 1991. Before then, the telecommunications industry was reserved exclusively to a Government-owned statutory monopoly. In 1991, the passing of the *Telecommunications Act 1991* allowed a restricted number of facilities-based competitors into the fixed and mobile markets, and opened the market to resale-based competition. These firms were given rights to obtain access to some of Telecom's (later Telstra's) services at a specified price.

In 1997, when the legislative barriers to entry to the telecommunications industry were removed, a new Part XIC of the TPA was introduced to deal with access to telecommunications services. The Government stated that:

... there remain good reasons for there to continue to be industry-specific competition regulation for telecommunications. The removal of regulatory barriers to entry does not automatically result in the appearance of normal competitive market structures.

Telstra continues to wield significant market power derived primarily from its historical monopoly position. There is also scope for incumbent operators generally to engage in anti-competitive conduct because competition in downstream markets depend on access to the carriage services controlled by them ...

Another important feature of the telecommunications industry is that competitors inevitably must make use of each other's networks ... This 'any-to-any' feature — and the Government's commitment to promote the diversity of carriage and content services available to end users — requires an access regime that includes additional features to those contained in the general access regime in Part IIIA of the Trade Practices Act (Second Reading Speech, Trade Practices Amendment (Telecommunications) Bill 1996, pp. 1–3).

The access regime in Part XIC is limited to telecommunications services (described under the legislation as 'eligible services'). These are listed carriage services (as defined under the *Telecommunications Act 1997*), and services that facilitate the supply of carriage services.

Under Part XIC, if a firm is unable to negotiate access commercially with a service provider, the only way to obtain access is through 'declaration' of the service.

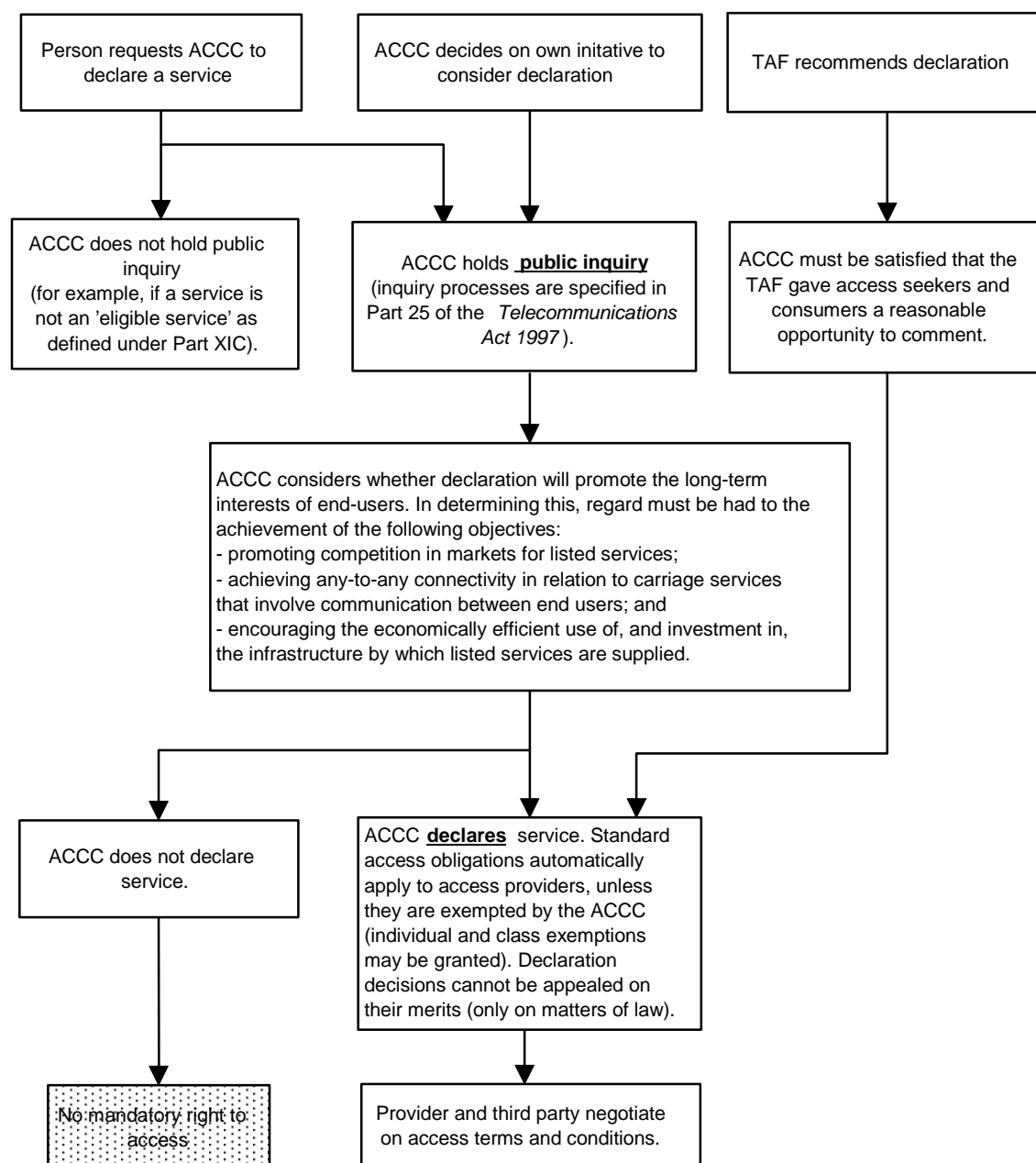
There are several ways that a service may be declared. Currently (as shown in figure 7.1), any person may ask the ACCC to declare a service, the ACCC may decide on its own initiative to consider declaration, or the Telecommunications Access Forum (TAF) may recommend declaration to the ACCC (the TAF is discussed in more detail in chapter 10). In addition, as a transitional measure upon the introduction of Part XIC in 1997, some services were 'deemed' to be declared. Deeming is not currently available under Part XIC and thus is not shown in figure 7.1.

The decision of the ACCC to declare (or not declare) a service is not appealable on its merits, but can be appealed on a matter of law to the Federal Court. The criteria and appeal rights for declarations are discussed in detail in chapter 10.

Once a service is declared, then all providers of this service are subject to telecommunications-specific 'standard access obligations' — which, amongst other things, require them to offer the service to an access seeker (the standard access

obligations are summarised in box 7.2). This is a key difference from Part IIIA — where no such obligations exist.

Figure 7.1 Declaration under Part XIC



Source: Divisions 1–3 of Part XIC of the TPA 1974.

The standard access obligations apply on such terms and conditions as are agreed between the parties, or as otherwise specified in an *undertaking* or *arbitration* (these terms are explained below). Where parties agree on terms and conditions, they have the option of registering the contract with the ACCC.

Box 7.2 **Standard access obligations**

Upon declaration, an access provider is subject to standard access obligations. These require the access provider to:

- supply the declared service to an access seeker; or permit interconnection with an access seeker so that the access seeker may be supplied with the declared service. (The access seeker is required to use the declared service or interconnection in order to provide carriage services and/or content services.)
- take all reasonable steps to ensure that the technical and operational quality of the declared service (or interconnection) is equivalent to that which the access provider provides to itself, and fault detection, handling and rectification is equivalent to that which the access provider provides to itself.
- ensure interconnection complies with any standard under Division 5 of Part 21 of the *Telecommunications Act 1997* (which deals with technical standards about the interconnection of facilities).
- supply billing information (the timing and content of which is set out in subordinate regulations).

Overriding the standard access obligations are the ‘reasonably anticipated’ needs of the access provider and existing customers, who have priority over the use of the network.

In addition, the standard access obligations do not apply where there are reasonable grounds to believe that the access seeker would fail to comply with agreed terms and conditions (for example, they are insolvent), fail to protect the integrity of a telecommunications network, or fail to protect the safety of individuals working on or using a telecommunications network.

Firms can seek individual or class exemptions from the standard access obligations from the ACCC — which may only grant an exemption if it is in the long-term interests of end-users. Individual exemptions can be appealed on their merits to the Australian Competition Tribunal. Both class and individual exemptions can be appealed on a matter of law to the Federal Court. Class exemptions are also subject to a type of merits review as they are a disallowable instrument and can be disallowed by either House of Parliament.

Source: S. 152AR of the TPA.

Undertakings allow a provider to settle the terms and conditions of access to declared services on a multilateral basis. The ACCC can only accept an undertaking if it is ‘reasonable’, according to a list of criteria. If an undertaking is not accepted by the ACCC, and parties cannot agree on terms and conditions of access, then either party may notify the ACCC of their dispute.

Notification of a dispute on access terms and conditions triggers the arbitration process,¹ under which the ACCC may make binding determinations on the access terms and conditions to apply between the parties. Arbitration sets terms and conditions that are specific to the parties involved, these terms and conditions are not made public.

Since legislative changes to Part XIC in 1999, the ACCC may make an interim determination before it makes a final determination.² Interim determinations can be made relatively quickly (fewer matters need to be taken into account than final determinations) and cannot be appealed on their merits. The ACCC argues that it is appropriate to issue a interim determination where ‘finalising of the dispute is likely to take considerable time’ (sub. 40, p. 28). They put into place an interim price (and other conditions) so as to enable commercial operations to progress while a final determination is prepared.

Even if an interim determination is made, the ACCC must proceed to a final determination (unless the dispute is withdrawn). Final determinations must take account of a greater list of matters, and may be appealed on their merits to the Australian Competition Tribunal. In addition, final arbitrations can be backdated to the time of notification of the dispute (backdating was introduced also in the 1999 legislative changes).

The processes by which access terms and conditions can be regulated under Part XIC are set out in figure 7.2. Commercial negotiations are often held in parallel with these regulatory processes. As stated by the ACCC:

... even parties who have notified a dispute are not prevented from continuing to negotiate with Telstra on the terms and conditions of supply ... indeed they are encouraged to do so (2000i, p. 3).

The criteria used by the ACCC in regulating the terms and conditions of access under Part XIC are discussed in chapter 11.

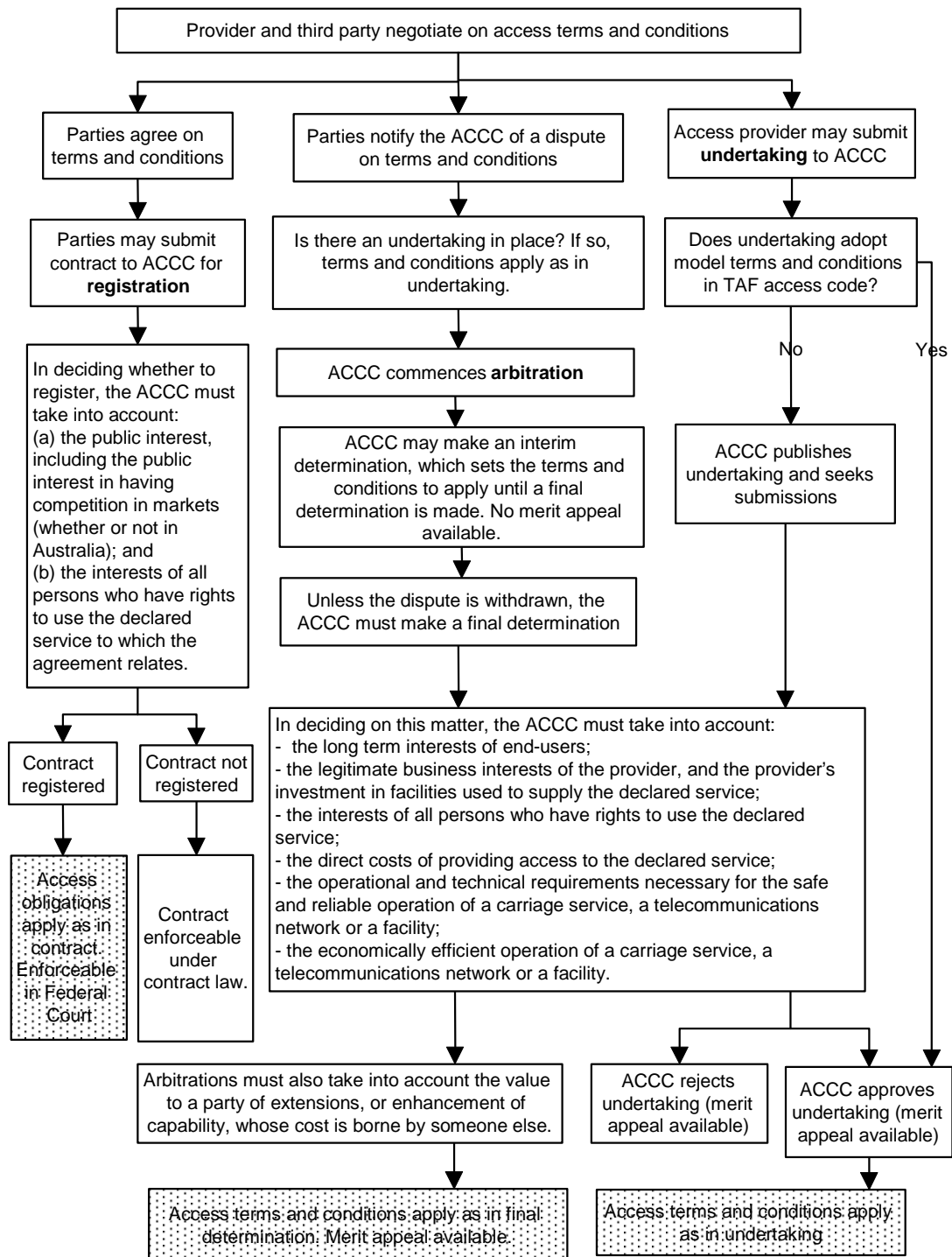
There are several provisions that deal with the enforcement of Part XIC. For example, standard access obligations can be enforced under s. 152BB of the TPA. The Federal Court may order a provider to comply, and/or pay compensation to any person who has suffered damage as a result of non-compliance.³

¹ The provisions regarding arbitration in Part XIC are based on the parallel provisions in Part IIIA. Indeed, the arbitration provisions in Part IIIA of the Act can be used to interpret those found in Part XIC (Explanatory Memorandum Trade Practices (Telecommunications) Bill 1996, p. 45).

² Such a provision is not included in the parallel generic access regime, Part IIIA, but reflects the need for speed in telecommunications (chapter 10).

³ Parties who refuse to obey Court orders are in ‘contempt’ of the Court and are subject to the wide discretion of the Court to impose fines and jail terms.

Figure 7.2 Setting terms and conditions of access under Part XIC



Source: Divisions 4, 5, 8, 9 of Part XIC of TPA.

The ACCC or private parties may request enforcement by the Federal Court. A breach of standard access obligations is also a breach of a carrier licence and is subject to civil penalties of up to \$10 million for a body corporate or \$50 000 for a

person other than a body corporate. The Minister for Communications, Information Technology and the Arts or the ACCC may institute a proceeding in the Federal Court for the recovery of this penalty.

Remedies are also available where a person engages in conduct for the purpose of preventing or hindering access to a declared service (under s. 152EG). The nature of the remedies are similar to those available under s. 152BB.

Arbitration determinations may be enforced under s. 152DU. A party to the determination may obtain from the Federal Court an injunction or any other order the Court considers appropriate including compensation for loss or damage.

7.3 The use of Part XIC

Parties are often able successfully to negotiate access terms and conditions outside Part XIC. At the Commission's hearings, Telstra noted:

... there are many wholesale customers ... where we achieve commercial settlement. We have, you know, hundreds of wholesale contracts out there (trans., p. 32).

AAPT said that '... a significant number of access agreements have been concluded by commercial negotiation ...' (sub. 7, p. 30), but that 'commercial negotiation is not necessarily successful in obtaining timely access to these services' (sub. 7, p. 31). Hutchison stated that it uses commercial negotiation or other private arrangements to resolve access matters, but that delays have been considerable (sub. 6, pp. 6–7). The Service Provider Industry Association viewed negotiation as desirable but stated that it had proved in many instances to be '... difficult, protracted, even impossible' (sub. 9, p. 1).

Telstra stated that the regulatory regime biases some negotiations towards regulated outcomes:

... access seekers ... clearly believe they'll get a lower price from the regulator... there will always be a better deal from the ACCC (trans., pp. 8, 32).

It is clear that certain factors bear on the extent to which commercial agreements are used in preference to Part XIC arbitration. If 'hundreds of wholesale contracts' exist, then it is clear that by far the majority (at least 80 per cent) of terms and conditions are commercially negotiated. The 43 disputes on terms and conditions that have gone to arbitration are discussed in general below but are itemised in more detail later.

Firstly, it appears that high volume (and revenue) services are more likely to go to arbitration. This is because access seekers that expect lower arbitrated access prices will target high traffic services to obtain the greatest overall gain.

Secondly, larger firms appear more likely to go to arbitration. For smaller firms, legal costs and the cost involved in allocating key staff to assist in an arbitration may be greater than any expected return. Uncertainty over expected returns, and the prospect of facing the ‘big pockets’ of access providers, can rule out the option of arbitration. In addition, smaller firms may expect larger access seekers to progress arbitrations, and to receive the ‘trickle down’ effect of lower prices through commercial agreements:

... many of these agreements have been entered into by smaller CSPs which have no effective bargaining power and limited ability to sustain an arbitration. In addition, where such a party is aware that a larger carrier or CSP has commenced an arbitration, there is even less incentive to commence one’s own proceedings, as there is the possibility that more satisfactory terms and conditions may flow from the arbitration into commercial agreements (AAPT, sub. 7, pp. 30–31).

Thirdly, disputes are less likely where there are a number of access providers (or a credible threat of bypass). Telstra stated:

... in markets where the threat of investment bypass is genuine, we have much better opportunities to do commercial deals. I mean, there is a huge incentive by wholesale, to get the deal that will put people on our network rather than their network (trans., p. 32).

To date, bypass has been concentrated in CBD areas (for a range of services), and mobile services (Australia-wide). Chapter 3 describes the level of bypass in CBD areas. For mobile services:

- Although AMPS and GSM originating and terminating services have been declared (they were deemed in the transition to the new regime), mobile operators have generally been able to negotiate terms and conditions between themselves successfully without the need for regulatory intervention.
- Vodafone noted that the ACCC decision not to declare intercarrier roaming on the grounds that satisfactory commercial arrangements would be entered into has subsequently been validated by market developments — for example, the former One.Tel and Hutchison have entered into commercial roaming agreements with Telstra (sub. 15, p. 33).
- Vodafone noted the success of commercial negotiations in CDMA access services (sub. 15, p. 33).

As a result of the success of commercial negotiation, some participants have requested that the markets where bypass has occurred be removed from

telecommunications-specific legislation (for example, Ericsson sub. 23, p. 4). The relevant scope of access regulation is discussed further in chapter 9.

The remainder of this chapter summarises the use of Part XIC and provides some of the views of participants on the success (or otherwise) of the regime as a whole.

Declarations

Declaration plays a key role in gaining access, by opening the door for subsequent binding arbitration between parties. As noted by the ACCC:

Decisions to declare services generally have an immediate effect on the market ... [they] have generally resulted in an increase in the use of the service and consequent competition in downstream markets. These changes have been accompanied by falls in the retail charges of almost all basic telecommunications services for almost all customers (sub. 16, pp. 83–84).

In examining the operation of the declaration provisions to date, relevant factors include:

- how many (and what type) of declarations have been made;
- how long the declaration process took;
- how many declarations have been subsequently appealed; and
- how many exemptions have been applied for and accepted.

Number and type of declarations

As at August 2001, there were thirteen services declared under Part XIC (counting originating and terminating tails of the same service as one service overall). The majority of these relate to fixed line services. All services that have been subject to the declaration provisions in Part XIC are listed in table 7.1.

The most popular route for declaration has been deeming, which accounts for eight of the thirteen declared services. The other five services were declared after a public inquiry, usually after being referred⁴ to the ACCC from the TAF — although the ACCC has also initiated an inquiry in some cases.

⁴ Part XIC also specifies that the TAF may also *recommend* that a service become declared, with reduced requirements for an ACCC public inquiry and report (s. 152AL(2)). So far, the TAF has been unable to agree on recommending any service for declaration. Many participants at the Commission's hearings stated that this was a failure of the TAF, and attributed this to the ability of some members to delay procedures, and to veto any proposals (the TAF is discussed in more detail in chapter 10).

Table 7.1 The use of declaration provisions under Part XIC

<i>Service</i>	<i>Date of application</i>	<i>Date decision made</i>	<i>Process for decision making</i>
Declared services			
Domestic PSTN originating and terminating access	n/a	June 1997	Deeming
Domestic GSM originating and terminating access	n/a	June 1997	Deeming
Domestic AMPS originating and terminating access	n/a	June 1997	Deeming
Domestic transmission capacity service ^a	n/a	June 1997	Deeming
Digital data access service ^a	n/a	June 1997	Deeming
Conditioned local loop service	n/a	June 1997	Deeming
AMPS to GSM diversion service	n/a	June 1997	Deeming
Broadcasting access service	n/a	June 1997	Deeming
ISDN originating and terminating service	Nov/Dec 1997	November 1998	TAF referred to ACCC
Unconditioned local loop service	October 1997	August 1999	TAF referred to ACCC
Local carriage service	October 1997	August 1999	TAF referred to ACCC
Local PSTN originating and terminating service	October 1997 ^b	August 1999	ACCC initiated public inquiry
Analogue subscription television (pay TV) broadcast carriage service	Dec 1998 ^b	September 1999	ACCC initiated public inquiry
Services not declared			
International PSTN primary and terminating services	n/a	June 1997	Deeming
PSTN transit access	n/a	June 1997	Deeming
Digital multiplex services	n/a	June 1997	Deeming
Preselection	n/a	June 1997	Deeming
Iterra (satellite) domestic originating access	n/a	June 1997	Deeming
Mobilesat originating and terminating access	n/a	June 1997	Deeming
International signalling and terminating access	n/a	June 1997	Deeming
International signalling for GSM roaming	n/a	June 1997	Deeming
AMPS resale	n/a	June 1997	Deeming
Domestic intercarrier roaming	September 1997	March 1998	Minister requested ACCC to consider declaration
Technology-neutral subscription television service	Dec 1998 ^b	August 1999	ACCC initiated public inquiry
Long distance mobile originating service	June 1998	January 2000	TAF referred to ACCC
Billing and collection services	May 1999	June 1999	TAF referred to ACCC
Smartcard technology	December 1999	June 2000	TAF referred to ACCC
Services where exemption/revocation/variation has or is being considered			
Domestic transmission capacity service	June 2000	May 2001	ACCC initiated variation or revocation
Local carriage service	June 2000	September 2001 (draft)	Telstra initiated exemption
Domestic AMPS originating and terminating access	Dec 2000 ^b	Being considered	ACCC initiated revocation
AMPS to GSM diversion service	Dec 2000 ^b	Being considered	ACCC initiated revocation

^a These services were varied in November 1998. ^b Date inquiry commenced. n/a not applicable.
Source: ACCC sub. 16, pp. 42–3; and ACCC information.

Further detail about the declaration decisions made since deeming is summarised in appendix J. Some of the key features of these decisions are discussed below.

Firstly, most of the services declared by the ACCC since 1997 have been focused on the fixed local network — the unconditioned local loop, local PSTN services and local carriage services.

Secondly, some declarations have included an indication of likely access pricing (normally this would be left to the arbitration phase). These indications were not binding on parties but would be highly likely to colour any subsequent negotiations. For example, in its declaration of local services, the ACCC stated:

In the [ACCC's] view, Telstra's legitimate commercial interests could be maintained by structuring access prices in accordance with retail price regulation. Thus, the price of local PSTN originating and terminating services may depend on the purpose for which the services are used. If the services are used to supply local calls, a per call price may be appropriate. In this case, geographic averaging of access charges may be desirable ... If the local PSTN originating and terminating services were used for long distance calls, the [ACCC] considers a pricing approach consistent with the approach for Domestic PSTN Originating and Terminating Access Services would maintain the legitimate commercial interests of the access provider (ACCC 1999c, p. 99).

Thirdly, some declared services have been offered by more than one provider. A typical example of this is where a service is offered by several providers in CBD areas, but only by one provider in more regional areas. The ACCC has dealt with this issue in different ways. For example, although the ACCC noted that the unconditioned local loop had been duplicated in some areas, it decided to declare all areas and to review this decision in around five years, that is, in 2004 (appendix J). In another case, the ACCC chose to exclude certain geographical areas from declaration. For example, the ACCC did not declare inter-capital city transmission on the Melbourne — Canberra — Sydney route, as this route was likely to be the focus of actual and likely new entrants (appendix J). But it declared other transmission routes where entry had not yet occurred and was least likely to occur. A subsequent decision has been made by the ACCC to remove the remaining inter-capital routes from declaration (ACCC 2001f).

Fourthly, the ACCC has stated that declarations have had little or minimal effect on any-to-any connectivity. This appears to be because any-to-any connectivity has effectively been achieved through the deemed services (in particular, the PSTN and GSM services). As stated by the ACCC in its report on local telecommunications services:

The local PSTN terminating service considered during this inquiry is the service most likely to have an impact on the achievement of any-to-any connectivity ... The Commission notes that there is already a declared service which can be used to achieve any-to-any connectivity on fixed networks (ie the Domestic PSTN Terminating Access Service). Consequently, the Commission does not expect declaration of the local PSTN terminating service to have a material impact on the achievement of any-to-any connectivity (ACCC 1999c, p. 96).

Finally, it appears as though most of the services likely to be declared (in the short to medium term) have been declared. However, in September 2001, the ACCC announced an inquiry to assess the variation of the mobile service declaration to CDMA technology (ACCC, 2001s).

The bulk of regulatory activity now surrounds the determination of access prices (and other conditions), and in the declaration arena most activity surrounds revocations and exemptions. As stated by the ACCC at an industry conference in 1999:

The ACCC has now undertaken much of the significant work on declarations and on pricing Telstra's network. While this work will continue, the ACCC expects to find more of its resources allocated to work on arbitrating particular disputes between Telstra and its competitors over access terms and conditions and the price of access. We have laid a considerable proportion of the regulatory foundations — the next challenge is to consolidate the reforms, while ensuring that actual interconnection between competing telecommunications firms proceeds in a timely fashion (ACCC 1999f, p. 6).

Timeliness

On average, it took around one year for the ACCC to decide whether or not to declare a service (not including the deemed services). Decision making times ranged considerably — from one month to 22 months.

The ACCC has published an indicative timeframe for declaration inquiries — according to this, the time taken from application to decision should take seven months (or ten months for a complex inquiry) (ACCC 1999b, p. 26). In practice, all of the decisions (bar one) to declare a service took longer than the ACCC's indicative timeframe. In contrast, all of the decisions (bar one) to not declare a service were within this timeframe. The ACCC acknowledged that it has been criticised by some parties for taking too long in deciding whether or not to declare a service (ACCC sub. 16, p. 85).

Of relevance to timeliness is the 'bunching' of requests. For example, the ACCC received a bunch of local services for consideration in October 1997 from the TAF (unconditioned local loop and local carriage). And a bunch of data services (ISDN,

domestic transmission, digital data access) was also received by the ACCC over the following two months (November/December 1997). Given resource constraints, when the ACCC receives multiple requests for declaration at similar times, it must then rank potential inquiries in order of priority.

Exemptions from standard access obligations

Under Part XIC, a provider may obtain an exemption from the standard access obligations that apply when a service is declared. If the exemption is obtained from the ACCC, the provider is not obliged to offer the declared service to an access seeker.

In June 2000, Telstra applied for an exemption from the requirement to supply the local carriage service within the CBD of Melbourne, Sydney, Brisbane, Adelaide and Perth. (The local carriage service is used to supply local calls between two end users in the same local call area.) In its submission to the ACCC, Telstra claimed that ‘market conditions already provide for the competitive supply of the local carriage service (LCS) in CBD areas both at the wholesale and retail layers’ (Telstra 2000c, p. 2).

In its submission to the ACCC, Cable & Wireless Optus has argued that Telstra should not be granted this exemption as it retains a substantial degree of market power. In addition, it applied for an exemption from the obligation to supply this service for carriers that do not have a substantial degree of market power (Cable & Wireless Optus 2000f, p. 3).

In November 2000, Telstra lodged a further application for exemption pertaining to the CBD areas of Canberra, Hobart and Darwin, the metropolitan areas of all capital cities and the regional centres of Newcastle, Wollongong and Geelong.

In determining whether exemptions should be granted to Telstra, the ACCC is considering whether to apply the exemption more widely, to all providers of that service. The ACCC stated (ACCC 2001m, p.6):

... the case supporting the grant of an individual exemption is likely to involve market features affecting all suppliers, and potential suppliers, of the Local Carriage Service. Accordingly, the Commission has decided to consider, in conjunction with Telstra’s application for an individual exemption, a class exemption.

In September 2001, the ACCC (2001k) announced a draft decision to remove current access regulation on Telstra and other carriers supplying wholesale local calls in CBD areas of Sydney, Melbourne, Brisbane, Adelaide and Perth — but with the removal of the regulation to be deferred until one year after any final decision is made.

Revocations and variations

The ACCC has announced its decision to vary the intercapital domestic transmission declaration and is currently considering whether to revoke the domestic AMPS originating and terminating access and the AMPS to GSM diversion service declarations.

Despite the phasing out of the AMPS service, the ACCC is required to conduct a public inquiry into the revocation of the AMPS related services (this requirement is discussed in chapter 9).

For the domestic transmission service, the decision to hold a public inquiry into revocation (or variation) of intercapital routes was based, in part, on information obtained through the ACCC monitoring program (appendix J). The ACCC's final report concluded that varying the service description to remove the remaining intercapital transmission routes (the Sydney to Brisbane route, and Melbourne, Adelaide and Perth routes) would be in the long-term interests of end-users (ACCC 2001*l*, p. 3). New entrants (and potential new entrants) on those routes have resulted in increased competition and lower prices. The ACCC also noted that the absence of any ongoing arbitrations for this service raised the issue of the extent to which declaration was promoting competition. The ACCC proposed that the intercapital routes remain under price monitoring, to assess whether competition develops as expected, and to obtain information useful for comparison with regional routes (which remain declared).

Appeals

Two appeals have been made against ACCC declaration decisions (on administrative law grounds — these are the only sort of appeals allowed for declarations).

They involve two related declarations — the broadcasting access service deemed in 1997 (and subsequently varied), and the analogue cable pay TV service declared in 1999. The two declarations cover a similar service — analogue pay TV.

Telstra and Foxtel appealed the validity of these declarations to the Federal Court. Although the Full Federal Court upheld the declaration of the 1999 analogue service (and awarded costs to the ACCC)⁵, it ruled that the 1997 deemed service was void (no order as to costs was made with respect to this matter). In voiding the deemed

⁵ Telstra sought special leave to appeal this decision in the High Court. This was rejected by the Court on 10 August 2001.

services, the Court stated that there was overlap between the two declarations and the initial deemed service was inaccurately specified.

Terms and conditions of access

As previously stated, the emphasis of regulatory activity under Part XIC has shifted to determining the terms and conditions of access to declared services. There are several processes for regulatory intervention in access terms and conditions (figure 7.2) — undertakings, arbitrations, and registration.

The use of Part XIC in determining terms and conditions is described below.

Undertakings

The four undertakings submitted to the ACCC, all by Telstra, have been rejected. Although the undertakings have provided useful information to industry players and the ACCC, and have allowed terms and conditions to be debated publicly, they have not realised their objective to achieve multilateral agreements:

The principle underlying the undertaking process is to avoid the costly and time-consuming bilateral arbitrations between the access provider and each access seeker (Telstra sub. 24, p. 40).

The first three undertakings (relating to PSTN, AMPS and GSM services) were rejected by the ACCC on the grounds that the non-price terms and conditions were not reasonable (all three undertakings had similar non-price terms and conditions, box 7.3). The ACCC concluded that the non-price terms and conditions provided too much discretion to Telstra as to when and to whom and how services would be provided, created uncertainty, and failed to impose obligations on Telstra such as Telstra required of service providers. The ACCC also considered that the access price in the PSTN undertaking (a ‘headline’ rate of 4.73 cents per minute) — was double the efficient price (between 1.87 and 2.77 cents per minute).

The fourth undertaking (a revised PSTN undertaking) was rejected by the ACCC on the grounds that the proposed access price was unreasonable. Whilst Telstra proposed an average ‘headline’ access charge for 1999-00 of 2.37 cents per minute, the ACCC estimated it should be 1.77 cents per minute. For 2000-01, Telstra proposed a price of 2.01 cents per minute and the ACCC estimated it should be more like 1.53 cents per minute.

Although the gap between prices offered commercially and those estimated by the regulator as ‘efficient’ has narrowed over time, it remains substantial.

Box 7.3 Non-price issues in the ACCC's assessment of Telstra's first three undertakings

The ACCC rejected Telstra's first three undertakings (PSTN, GSM, AMPS) on the grounds that their non-price terms and conditions were unreasonable. (For the PSTN undertaking, the ACCC also indicated that the access price was too high, but did not base its decision on this conclusion).

Non-price terms and conditions

In its non-price terms and conditions, Telstra used some terms that departed considerably from the TAF code and which gave it additional discretion. Some terms also increased uncertainty for access seekers. There were many clauses which the ACCC stated were unreasonable. For example:

- The undertaking used phrases such as 'in Telstra's reasonable opinion' and 'reasonable grounds in Telstra's opinion to believe' as a condition of access. This contrasts with more objective wording in the legislation (and the TAF code) which is 'reasonable grounds to believe'. For example, under the proposed undertaking Telstra could reject an application under the undertaking if *in Telstra's reasonable opinion* the access seeker's application was not made in good faith.
- There was uncertainty as to the level of information required to establish security requirements and creditworthiness. One provider (Hutchison) submitted that there was no limit to the security requirements Telstra could impose.

Source: ACCC 1999g.

In percentage terms, in 1997-98 the ACCC price was 40 to 60 per cent lower than commercially offered prices, in 1999-00 it was 25 per cent lower, and in 2000-01, around 23 per cent.

As no undertakings have been approved by the ACCC, none of these prices are regulatorily binding. However, the ACCC has indicated that it uses the prices developed during the assessment of undertakings in setting binding arbitral prices:

The ACCC proposes to use the work carried out in the ACCC's assessment of Telstra's PSTN undertakings, particularly the pricing work, as an input to the arbitrations currently before the ACCC in respect of the PSTN services (sub. 16, p. 49).

In its press release announcing the finalisation of two PSTN arbitrations the ACCC said:

In finalising these access arbitrations the ACCC had regard to its previous, extensive work on estimating the efficient costs of using Telstra's network as part of assessing Telstra's access undertakings for the same services (ACCC 2000q).

Telstra stated that it had serious doubts as to whether the ACCC would ever accept an undertaking:

... experience to date raises serious doubt over the fundamental purpose of access undertakings ... in its final report on Telstra's PSTN undertaking the ACCC sets out the level of access prices that it believes to be efficient, but states that in arbitrations this does not mean that each service provider will receive the same price, the actual price will be determined on the circumstances of each case, such as traffic profile. The fact that the ACCC is positioned to determine the individual circumstances of each access seeker raises serious doubts over whether the ACCC would ever find an undertaking, which necessarily contains generic terms and conditions, acceptable (sub. 24, p. 40).

Telstra stated it is not prepared to lodge any further undertakings at this stage (sub. 24, p. 44).

Timing

The only firm that has proposed undertakings — Telstra — viewed them as an 'enormously costly and time-consuming task' (Telstra sub. 24, p. 39).

The time taken between the lodging of the undertakings and their eventual rejection by the ACCC is as follows:

- the first undertaking (PSTN) was lodged in November 1997 and rejected almost one and a half years later (in June 1999);
- the second and third undertakings (AMPS, GSM) were lodged in November 1997 and rejected on the same grounds as the PSTN undertaking in August 1999, two months after the PSTN undertaking was rejected; and
- the fourth undertaking (PSTN) was lodged September 1999 and rejected ten months later (in July 2000).

Using a simple average, the ACCC has taken roughly a year and a half to reject an undertaking. In some cases, some terms and conditions proposed in an undertaking lapsed before the ACCC had finalised its assessment.

Two factors are likely to have contributed to these timeframes. Firstly, the ACCC made a significant investment in setting up a pricing model in its initial assessment (even though the undertaking was eventually rejected due to non-price issues). In particular, the TSLRIC model was developed during that time.

More importantly however, is the interrelationship between processes (which undermines the usefulness of individual timelines for each process). For example, an access provider may propose an undertaking in order to determine industry wide terms and conditions at the same time as engaging in several bilateral private arbitrations. Both undertakings and arbitrations involve decision making by the

ACCC. In practice, the arbitrations are usually delayed until the undertaking is assessed. As stated by AAPT:

... the ACCC has sometimes delayed the making of an interim arbitration until it has assessed a relevant access undertaking (such as the Telstra PSTN undertaking) (sub. 7, p. 34).

The AAPT–Telstra dispute provides a useful example, illustrating the way that arbitration determinations follow undertaking assessments:

- in November 1997, Telstra lodged a PSTN undertaking with the ACCC;
- in December 1998, AAPT notified the ACCC of a PSTN dispute with Telstra;
- in June 1999, the ACCC rejected Telstra’s PSTN undertaking and in doing so estimated ‘efficient’ access prices;
- in September 1999, the ACCC made an interim determination for the AAPT–Telstra dispute;
- in September 1999, Telstra lodged a revised PSTN undertaking with the ACCC;
- in April 2000, ACCC released a draft assessment of the revised undertaking, updating its estimate of ‘efficient’ access prices;
- in June 2000, the ACCC revised the interim determination between AAPT and Telstra;
- in July 2000, the ACCC rejected Telstra’s revised undertaking, further refining its estimate of access price; and
- in September 2000, the ACCC made a final determination for the AAPT–Telstra PSTN dispute.

AAPT cautioned against interrelationships becoming a potential delaying tactic:

While AAPT acknowledges that there will often be similar issues raised in both contexts, and therefore similar enquiries are required to resolve the issues, Parliament clearly did not intend that individual arbitrations should be delayed pending the outcome of an assessment of an access undertaking. The ACCC’s approach is potentially problematic in that it signals to access providers that a means by which access on reasonable terms can be delayed is by submitting an access undertaking which is unlikely to be acceptable to the ACCC (sub. 7, p. 34).

The time taken to evaluate any future undertakings is likely to decrease. For example, the second PSTN undertaking was rejected in only ten months. Further undertakings, at least for this service, are likely to take less time to evaluate as the stock of knowledge builds. Undertakings for different services may take relatively longer but are also likely to benefit from the knowledge built up during the evaluation of the initial undertakings.

Appeals

Telstra has not lodged an appeal against any of the decisions made by the ACCC to reject its undertakings. Although the TPA appears to allow merit appeals of ACCC decision making on undertakings, Telstra has stated that the grounds for appeal of an undertaking are narrower than those for final arbitration determinations, and that ‘... it is more sensible to challenge an arbitration than an undertaking’ (sub. 24, p. 44).

Arbitration

If parties cannot agree on terms and conditions, and an undertaking does not specify terms and conditions, they may notify the ACCC of a dispute between them. This triggers the arbitration process, under which the ACCC may make binding interim and final arbitrations between the two parties.

The use of arbitration provisions under Part XIC is described below.

Number and type of disputes

Since the commencement of the regime in 1997, the ACCC has been notified of 43 disputes over the terms and conditions of access to declared services⁶. In addition, the ACCC has been notified of three disputes, pertaining to number portability, under the *Telecommunications Act 1997*. In contrast to appendix G, which examines the timeliness of all disputes, the following section deals only with disputes notified under XIC. The status of these disputes as at August 2001 is noted in table 7.2.

Thirteen of these disputes are concerned with access to local fixed services — either the unconditioned local loop or the local carriage service.

To date, the predominant matter of dispute is the price at which access will be provided (ACCC sub. 16, p. 87).

Which firms are involved and in what capacity?

Given the relatively concentrated structure of the telecommunications market (chapter 3), it is perhaps not surprising that the same firms are involved in many arbitrations. The firm most involved in access arbitrations is Telstra.

⁶ This treats the Primus-Cable & Wireless Optus GSM originating and terminating dispute as two separate disputes (the terminating dispute was resolved six months after the originating dispute).

Table 7.2 The status of arbitrations under Part XIC, by service

As at August 2001

<i>Parties (access seeker – access provider)</i>	<i>Date dispute notified</i>	<i>Date dispute withdrawn</i>	<i>Date of ACCC termination</i>	<i>Date of interim</i>	<i>Date of final</i>	<i>Date of appeal</i>
PSTN						
AAPT – Telstra	13 Nov '97	9 Dec '97	-	-	-	-
AAPT – Telstra	11 Dec '98	-	-	14 Sept '99 (revised 1 June '00)	13 Sept '00	Oct '00
C&W Optus – Telstra	14 Dec '98	21 Dec '98	-	-	-	-
Primus – Telstra	5 Feb '99	-	-	23 Sept '99 (revised 31 May '00)	18 Sept '00	Oct '00
AAPT – C&W Optus	11 Jun '99	14 Mar '01	-	-	-	-
C&W Optus Networks and Mobiles – Telstra	16 Nov '99	15 May '00	-	-	-	-
Telstra – AAPT	22 Nov '99	-	-	4 Nov '00	-	-
Flow Comms – Telstra	7 Jan '00	-	-	1 Jun '00	27 Nov '00	-
Telstra – Primus	7 July '00	-	-	21 Nov '00	-	-
The Internet Group (lhug) – Telstra	1 Nov '00	-	6 Jun '01	-	-	-
Telstra – PowerTel	5 Dec '00	-	-	2 Apr '01	-	-
Telstra – Chime Comms	21 Dec '00	-	6 Jun '01	-	-	-
WorldxChange – Telstra	22 Dec '00	-	-	-	4 May '01	-
C&W Optus – Telstra	3 Apr '01	-	-	-	-	-
GSM						
Telstra – Vodafone	16 Jun '98	11 Nov '98	-	-	-	-
AAPT – Telstra	16 Mar '99	-	-	-	-	-
AAPT – C&W Optus	15 June '99	2 May '01	-	-	-	-
Primus – Telstra	1 Oct '99	7 Jun '01	-	-	-	-
Primus – C&W Optus	1 Oct '99	5 Dec '00	-	-	-	-
Primus – C&W Optus	1 Oct '99	15 Jun 01	-	-	-	-
Primus – Vodafone	1 Oct '99	10 Apr '00	-	-	-	-
AAPT – Vodafone	30 Nov '99	-	-	-	-	-
WorldxChange – Telstra	22 Dec '00	-	-	-	-	-
Domestic Transmission						
AAPT – Telstra	8 Mar '99	7 Mar '00	-	-	-	-
Primus – Telstra	5 Feb '99	2 Apr '99	-	-	-	-

(continued next page)

Table 7.2 continued

<i>Parties (access seeker – access provider)</i>	<i>Date dispute notified</i>	<i>Date dispute withdrawn</i>	<i>Date of ACCC termination</i>	<i>Date of interim</i>	<i>Date of final</i>	<i>Date of appeal</i>
Digital Data Access						
AAPT – Telstra	8 Mar '99	2 Jan '01	-	22 Dec '99	-	-
Macquarie Corporate Telecomms – Telstra	10 May '99	-	-	22 Dec '99 (revised 8 Jun '00)	22 Dec '00	-
ISDN						
C&W Optus – Telstra	11 May '99	4 Sept '00	-	-	-	-
Analogue pay TV						
TARBS – Telstra	23 Sept '99	-	-	24 Apr '01	-	-
C7 – Telstra, Foxtel and related parties	31 Aug '00	-	-	5 Apr '01	-	-
Local carriage						
C&W Optus – Telstra	13 Aug '99	-	-	20 Jun '00 (revised 23 Oct '00)	-	-
Macquarie Corporate Telecomms – Telstra	29 Dec '99	-	-	20 Dec '00	-	-
Primus – Telstra	7 Mar '00	-	-	29 Jan '01	-	-
AAPT – Telstra	21 Mar '00	30 Mar '01	-	21 Dec '00	-	-
One.Tel – Telstra	18 July '00	30 Apr '01	-	-	-	-
dingo blue – Telstra	30 Aug '00	-	-	-	-	-
RSL COM – Telstra	30 Aug '00	4 Dec '00	-	-	-	-
WorldxChange – Telstra	8 Dec '00	-	-	-	-	-
People Telecom – Telstra	28 May '01	-	-	-	-	-
ULL						
AAPT – Telstra	24 Jul '00	-	-	22 Dec '00	-	-
C&W Optus (subsidiaries) – Telstra	27 Jul '00	-	-	22 Dec '00	-	-
One.Tel – Telstra	9 Aug '00	10 Aug '01	-	22 Dec '00	-	-
Primus – Telstra	9 Oct '00	-	-	-	-	-

Source: ACCC information as at August 2001.

Disputes are concentrated with respect to both access seekers and providers. Of the 13 access seekers that notified the ACCC of disputes on the terms and conditions of access to declared services, three firms accounted for around half of the total disputes (AAPT was involved in ten disputes, Primus in eight and Cable & Wireless Optus in six). As noted previously, access seekers in arbitrations tend to be large firms.

On the access provider side, there is an even greater concentration of disputes. Of the eight access providers that were involved in disputes, Telstra accounted for over two thirds of the total disputes.

Timeliness

25 disputes have been finalised — at least in terms of ACCC decision making (some ACCC decisions are under appeal to the Australian Competition Tribunal). Only five final determinations have been made. Of these, three were made over eighteen months after the disputes had been notified to the ACCC, another took eleven months, while the remaining dispute only took four months to finalise. The ACCC has terminated two disputes and 18 disputes have been withdrawn. The remaining 18 disputes have not been finalised — and have been active ranging from two months to over two years.

The delay in finalising arbitrations can be partly explained by the desire to establish industry wide principles (through undertaking assessments and discussion papers). In its discussion paper on the unconditioned local loop, the ACCC stated:

... the [ACCC] considers it would be appropriate to inform the market as to its thinking on various methodological issues surrounding the pricing of this service and, in addition, to provide some preliminary views about the various pricing claims that have been made, particularly by Telstra, in relation to this service (ACCC 2000i, p. 2).

Withdrawn disputes

The withdrawal of a dispute means that the ACCC must not make a determination on the dispute (an issue examined in chapter 10).

Of the 18 disputes that have been withdrawn, seven were withdrawn within approximately half a year of being notified to the ACCC — three PSTN disputes, two mobile disputes, a domestic transmission dispute and a local carriage dispute. Three disputes were withdrawn within a year and the remaining eight disputes were withdrawn between one to two years after being notified to the ACCC.

The ACCC has used a number of methods during arbitration to hasten agreement in disputes (and their subsequent withdrawal). These methods focus on facilitating further discussions between the parties and include bilateral discussions with relevant parties and senior ACCC staff, and ordering parties to seek private mediation. These process often occur in parallel with regulatory procedures.

The ACCC has stated that it expects that there will be a continuing trend towards the settlement of disputes without the need for final determination (ACCC sub. 16, p. 53).

Interim determinations

The ACCC can make an interim determination during an arbitration, which will set the terms and conditions of access until a final determination is made (the final determination can then be backdated to the notification of the dispute). Interim determinations can be made fairly quickly (fewer matters need to be taken into account than final determinations) and they cannot be appealed on their merits.

The ACCC has made interim determinations in 17 disputes, with Telstra being involved in all cases (table 7.2).

Four of these disputes — three PSTN disputes and one on digital data access — have progressed to final determination. Three more disputes (relating to digital data access, local carriage service and the unconditioned local loop) were withdrawn following the interim determination. The remaining disputes are continuing to be arbitrated by the ACCC.

Some participants stated that interim determinations should be used more often. For example, AAPT said:

The ACCC seem to have been more concerned about doing the things thoroughly, 110 per cent, so that their judgments would withstand an appeal; yet the industry has been pressing — a wide variety of people have been pressing — to adopt the interim decision approach (trans., p. 169).

And Cable & Wireless Optus stated they should be used earlier in the process:

However, the ACCC has not used this power as effectively as it might have because it has only handed down interim determinations too late in the arbitration process (sub. 8, p. 108).

Final determinations and appeals

Final determinations set the terms and conditions of access, and can be backdated to the time of notification of the dispute. This type of determination is appealable on its merits.

To date, only five disputes have been finally determined by the ACCC.

The final PSTN determinations with AAPT and Primus were appealed by Telstra (on their merits) to the Australian Competition Tribunal in October 2000.

The Tribunal had an initial ‘directions hearing’ in December 2000, where some preliminary matters were determined.⁷ At this hearing, the applications by Cable & Wireless Optus and Macquarie Corporate Telecommunications to join in the appeal were considered. Telstra opposed both applications. Due to the extent of Cable & Wireless Optus’ involvement in the assessment of the PSTN undertakings, and due to the fact that the ACCC’s ultimate analysis was underpinned by some of their arguments and data, the Tribunal decided to allow Cable & Wireless Optus to join in the appeal. The application by Macquarie Corporate Telecommunications was refused — it did not have a sufficient interest in the appeal as it had far less participation in the undertaking assessment process.

Registration

Registration — which allows agreed access terms and conditions to be ‘registered’ by the ACCC and subsequently enforced under the TPA — has not been used to date.

There appears little incentive to register agreements as the enforcement mechanisms under the Act do not appear to differ from those available under contract law. And if the agreed terms and conditions are not registered, the agreement is still enforceable under contract law.

Enforcement of Part XIC

To date, there have been no actions taken by the ACCC or other parties to enforce the obligations under Part XIC. Once rights are determined through ACCC decision making — although parties may appeal those decisions — they have complied with their legal obligations.

As a result, the involvement of the Federal Court in Part XIC has been limited. To date, the involvement of the Court has been limited to the appeal by Telstra against the deeming and declaration of analogue pay TV services and related matters (the appeal was discussed previously).

Conclusion

In terms of the number of wholesale contracts, commercial negotiation appears to be the normal way that providers determine access terms and conditions. Arbitrations tend to be over high traffic services (which generate large revenues for

⁷ Telstra Corporation Ltd [2001] ACompT 1, available at www.austlii.edu.au.

access providers) where there is little facilities-based competition, and are pursued by larger access seekers. As a result, the relatively small number of arbitrations probably belies their importance in setting competitive conditions in the industry.

When compared to the use of Part IIIA of the TPA, Part XIC has been used relatively intensively by participants in the industry. Thirteen services have been declared, four undertakings submitted, and 43 disputes on terms and conditions notified. In comparison, under the generic access provisions in Part IIIA of the TPA, which apply to all industries, only nine declarations have been recommended by the National Competition Council (NCC) (and fewer have been accepted by the relevant Minister), nine regimes have been certified by the NCC as effective, and one undertaking has been accepted by the ACCC (Productivity Commission 2001c).

The bulk of declarations under Part XIC (at least with respect to existing services) appears to be done. Future declaration activity is likely to concentrate on refining or revoking existing declarations rather than dramatically increasing the number of services to which the access regime applies.

Once it is established that a service is subject to the access regime, disputes have focussed on pricing. It appears as though there is significant gap between regulated and commercially offered prices — although this gap decreases over time.

Many participants complain of unnecessary delays in regulatory decision making. Some declarations took longer than ACCC indicative time frames. It has taken around one and half years to evaluate undertakings, and some of the final assessments were made after initial terms and conditions had expired. Of the 43 arbitrations conducted by the ACCC, only five have progressed to final determinations, two of which are subsequently under appeal.

Although interrelationships can explain some of the delays for individual processes, overall timeliness remains an issue. (Appendix G measures and interprets the extent of delay associated with different disputes.)

The next chapters (8 to 11) address many of the issues raised by participants about the access regime in Part XIC.

8 Rationale for access

Box 8.1 Key messages

Among competing instruments dealing with the use of market power, there is a good case for an access regime to apply to telecommunications.

With appropriately set access prices, such an approach is more likely than other measures to increase efficient competition in final markets with gains, such as, lower retail prices, greater innovation and product differentiation, and heightened incentives for cost cutting by the incumbent.

While there are few policy relevant features that are unique to telecommunications, the overall combination of features does appear to make telecommunications different from other regulated utilities in some policy relevant dimensions. These include the speed of market and technological change, and the relevance of network effects.

Therefore, the Commission recommends the retention of a telecommunications-specific access regime.

8.1 Introduction

This chapter examines the rationales for a telecommunications access regime. Any appropriate policy intervention must be based on the existence of a problem that needs to be overcome. Chapter 2 outlines the fundamental problem in telecommunications as one of inefficient pricing or other conduct associated with market power in the absence of regulation. Chapter 4 assesses the likely state of competition in the absence of regulation to see if these problems would be likely to persist. The existence of market power provides a starting point for intervention in telecommunications, but it does not necessarily provide a sufficient rationale for an access regime as the best instrument of those mooted in chapter 2. Accordingly, section 8.2 critically assesses the various instruments — including access — that may deal with monopoly pricing and conduct. The chapter then examines the threshold issue of the degree to which telecommunications should be subject to specific versus generic competition regulation (section 8.3).

8.2 What regime will best encourage efficient competition in final markets?

Of the instruments that might be applied to deal with potential market power in telecommunications (discussed in chapter 2), a return to full government ownership is eliminated as an option because of its severe limitations. Strict vertical separation is outside the terms of reference of this inquiry as a possible option. Anti-competitive conduct rules serve a complementary role because they cannot deal with monopoly pricing per se. That leaves other options for dealing with market power in telecommunications, some of which may be applied together:

- global or other price caps;
- accounting separation, accompanied by rules that require the bottleneck facility owner to provide access to other parties on the same basis as to their own downstream arm;
- an access regime of some sort; and/or
- price and conduct monitoring.

Despite the benefits of each of these instruments as canvassed in chapter 2, each also has significant faults.

Without other regulations, global price caps may permit predatory pricing at the retail level (which could be hard to detect) and thus deter entry by rivals, even where such entry is efficient. And while price caps may encourage cost minimisation by the incumbent, they do not replicate the competitive pressure that stems from the actual entry of rivals. This, with their lack of targeting of problem areas and scope for developing into inefficient rate of return regulation, leads to the warning from Laffont and Tirole (2000, p. xv) to: ‘Beware expecting too much from price caps’.

The combination of accounting separation and a requirement of non-discrimination effectively mimics vertical separation. It is subject to the advantages and disadvantages described in chapter 2. As an option, it still begs the question of which carriers would be required to practise accounting separation, the relevant facilities, the nature and monitoring of non-discrimination rules and the level of access prices. These are all matters determined by an access regime.

Access regimes are administratively complex, involve protracted processes to yield outcomes, tend to balloon with regulatory additions and involve complex access pricing issues.

Price monitoring is, by contrast, relatively light handed, but it is a weaker instrument for dealing with market power. It is best suited to situations where that power is residual or uncertain or as a transitional measure to deregulation (Productivity Commission 2001d).

The Commission considers that an access regime of some sort is warranted. This is because an access regime — with appropriately set access prices — is more likely to increase efficient competition in final markets with gains, such as lower retail prices, greater innovation and product differentiation, and heightened incentives for reducing the incumbent's costs. By facilitating interconnection between the incumbent network and rival competing networks at 'reasonable' prices, an access regime also allows for the development of facilities competition. A hybrid policy instrument, which combines aspects of an access regime with other instruments, may work more effectively than an access regime alone.

Accordingly, the Commission finds that there is a prima facie case for an access regime to apply to parts of telecommunications facilities, at least for the medium term, possibly in combination with other measures.

That said, the lessons from chapter 2 suggest that the extent to which regulating access to telecommunications facilities is likely to improve economic efficiency depends on whether:

- it is possible to discriminate between cases where access should and should not be regulated. Defining the scope of the regime appropriately has a large bearing on its potential compliance burdens and its adverse effects on investment and innovation;
- the process for securing access leads to collusive price setting in the final market (that is, it would generally be desirable to grant access if it secured competition in a market other than in the one in which access is being sought); and
- it is possible to achieve efficient access prices. Expectations about regulators' access pricing decisions influence the willingness of incumbents and new entrants to negotiate in good faith or not. Access pricing casts a shadow over the whole of the access regime and cannot be seen as a separate influence.

The above issues of regulatory design are taken up in chapters 9, 10 and 11.

Finally, the likely impact of an access regime by itself should be put into perspective. There are clearly policy complements and alternatives to access (such as retail price controls). This has an implication for appraising the benefits of an access regime. When measuring the rationale for a *particular* intervention, the criterion is not only that the intervention produces a net benefit compared with the

counterfactual of no intervention, but that it does so compared with the counterfactual of alternative instruments that may feasibly be used.

8.3 Is there a rationale for a *specific* telecommunications access regime?

As well as telecommunications, Australia has a range of State and Federal sector-specific access arrangements (gas, electricity and water, with postal services mooted under Part XID).

But it also has a generic regime — Part IIIA of the TPA.. The fundamental problems that justify an access regime are common to Part IIIA and Part XIC — they attempt to remedy the impacts of market power acquired through an incumbent's control of some essential facility.¹ At a broad level, the generic and specific regimes in the TPA have many common features, such as the emphasis on the negotiate/arbitrate model and the capacity for undertakings. Both regimes would appear to meet Australia's international trade treaty obligations in relation to telecommunications.²

However, notwithstanding the existence of a generic regime, most participants in the inquiry saw a need for a telecommunications-specific access regime — at least over the medium term. But some argued that it was appropriate to move to Part IIIA now (box 8.2).

There are two major separate issues to be considered when determining whether telecommunications services should be subject to a different access regime than generic provisions for bottleneck facilities:

- First, different regulatory treatment of telecommunications from other industries may be warranted if there are specific and significant features of telecommunications that can justify differential treatment. The goal is to define the right level of specificity or generality to apply in any set of regulations

¹ In this sense, the argument from PowerTel (sub. 14, p. 5) and Austar United Communications (sub. 19, p. 1) that Telstra has market power and dominates the telecommunications industry is not a persuasive basis for a telecommunications-specific access regime.

² AAPT (sub. 41, pp. 28ff and sub. DR100, p. 23) questions this. It said that the existing version of Part IIIA does not require terms and conditions of access be set in accordance with the principles set out by the fourth protocol to the GATS and need not meet the required interconnection criteria. The Commission's understanding from the Department of Foreign Affairs and Trade is that this is not correct (sub. 46, p. 1), although the Department also noted that in the event of repeal, the Department 'would need to be consulted to ensure the implementation of a GATS-consistent regime'.

(box 8.3). Outside that, arbitrary or inconsistent differences in regulatory treatment and wording should be eliminated. This inquiry has closely followed the parallel Part IIIA inquiry in trying to identify the appropriate general principles and practices that should guide *any* access (and competition) regime — and isolating the areas where specific regulations may be warranted for telecommunications.

Box 8.2 Specific versus generic access regime? Some participants' views

... we do not see a case for continuation of Part XIC of the TPA ... the fact is that this power for regulation of access [Part IIIA] will remain in the TPA and serve as a 'safety net' should there be abuses of Telstra's control of the network ... Beyond that the provisions of section 46 of the TPA, relating to market power are also available ... Access rules should always be applied very sparingly. They are highly interventionist and likely to create inequities and distortions. There is probably no more need for specific legislation in telecommunications than in several other industries (IPA sub. 20, pp. 6–7).

Telstra submits that Part IIIA of the Act should eventually replace Part XIC of the Act. However, Telstra acknowledges that important transitional issues need to be addressed before the telecommunications-specific access regime can be folded into the general access provisions. (Telstra sub. 38, p. 3).

The market has not reached the stage where existing sector-specific rules can be withdrawn any further in favour of general competition law. The withdrawal of specific regulation would only result in the rapid re-monopolisation of the market. The reasons for sector-specific regulation remain as compelling today as they were in 1997... (Cable & Wireless Optus sub. 8, pp. 10–11).

...the legislative requirement to review the telecommunications-specific competition regime in section 151CN is limited to Part XIB, indicating that Part XIC is intended to be long term ... the particular characteristics of the telecommunications sector require a different emphasis in access regulation (AAPT sub. DR100, pp. 22–23).

- Second, there is a question of the appropriate legislative 'vessel' for dealing with difference and similarity. There are three possible approaches to structuring regulatory arrangements. A general access regime could be defined:
 - with clauses and principles that were common to all industries at the highest level and the capacity for industry-specific clauses underneath that general structure;
 - that would apply to all industries bar those that had specific regimes, with separate specific regimes having higher level clauses and principles that mirrored that of the general regime, and then specific sub-clauses at lower levels; or

-
- that is applied by the responsible regulator to specific industries that have no major ‘structural’ differences from each other. This would not require any specific sub-clauses.

These two broad themes are considered in detail below.

Box 8.3 Appropriate generality and specificity in regulation

A principle for good regulation is that every matter should be dealt with at the highest level of generality possible:

- This avoids inconsistencies between regulations applied to like classes and further reduces the risk of biasing resource allocation between competing uses.
- It avoids ‘belt and brace’ regulations, where the one area of activity is subject to overlapping repetitive regulations (as appears the case with telecommunications access).
- It reduces arbitrary differences that arise from ad hoc regulation — differences that add gratuitously to regulatory complexity, ambiguity and higher administrative and compliance burdens.
- It is more efficient in that it reduces the risk of accidental legislative and bureaucratic duplication or inconsistency. One broader Act and one regulator can suffice for many different areas. Any proposed changes to legislation or administration are scrutinised by a range of industries and consumers.
- Because regulations are built systematically from the top down, rather than from the bottom up, it reduces the risk that regulatory reform introduces undesirable consequences for other regulations.

But at some point, there is also value in differentiating how regulations should apply to different areas.

The right level of specificity

While there are few policy relevant features that are unique to telecommunications, the overall combination of features do appear to make telecommunications different from other regulated utilities in some policy relevant dimensions. This *may*, at some level of specificity, require separate clauses or processes from those required for some other industries. There are eight factors that create a rationale for this specificity.

Network effects are far more prominent than in utilities such as water, electricity or gas. Where transit alternatives are not available, the refusal to provide interconnection provides a different basis for market power than natural monopoly per se (as noted in chapter 2 and by several participants, such as Cable & Wireless

Optus sub. 8, p. 5 and AAPT sub. 7, pp. 11–12). It is unclear whether market power stemming from network effects would be adequately catered for by the declaration requirement in s. 44G(2)(b) (in Part IIIA) that it would ‘be uneconomical for anyone to develop another facility to provide the service’. Two-way access pricing may be important also. Different networks interact and charge varying terminating prices, with unexpected impacts on regulation of access pricing and the potential declaration of services.

Technology is moving far more rapidly and in uncertain directions compared with most other areas of infrastructure. While the Commission questions whether this justifies greater discretion given to the regulator under Part XIC than Part IIIA (as maintained by PowerTel sub. 35, p. 20) — it may well require speedier processes (Cable & Wireless Optus sub. 8, p. 96 and PowerTel sub. 35, p. 19) and probably increases regulatory risk.

The services are very heterogeneous (such as email, internet, messaging, video-on-demand, pay TV, long-distance, local calls) compared with many other utilities, which makes regulatory monitoring more difficult and simple pricing rules less feasible.

The government has applied a set of social regulations to telecommunications — such as retail sub-caps and universal service obligations — that influence the type of economic regulation that is optimal. For example, the access pricing rules that may be optimal in a first-best world, may not be in telecommunications (such as in local call resale — appendix D).

Artificially raised consumer switching costs also loom large. Incumbents with a large subscription base can gain market power by frustrating number portability or by making it difficult for customers to buy specific parts of a bundle of telecommunication services. There are few policy interventions resembling number portability or pre-selection for any other utility.

There are standards issues — such as those dealing with interference and interconnection — that are specific to telecommunications networks, and may be relevant to appropriate competition regulations (for example, defining where the ACA and the ACCC may need to consult). There are other, equally specific, standards issues applying to other utilities.

The types of standard access obligations in telecommunications vary from those in other industries, as do the roles of any industry-specific bodies. Telecommunications-specific legislation can define these obligations and roles. For example, Division 3 of Part XIC specifies ex ante the standard access obligations (box 7.2 in chapter 7), in telecommunications-specific terms, of an access provider

after declaration of services.³ The standard access obligations act as a base level of access obligations, and the transaction costs of replicating these basic obligations across contracts are avoided. Part XIC also delineates specific roles for telecommunications bodies such as the ACA in the access regime.

These specific features have led many countries to adopt telecommunications-specific access regimes,⁴ although, until recently, New Zealand was a notable exception.⁵

Finally, there is a zone of uncertainty about the appropriate level of specificity. There may not be enough known about optimal processes and laws for regulating access. Both Parts IIIA and XIC are relatively new. It may be questioned whether there is enough evidence about how the arrangements have worked that could underpin a judgment about how extensive general arrangements should be applied (FlowCom sub. 12, p. 3). This is particularly true for Part IIIA, where there have been few undertakings and declarations, and no arbitrations (Productivity Commission 2001c).

The right legislative instrument

While there are some differences between telecommunications and other bottleneck facilities that justify different regulatory treatment, this does not by itself justify a specific part of the TPA (or separate legislation). For example, Part IIIA could contain some provisions that apply generally and then some contingent clauses that only apply to certain specific industries or attributes (for example, networks). This would then enable that general regime to accommodate network effects, standard access obligations and other telecommunications-specific provisions. This would

³ Declaration under Part IIIA only results in a right to negotiate and provides no guarantee of access. This question (and the terms and conditions of access) is determined in any negotiations or consequent arbitration. Indeed, a service may be declared under Part IIIA and become subject to arbitration proceedings with the final result that an access seeker has no right of access to the declared service (s. 44V3).

⁴ Of course, the fact that most other countries also have a telecommunications-specific access regime is, in itself, not a reason for having one in Australia. But their choices reflect common concerns about specific features of telecommunications that warrant special attention in access regulations.

⁵ A number of inquiry participants pointed to the experiences with the recent Telecom-Clear disputes in New Zealand as an indication that a general competition regime does not work (Cable & Wireless Optus sub. 8, pp. 55ff). However, the New Zealand competition regime does not include provisions equivalent to Part IIIA of the TPA. Consequently, experience in New Zealand does not provide a guide to whether a *properly designed* general access regime would work well or not for telecommunications.

have some advantages relative to drafting a separate part of the TPA which only applied to the telecommunications industry:

- it reduces the duplication of common elements in the general and specific parts of the Act;
- it reduces the risk that uncoordinated changes would be made to the erstwhile common features — creating inconsistencies and ambiguities between the two regimes; and
- it implies that a wider group of interested parties provides scrutiny of regulatory decisions — thus reducing the risk of regulatory capture. Thus, the result of any declaration and arbitration process under Part IIIA is of potential interest to any facility owner or access seeker, even if the particular instance relates to another industry, since these results may have wider application. In contrast, regulatory decisions under Part XIC are, by definition, quarantined to the telecommunications sector.

However, since both a general access regime and Part XIC already exist, the choice is not being made in a ‘greenfield’ context. The Commission is concerned that the existing version of Part IIIA has some features that reduce its current scope to regulate access to telecommunications services adequately ⁶:

- Part IIIA is administered by two regulatory bodies. The separate roles of the two bodies reflects the general desirability of separating responsibility for the coverage of the regime (through declaration inquiries by the NCC) from responsibility for pricing and access regulations (the arbitration phase administered by the ACCC). The NCC’s role also partly reflects coverage by Part IIIA of State and Territory matters. However, the Commission does not consider that in telecommunications the benefits of a second regulator would outweigh the costs (chapter 10).
- AAPT (sub. 7, p. 30) and PowerTel (sub. 35, p. 19) considered that Part XIC was more free of political intervention than Part IIIA, where a relevant minister determines whether a recommendation by the NCC for declaration is accepted or not (although there is potential role of ministerial pricing determinations under part XIC that do not occur in Part IIIA).
- In the parallel inquiry into Part IIIA, the Commission (2001c) found several deficiencies, such as cumbersome and slow administrative procedures,

⁶ Another potential issue is the different market definition in Part IIIA and XIC. PowerTel (sub. 35, p. 18–19) notes that the market definition in the competition test in Part IIIA requires defining a separate functional market — which it alleges to be a more difficult process. However, there are similar difficulties in defining the relevant markets for some telecommunications services (chapter 2).

limitations in the declaration criteria, and the absence of pricing principles. The Commission (2001c) has proposed some changes to Part IIIA that would address these weaknesses.

There are some advantages in an approach in which the telecommunications-specific access regime adopts, by reference, some elements from the general regime that are appropriate for telecommunications and deviates on a range of specific matters where relevant:

- The more the general regime accommodates the specificities of varying industries the more complex the legislation becomes.
- The general part might be used as a harder test with more stringent thresholds for ‘residual’ access problems involving industries not currently dealt with by specific access regimes, while the specific regimes could apply to cases where there was greater certainty of regulatory gains — such as telecommunications. The parallel Commission inquiry into Part IIIA regards the general regime as serving both this ‘residual’ role and as a regime that establishes a basic framework that can be drawn on by specific regimes — by both State and Territory and other Commonwealth regimes.
- The best processes and principles are not known with certainty. There are risks when policymakers wish to try new, potentially generally applicable, administrative processes or criteria in an access regime. If the innovations are actually poor and they apply to all access cases, the costs could be very high. Specific regimes provide a possible model for allowing some limited experimentation to find better regulations, before these are applied more generally. In this light, the Commission’s Part IIIA inquiry has proposed the adoption of some of the features of Part XIC that have, after experience, proved to be beneficial (such as information disclosure requirements).
- Although not insurmountable, the transactions costs involved in switching to Part IIIA warrant consideration. One participant argued that:

FlowCom does not consider there would be any benefits of a move to Part IIIA which would justify the substantial cost of dismantling and rebuilding the regulatory structures which have been developed to address telecommunications issues (sub. 12, p. 3).

On the other hand, Telstra (sub. 38, p. 21) noted that one way of reducing the transactions costs would be to deem various pre-existing declarations if they were to be moved to Part IIIA.

Moreover, some of the risks of a specific regime can be reduced by having the same regulator oversee both the telecommunications-specific and the general regime — as is the case now with the ACCC.

Summary

There are advantages and disadvantages with a telecommunications-specific regime. The main advantage is that it overcomes some practical obstacles to consolidation while allowing a level of specificity that might otherwise be clumsy in a general regime. The main potential risk is that the specific regime would adopt objectives, principles and processes that are not consistent with Part IIIA. However, this report makes a number of recommendations that, where appropriate, make Part XIC closer to Part IIIA.

RECOMMENDATION 8.1

The Commission recommends the retention of provisions for a telecommunications-specific access regime. However, its objectives, principles and processes should adopt those in Part IIIA wherever possible.

9 Scope of the access regime

Box 9.1 Key messages

The Commission recommends that the current objects clause (LTIE) be amended to focus on promoting efficiency in the use of, and investment in telecommunications services. This would explicitly recognise the importance of maintaining investment incentives as well as efficient use, and would also maintain consistency with the Commission's recommended objects clause for Part IIIA of the TPA.

The declaration criteria in Part XIC are vague and provide excessive discretion to the regulator. They also differ strikingly from those applying in Part IIIA. The Commission recommends that the criteria be replaced with a new more stringent set of requirements, all of which must be met, before the ACCC can declare telecommunications services.

For a carrier making a new investment, the risk of future declaration — with regulated access prices — may lead to the delay or termination of the planned investment. This is because access regimes may truncate the returns from risky investments. The Commission has proposed a number of options for dealing with this problem, such as binding rulings and regulatory contracts that provide immunity from declaration. The Commission's parallel inquiry into Part IIIA has recommended a process for refining the options that should be employed, and the outcome of that process should also be incorporated into Part XIC.

Currently, a declaration or revocation inquiry by the ACCC results in either declaration or no regulation. In some cases, a preferred alternative may be price monitoring, which is more light-handed than declaration.

So long as the problems arising from market power by non-dominant terminating access providers are dealt with by other means, a service declaration should only apply to providers with market power.

The current exemption process needs reform to make it an easier option — especially if declaration continues to apply to non-dominant providers of a service.

Currently, declaration has no sunset provisions. These should be introduced.

9.1 Introduction

This chapter examines the appropriate scope of a telecommunications access regime. This includes the objects clause that defines the overall purpose and target

of the regime and the criteria used to determine what services should be declared (sections 9.2 to 9.5), the potential to ‘immunise’ certain investments from declaration (section 9.6), the option of using price monitoring as an alternative to declaration (section 9.7), the use of exemptions to better target declaration (section 9.8) and the appropriate duration of arrangements (section 9.9).

9.2 The objects of access

The scope of services under review

The copper wire local loop is the core part of the telecommunications network — and with increased functionality not only provides basic telephony, but also new services such as broadband through ADSL. Other platforms are also emerging, such as mobile and fibre networks. These are offering a range of new services (internet, cable TV, video on demand, SMS, WAP). Which of these increasingly diverse telecommunications services should be declared and what should be the extent of appropriate regulation?

Some participants argued for very wide coverage of the access regime. iiNet considered:

A much-needed reform would be the declaration of access to infrastructure of all kinds for any telecommunications purpose — effectively requiring owners of infrastructure to make available access to that infrastructure at a fair market price (sub. 5, p. 1).

Others, such as Vodafone, argued for regulatory forbearance — with declaration targeted at those areas of telecommunications where competition was otherwise unworkable:

... Vodafone submits that future telecommunications regulatory regimes should adopt principles of forbearance and follow a more neutral general competition law approach to access and conduct rules, with residual areas of significant concern addressed specifically (sub. 15, p. 15).

These respective positions reflect differing implicit judgments about the costs and benefits of a wide versus narrow scope of the telecommunications-specific access regime. The Commission’s view is that, as for other regulations, the appropriate overarching criterion for deciding which facilities or services should be subject to access requirements is a net public benefit test. This requires that overall, there are strong grounds for believing that access to the declared telecommunications services will improve the long-run welfare of Australians, *taking account of the imperfections and risks of the regulatory regime*. However, while a public benefit test may be a useful overarching sentiment in determining the scope of declarations,

its lack of specificity makes it difficult to apply. For that reason, it is constructive to specify a clear object clause and an associated set of criteria that identify when it is likely that declaration would generate a net benefit.

The current object of Part XIC

Unlike Part IIIA, Part XIC includes an objects clause (s. 152AB(1)) that explains the objective of the Part — namely to promote ‘the long-term interests of end-users’ (LTIE). End-users are final consumers, not intermediaries such as carriage service providers (which may also buy services from telecommunications carriers).

The LTIE clause has a number of strengths.

- It clearly sets an ultimate objective for Part XIC, which, in general, would equate with economic welfare.
- By specifying the long term¹ it avoids the pitfall of setting low access prices in the short run (to the benefit of consumers), but provoking a long-run diminution of supply that would result in forgone future consumption. In principle, it thus protects incumbent’s investments in bottleneck facilities.

However, in applying the LTIE objects clause, Part XIC takes a slightly more restrictive approach than the rest of Australian trade practices law. The object of the TPA as a whole is ‘to enhance the welfare of Australians through the promotion of competition and fair trading and provision for consumer protection’ (s. 2).

The ACCC (1999b, p. 32) has contrasted the LTIE test with a public benefit test:

... the long-term interests of end users concept is not to be equated to the public benefit. Rather ... in the [ACCC’s] view, end-users should be seen as a subset of the public ...

This suggests that the application of the LTIE objects clause would not necessarily produce the same outcomes as one aiming at the public benefit. It is generally appropriate to seek the overall public benefit, rather than that of particular sub-groups.² This approach is reflected in the Government’s terms of reference for this

¹ The long term is not defined in the TPA, but is generally interpreted as taking a long-term economic perspective that allows for producers to vary all factors of production — including renewal of any investment (ACCC 1999b, pp. 33–4).

² The submission by the Northern Territory Government (sub. 22, p. 9) suggested the addition of a further objective to s. 152AB(2) of Part XIC of ‘extending access to reliable, affordable, basic voice and data services to all Australians’. The issue of how much government should ensure access to such services to all Australians is fundamentally a social issue, rather than an economic efficiency matter. This suggests that the objective should not be included in the TPA, though

inquiry, which requested that the Commission ‘aim to improve the overall economic performance of the Australian economy’.

The Commission also notes that while the expression ‘long-term’ may indeed pick up the need to ensure that investment and innovation are not sacrificed for short term gains (as argued by AAPT sub. DR100, p. 17), such protection could receive more emphasis. It may be still tempting to provide short term aid to consumers by reducing monopoly power, even in circumstances when investment and innovation — the biggest drivers of economic welfare — are contingent on temporary monopoly power. In this case, constraining this power ultimately is inimical to the interests of consumers. An objects clause that is explicit about investment is probably a more sure-footed way of using the right conceptual framework and ensuring a long-term focus.³

Several participants also argued that the LTIE clause might favour consumers at the expense of a wider perspective on economic efficiency and suggested its amendment:

What we have is not a competition criterion but a consumer criterion, which can only be a partial guide to optimal policy (Institute of Public Affairs sub. 29, p. 3).

We consider that the current test skews decisions in favour of direct and measurable benefits to consumers — when there is a broader requirement to consider investment aspects explicitly (Vodafone sub. DR70, p. 10).

Excessive focus on end-users, rather than the aggregate of consumer and producer surplus, can result in regulatory decision making that attempts to produce short-run consumer gains at the expense of long-run efficient investment and innovation (Cable & Wireless Optus sub. DR72, p. 21).

While there may be some circumstances where these claims would apply,⁴ it is not clear that, *by itself*, changing the LTIE clause to an explicit economic welfare or efficiency criterion would have made a substantial difference to the number and

there may be strong grounds for government to specify (and fund) it as part of some other Act or as a program objective (chapter 18).

³ Indeed, M. Legg (sub. DR85) emphasised the critical role of innovation in particular in generating long-term gains and suggested that this should be made clear.

⁴ One way in which this could occur would be if declaration were to lead to transfers from shareholders of the bottleneck facility to consumers, as competition eroded retail markups. Such transfers to consumers are, by their nature, not net welfare gains, but the LTIE test does not preclude them being considered. Consequently, a situation *could*, in principle, arise where consumers may be better off, but overall economic efficiency is lower (say because of some inefficient investment). As an example, suppose that a monopolist practised perfect multi-part price discrimination, so that consumer surplus was zero, but economic efficiency was maximised. A regulated price reduction will reduce output and lower economic efficiency, but it will increase consumer surplus. While this example is not realistic, it demonstrates that the link between the LTIE test and economic efficiency is imperfect.

type of declarations made by the ACCC to date. Notably, one of the criteria by which the LTIE is to be judged — described in s. 152AB(2)(e) — is effectively an overall efficiency criterion in any case. There is some ambiguity that arises from specifying the interests of consumers rather than the community at large, but it should not be overstated.

The parallel inquiry into the generic access regime by the Commission (2001a,c) has an extensive discussion on the appropriate objects clause for an access regime. In the Part IIIA draft report, the Commission recommended that an objects test be incorporated into Part IIIA, the key element of which is to:

...enhance overall economic efficiency by promoting efficient use of, and investment in, essential infrastructure services (Productivity Commission 2001a, p. 102).

Participants in that inquiry, including the NCC, were overwhelmingly in favour of such an objects clause. In its draft report into telecommunications, the Commission also favoured adoption of this objects clause in Part XIC. This reflected the parallel objectives of Parts IIIA and XIC of the TPA, and concern over the residual ambiguity in the LTIE clause.

A number of participants were concerned about amending the objects clause in Part XIC. The ACCC maintains that the LTIE criterion is superior to that proposed by the Commission on two grounds (sub. DR98, p. 8):

- it is more compatible with the broad s. 2 objective of the TPA; and
- the sub-tests (s. 152AB(2)) ‘clarify Parliament’s intention concerning the factors which are likely to promote the LTIE and require the ACCC to assess a range of effects in the course of determining whether a course of action is in the LTIE’.

However, these arguments are not strong. The first claim is not substantiated because, as discussed above, the ACCC has previously acknowledged that s. 2 aims at the ‘welfare of Australians’, not consumers alone. The second claim ignores the fact that the sub-tests, as currently phrased, are not necessarily appropriate in achieving the goals of competition policy (an issue that is examined in the next section). Notably, the ACCC (2001o, p. 5) did not recommend the adoption of an objects clause for Part IIIA, suggesting that s. 2 of the TPA was already an acceptable overarching object clause.

Consumer organisations claimed that the proposed objects clause in the draft report would represent an apparent dilution of a commitment to protect consumer interests (Consumers’ Telecommunications Network sub. DR76, p. 1), including the important principles of any-to-any connectivity (Australian Consumers’ Association sub. DR89, p. 1). The Commission acknowledges the centrality of consumers in any test of economic efficiency. However, an explicit focus on preserving incentives for

investment and innovation may better serve their long-term interests. Any-to-any connectivity is also an important aspiration, where it appears likely that market power might frustrate interconnectivity. However, that issue is dealt with through access arrangements and the declaration criteria, rather than the object clause itself.

Other participants argued that economic efficiency is a theoretical economic concept that would generate ‘uncertainty and confusion’, while displacing a term that was clearly understood and which had worked well (AAPT sub. DR100 pp. 16-17; PowerTel sub. DR102, p. 6; ATUG sub. DR69, p. 11). The Commission has altered the draft proposed objects clause so that it is effectively equivalent to the existing s. 152AB(2)(e), which should largely allay the concerns about any uncertainty generated by legislative change.

The Commission considers that were the Government to accept an the proposed objects clause in Part IIIA, the same clause should be adopted in Part XIC. This judgment stems from the value of explicitly specifying the preservation of investment incentives and eliminating gratuitous differences between parts of the TPA that have the same fundamental objectives.

Other parts of Part XIC (s. 152AS, s. 152AT, s. 152CR) and the *Telecommunications Act 1997* (s. 3(1)(a), s. 384(5), s. 387(3), s. 389, s. 458(5,6), s. 485(5) and schedule 1, Part 3, s. 17(3)) also make reference to the LTIE in Part XIC. Accordingly, consistency suggests that these would also need to make reference to the new objects clause.

RECOMMENDATION 9.1

The Commission recommends that:

- ***the objects clause in s. 152AB(1) of Part XIC of the TPA be changed from the long-term interests of end-users to ‘The object of this Part is to promote economically efficient use of, and investment in, telecommunications services’; and***
- ***the relevant sections of the Telecommunications Act 1997 be amended so as to adopt the new objects clause in Part XIC.***

Section. 152AB(6) usefully specifies some of the matters pertinent to a judgment of efficiency and this reference should be preserved, but in relation to the new objects clause.

9.3 Assessing the existing declaration criteria

Part XIC (s. 152AB(2)) establishes three secondary objectives to which the ACCC must have regard when establishing whether a service meets the LTIE and should be declared:⁵

- the promotion of competition in telecommunications markets for listed services;
- the achievement of any-to-any connectivity between end-users; and
- the efficient use of, and investment in, infrastructure.⁶

It is not a requirement that all three sub-tests be passed when declaring a service, only that regard must be had to them. Nor when they conflict, does s. 152AB(2) specify the tradeoffs between any of these sub-tests. This is not necessarily a fault, but its implication is that the regulator wields significant discretion when making a decision. In effect, the ACCC may declare a service if it believes it is in the LTIE. The lack of statutory guidance involves some risks of regulatory error.

Warren and Landrigan (2000) question whether the ACCC has impartially balanced the competing criteria under s. 152AB(2). They claim that, with the exception of the inquiry into intercarrier roaming, the ACCC's interpretation of the investment sub-test (s. 152AB(2)(e)) has focused on avoiding wasteful duplication of infrastructure, rather than on the dangers of declaration for investment incentives (s. 152AB(6)(c)).

Daly and Stoeckl (2000) argue that the link between the three declaration criteria in s. 152AB(2) and the goal of promoting the LTIE is conceptually weak. All three sub-tests could be passed without consumers necessarily being better off. For example, the welfare outcomes for consumers under oligopolistic competition are indeterminate.

The Commission re-examined s. 152AB(2) to see if a better declaration criteria can be developed that reduce the scope for regulatory error. In so doing, it has examined the three existing sub-tests for issues that need to be resolved in any new declaration criteria.

⁵ S. 152AL(3)(d) sets out the formal declaration criteria, but it is a reference to the conditions for establishing the LTIE in s. 152AB(2).

⁶ S. 152AB(3) indicates that these are the only matters to which the ACCC may have regard when assessing the LTIE.

The competition sub-test (s. 152AB(2)(c))

Interpreted literally, this test has a number of strengths, but also some ambiguities and problems.

The test is based on whether declaration ‘is likely to’ promote competition. This appears to be less demanding than ‘would’ as used in the current comparable Part IIIA competition test (s. 44G(2)(a)), although the practical importance of the difference is unclear.

The promotion of competition is sometimes seen as a proxy, backed by a body of legal precedent, for the achievement of efficient outcomes. As a proxy, there is a risk that some may interpret it literally, rather than seek to assess whether declaration that promotes competition also improves efficiency. It may be tempting, for example, to measure competition by counting competitors or by defining markets in a very narrow way. Telstra claims that decisions have not always accorded with the proper definition of competition, but rather on the notion of promoting apparent competition in settings where there is no real market power:

... the ACCC has extended regulated access arrangements to inter-capital transmission, which is plainly a market in which there are competing sources of supply. The carriage of Pay TV by analogue means over Hybrid Fibre Coaxial networks has also been brought within the access arrangements, with the ACCC simply disregarding the competition that comes from satellite Pay TV operators, even putting aside Free-to-Air. Equally, the ACCC has threatened to bring GSM roaming, a vigorously competitive market, within the arrangements, if commercially negotiated outcomes departed from the [ACCC’s] preferred path of market development (sub. 24, p. 22).

That said, while the TPA does not define competition, successive cases have made its meaning relatively clear (Evans 2000c, p. 9 and ACCC 1999b, pp. 39ff). Competition is the constraint imposed by footloose consumers and rivals on the capacity of a firm to use market power (to raise prices above the competitive level). It would be possible to have intense competition in a market with just one perfectly contestable firm — since the *potential* for entry would constrain prices. Under the TPA, promotion of competition is interpreted to mean removal of entry barriers that inhibit competition. Indeed, s. 152AB(4) indicates that promoting competition may be assessed by examining whether declaration ‘removed obstacles to end-users of listed services gaining access to listed services’, although this is only one matter that is relevant for assessing competition (s. 152AB(5)). However, it is not always easy to measure entry barriers or to define the appropriate scope of markets for assessing their severity. In this sense, judgment will play a significant and inevitable role in the assessment of whether declaration increases competition effectively.

The competition test leaves undefined the extent to which stimulation of competition was a consideration when judging whether to declare a service. If declaration puts a small downward pressure on the incumbent's prices, this would represent an increase in (properly defined) competition, but would that be enough to justify the costs and risks entailed by declaration? In a Part IIIA context — the Sydney Airports case — it appears that the competition criterion can be satisfied even if access only leads to a marginal increase in competition (Productivity Commission 2001c). This implies that this risk must also be present in Part XIC.

King (2000, p. 10) and the Law Council of Australia, among others, have suggested amending the competition test to one that allows for a *substantial* increase in competition. On the other hand, others have argued that the existing provision is already interpreted as requiring a non-trivial increase in competition (for example, Evans 2000c, p. 9). Overall, however, clarity is better than convention, suggesting there may be some benefit in the proposed wording change. The modifier 'substantial' is already applied in some other competition tests in the TPA (such as sections 45, 46, 47 and 50 and Part XIB). The Productivity Commission (2001c) has proposed the wording change in its reform options for the Part IIIA regime.

Another related issue is that competition has a temporal dimension. Market power may be substantial, but short-lived, so that the impact of declaration would also be ephemeral. Since transitory market power is what motivates many business innovations, a competition test should avoid operating in these cases. One option would be to require explicitly that a competition test should only apply in circumstances of enduring market power.

Finally, there are questions about what sort of services should be covered by Part XIC in assessing the competition test. Part XIC defines the relevant services as carriage services and services supplied by means of carriage services (s. 152AB(2)(a) and (b)). As noted by the ACCC (1999b), Part XIC does not rule out consideration of the market in which the service is supplied. In contrast, Part IIIA specifies that the relevant market is one *other* than the market for the service. In some cases, depending on how markets were defined, this implies that Part IIIA would assess a narrower range of markets for the competitive effects of a declaration than Part XIC. The NCC (2001, p. 36) has defended the use of the 'other than' caveat in Part IIIA, arguing that it would be pointless to encourage the re-supply of a natural monopoly service, unless final customers benefited. This suggests that the crux of a competition test is whether declaration would reduce the prices of the services to which the bottleneck services are an input below 'excessive' levels. In fact, while the wording of Part XIC and IIIA is rather different, this is more cosmetic than real. The requirement under Part XIC that

declaration be in the LTIE means that, as in Part IIIA, a service would not be declared if it intensified competition among suppliers but did not benefit end-users.⁷

The any-to-any connectivity sub-test

Any-to-any connectivity (s. 152AB(2)(d) and s. 152AB(8)) is clearly important to the efficient functioning of networks, but it is not always desirable.

First, interconnection costs for a particular service may be prohibitive. While this is recognised in Part XIC (s. 152AB(6)(a)(ii)), there is otherwise limited statutory guidance to the ACCC about when any-to-any connectivity is a relevant matter for the LTIE.

Second, paradoxically, the regulated requirement for any-to-any connectivity, combined with price regulations affecting Telstra's fixed network, may provide market power to small non-dominant networks (chapter 2).

Third, it is likely that access to origination services is not as important as access to terminating services. Ordover (sub. 43, p. 50) has argued that the potential for abuse of market power is greater for termination services:

This is because it is easier to scale origination facilities (i.e., construct facilities first to the customers you wish to serve first) than termination facilities (i.e., because one may not know whom your customers will wish to call).

For example, construction of origination services that are competitive with Telstra's fixed local loop may be feasible for certain customer sub-groups — such as large business users that are geographically close to each other, as in CBDs. That said, Ordover's (sub. 43, p. 61) argument does not currently apply to most consumers, although falling mobile service costs may challenge that in the future. In this case, local access services enable the incumbent's rivals to offer long distance and other services that rely on origination on the incumbent's network. Moreover, if terminating services are regulated but origination charges are not, then even with competition in the provision of local services, a large network could subsidise its own on-net origination charges through high off-net origination charges, making the other network less competitive.⁸ Accordingly, while terminating services are the most important source of network effects, originating services remain important in most markets.

⁷ The ACCC (1999b) indicates that end-users are the consumers of carriage services and other services supplied using carriage services, rather than suppliers of these services.

⁸ This strategy breaks down if the other network can set high terminating charges.

Finally, it is questionable whether withholding any-to-any connectivity is a profitable strategy for carriers where there are multiple carriers and the market is workably competitive — such as in the Australian mobile market. If domestic connectivity problems were to arise, entrants may be able to use international facilities to bypass domestic networks (Melody 2001). Even so, failure to provide interconnection might still occur when there is more than one incumbent — for example, if there were tacit collusion among several dominant carriers and limited transit options — potentially justifying mandated access. In this context, it is not clear that Part XIC aims to achieve any-to-any connectivity other than in circumstances where network effects create market power. However, the assessment of any-to-any connectivity is redundant if it is no more than consideration of a particular source of market power. This is because the proper implementation of the first sub-test, the competition test, will embrace any source of market power, including those arising from network effects.

There are grounds, therefore, for taking account of the strength and nature of network effects when determining whether the competition test will be met, but not to view any-to-any connectivity as an independent test. Accordingly, the any-to-any connectivity sub-test would more properly be seen as a matter relevant to the assessment of the objective of promoting competition (akin to s. 152AB(4)). As a contributor to market power, any-to-any connectivity is:

- not likely to be relevant in circumstances where there are sufficient players or bypass opportunities. (In this context, the application of price monitoring may be more appropriate than declaration — see the discussion in section 9.7).
- most likely to be relevant for domestic PSTN originating and terminating access services. These services were deemed (chapter 7) rather than formally declared. Currently, deemed services largely overcome the barriers to entry posed by network effects, so that the any-to-any connectivity criterion has played a minor role in declarations to date. However, since new types of originating and terminating services may develop and existing declarations may be sunsetted (as the Commission recommends), it is appropriate to gauge whether network effects may lead to market power when undertaking new declaration inquiries. But this does not require a separate network effect test.

The efficiency sub-test

The third sub-test is the efficient use of, and investment in infrastructure. As set out in detail in section 9.2, the Commission clearly agrees with this criterion — but views it as intrinsic to the objective of the whole access regime, rather than as a secondary objective.

9.4 Narrowing the scope of the competition tests with auxiliary requirements

Given that the any-to-any connectivity sub-test is really a subset of the competition test and the efficiency sub-test is a re-statement of the object clause, a key question is whether a competition (or market power) test alone could be used in the declaration criteria.

In assessing the possible role of sub-tests as a way of narrowing the competition test, it is useful to examine how the general access regime (Part IIIA) achieves this (box 9.2).

Box 9.2 Declaration criteria in the general access regime (Part IIIA)

s. 44G(2) The Council cannot recommend that a service be declared unless it is satisfied of all of the following matters:

- (a) that access (or increased access) to the service would promote competition in at least one market (whether or not in Australia), other than the market for the service;
- (b) that it would be uneconomical for anyone to develop another facility to provide the service;
- (c) that the facility is of national significance, having regard to:
 - (i) the size of the facility; or
 - (ii) the importance of the facility to constitutional trade or commerce; or
 - (iii) the importance of the facility to the national economy;
- (d) that access to the service can be provided without undue risk to human health or safety;
- (e) that access to the service is not already the subject of an effective access regime;
- (f) that access (or increased access) to the service would not be contrary to the public interest.

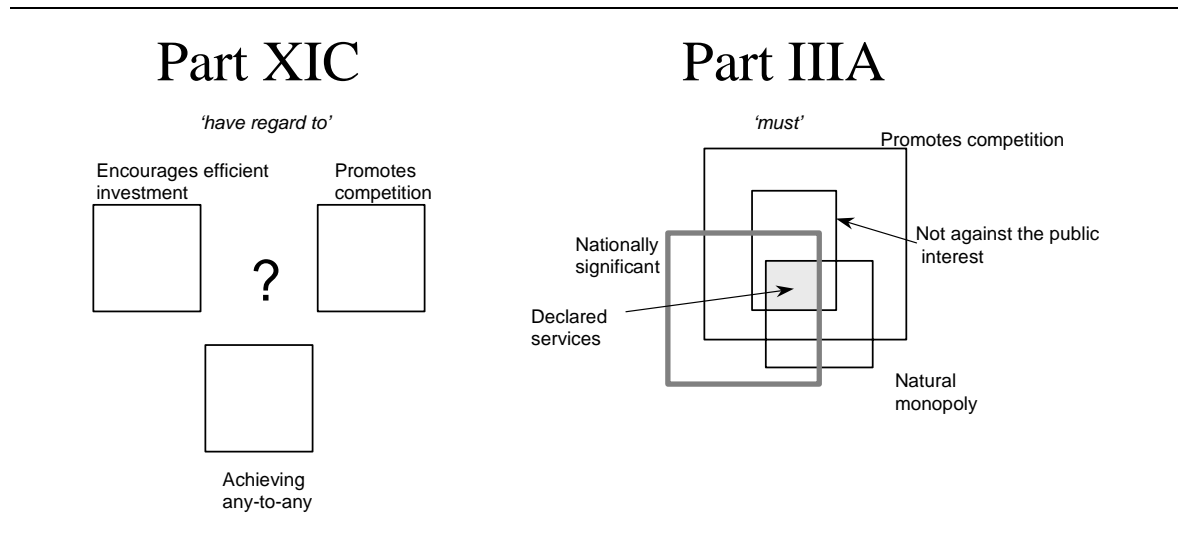
Source: Part IIIA (s. 44G(2)) of the *Trade Practices Act 1974*.

Part IIIA has a test (s. 44G(2)(b)) that is widely perceived and applied as a natural monopoly test (King 2000, p. 11; Miller 2000, pp. 151ff).⁹ It also requires a public

⁹ It appears that, in most cases, the Part IIIA test has been interpreted as a *sustainable* natural monopoly test (that is production costs are minimised with one producer and duplication would not be economically feasible). For example, this appears to have been the interpretation in the Sydney to Broken Hill rail case (Miller 2000, p. 152). However, in Part XIC, it appears that s. 152AB(2)(e) has been interpreted by the ACCC in a broader context, encompassing *unsustainable* natural monopoly. Thus, the ACCC has, on occasions argued that declaration was appropriate where entry is economically feasible, but deemed inefficient because it duplicates infrastructure. For example, in examining declaration of long-distance trunk routes, the ACCC (2000p, p. 23) argued that: 'Declaration would ensure that service providers are not forced into a

interest and national significance test. Because each of the criteria under the declaration criteria in Part IIIA *must* hold for the NCC to declare a service, the effects of these additional tests is to somewhat narrow the application of the competition test (figure 9.1).¹⁰

Figure 9.1 **The effect of ‘have regard to’ clauses versus required conditions**



Unlike Part IIIA, Part XIC does not limit the scope of a competition test in any way. Rather, the existing competition test implies that a sustainable natural monopoly would be declared, but in the absence of a clause like s. 44G(2)(b), the test would not rule out the declaration of *any* service (regardless of its cost characteristics) were it likely to promote competition. As R.S. Gilbert, a former Deputy Chairman of the Trade Practices Commission, notes (sub. 28, p. 2), the Part XIC declaration criteria are very broad in scope.

The Commission considers that the application of the competition test should be more focussed by requiring additional objective tests that must also be met prior to declaration. These tests are considered next.

decision to construct their own network facilities by a lack of competition in the upstream market. This duplication of infrastructure was considered by the [ACCC] to be wasteful and represented an inefficient allocation of resources’.

¹⁰ However, the diagram probably exaggerates the degree to which these clauses really narrow the application of the competition test. The ‘not against the public interest’ test and the health and safety test have typically not been influential in declaration inquiries.

A national significance test

There is no test under Part XIC¹¹ to stay the declaration of facilities that are not economically significant (unlike s. 44G(2)(c) in Part IIIA). A similar criterion would have some useful applications under Part XIC. It would remove the risk that small-scale telecommunications services might be individually declared, despite the high transactions costs of doing so (although to date, no such declarations have been made).

Some participants were concerned that a national significance test might neglect regional services.¹² However, it would not rule out grouping regional bottlenecks and declaring them, where this was economically efficient (as suggested by the Queensland Government sub. 39, p. 11).¹³ It is notable that the current Part IIIA test of national significance has allowed some state-specific services to be declared (for example, freight handling facilities in Sydney and Melbourne; Miller 2000, p. 153).

The existing national significance clause in Part IIIA is not ideally suited to a telecommunications context as it is couched in terms of the ‘facility’ rather than the relevant service subject to a declaration inquiry. In telecommunications, almost all delivery platforms for services would meet a national significance test, even if the particular service being carried on them was insignificant. Accordingly, a useful national significance test for telecommunications would need to be based on the service rather than the facility. That would also suggest elimination of the criterion of ‘size’ (s. 44G(2)(i)) in any telecommunications test.

Testing for large sunk assets and natural monopoly

Part IIIA contains a declaration test that is widely interpreted as targeting natural monopoly (s. 44G(2)(b)). This test is aimed at utilities where sustainable natural

¹¹ There is a significance test in relation to arbitrations. An arbitration can be terminated if it is unlikely to make a significant contribution to competition in a market or if the access seeker’s use of the service is not socially or economically significant (s. 152CS).

¹² For example, the Tasmanian Government raised the issue that Telstra owned the only fibre optic cable to mainland Australia, as well as two microwave radio connections from Tasmania to Victoria via King and Flinders Islands. These services had not been declared, although it was claimed they were bottlenecks for any telecommunications services between Tasmania and mainland Australia (sub. 36, p. 4). AAPT (sub. DR100, p. 21) argued that a national significance test might lead to some regional services not being declared.

¹³ In this sense a ‘facility’ could sometimes be seen as an aggregation of particular smaller facilities that had a high degree of commonality (for example, combining into one declarable service interstate trunk lines on routes where competition was weak).

monopoly bottlenecks are the source of market power. The question is whether it is an appropriate test for telecommunications.

Empirical evidence on the existence or otherwise of natural monopoly in telecommunications is ambiguous,¹⁴ and in any case, natural monopolies may be transitory (chapter 2). Given the uncertainty in econometric approaches to measuring natural monopoly, it may be preferable to use a ‘rule of thumb’ test for identifying natural monopoly, based on some common readily observable qualities of natural monopolies:

Efficient production of the service necessarily involves an infrastructure facility with high fixed costs and relatively low operating costs so that it is likely that the development of another such infrastructure facility by any person will raise the total cost of supplying the market for the relevant final good or service (King 2000, p. 10).

While useful, a literal interpretation of this definition would appear to include unsustainable and contestable natural monopolies. By amending fixed to sunk costs the test is narrowed to non-contestable facilities (Baumol et al. 1988, pp. 217ff).

Where there are large sunk costs (irreversible investments) and the existing network has sufficient capacity to meet the entire current and likely future demand in the relevant market, the high sunk costs act as a barrier to entry.¹⁵ In these circumstances, it is not likely in the current market that a second carrier would find it economic to duplicate the fixed network on a major scale. This situation appears to characterise much of Telstra’s fixed network, which would suggest a *prima facie* case for declaration of local loop services.¹⁶

¹⁴ See Albon, Hardin and Dee 1997, pp. 23ff and King 2000.

¹⁵ Many other industries in which there may be high sunk costs, such as steel making, fail the capacity test, and in these cases, do not have high barriers to entry. As noted by Baumol et al. (1988, p. 282), an entry barrier is anything that requires an expenditure by an entrant, but imposes no equivalent cost on the incumbent. Thus, in the global steel market, many steel plants are required to meet demand and a new plant could compete against existing plants on an equal footing.

¹⁶ The ACCC argued that the above sunk cost test was not a good basis for diagnosing natural monopoly for three reasons (sub. DR98, p. 12). First, it argued that the fact that King used fixed costs, not sunk costs meant that the test had a ‘dubious’ basis. However, the Commission has appropriately adapted the test (based on Baumol et al. 1988) so as to narrow its application to non-contestable facilities. Second, the ACCC claims that economies of scope, network economies and incumbency advantages also are indicators of natural monopoly. The Commission agrees that network effects are important as may be incumbency advantages, but whether they can properly be described as features of a natural monopoly technology is not clear (MacKie-Mason, for example, sees network effects as *demand side* natural monopoly). Furthermore, it is subadditivity not economies of scope (or scale) that are relevant — and it is the difficulty in confirming subadditivity that underlies the ‘rule of thumb’ approach. Finally the ACCC, claims that the test would appear to cover unsustainable and contestable monopoly technologies. This is

But this neglects other technological alternatives to the copper-wire loop and geographic variations in demand and capacity. Cable & Wireless Optus has constructed an HFC cable network, which has complementary telephony capacity, in much of metropolitan Australia (chapter 4). Since liberalisation, many small networks have sprung up in CBD markets where demand from business is very high. Mobile networks now span most of Australia. The existence of replicated origination and termination facilities suggests that the entire local loop is not a sustainable natural monopoly. In turn, this raises questions about what services should be declared, if any, in areas where a natural monopoly is not sustainable.

Given these rival facilities for call origination and termination, strict implementation of the Commission's Part IIIA natural monopoly test for telecommunications would require that all of Telstra's local loop elements in the relevant areas would be freed of standard access obligations. These elements are local carriage services (LCS or local call resale), the unconditioned local loop (the ULL or access to Telstra's copper wires), domestic PSTN originating and terminating access services (DPOTAS or access to Telstra's main exchanges) and local PSTN originating and terminating services (LPOTS or access to the local exchanges). The exemption would cover all metropolitan areas covered by Cable & Wireless Optus' HFC cable, and depending on the market definition, could encompass all parts of Australia covered by non-Telstra mobile networks.

However, such a broad exemption would risk driving out competing originating and terminating facilities because of network effects (chapter 2). Customers on any originating service value the ability to terminate on all other networks (any-to-any connectivity). The relative size of the subscriber bases, rather than the physical capacities of originating and terminating facilities, determines the strength of network effects. Because the number of subscribers to Cable & Wireless Optus' cable network is much lower than the number connected to Telstra's copper wire loop, Telstra could refuse interconnection accordingly, thus rendering Cable & Wireless Optus' network unattractive to subscribers.¹⁷ Thus network effects create barriers to entry even if the costs of the local loop are not strictly those of a sustainable natural monopoly.

not correct and is the reason *why* King's test was adapted. The test does have weaknesses (as indicated by the next paragraph), but they are not the ones outlined by the ACCC.

¹⁷ If interconnection were separately mandated, then the scope for strategic behaviour by Telstra would be substantially reduced. This is because while Telstra could influence the costs of the Cable & Wireless Optus network through high termination charges, Cable & Wireless Optus could also set higher termination charges in a tit for tat response. Indeed off-net calls are typically more important for such smaller networks, giving them good bargaining power. Price caps on Telstra's services would also weaken the capacity for this strategy.

Were Cable & Wireless Optus and Telstra to reach an agreement on access fees and terms outside declaration, the pricing behaviour of a telecommunications duopoly still may have adverse efficiency outcomes for carriers and CSPs connecting to them (for example, to transmission services). Although the pricing outcomes in duopolies are uncertain (Feinberg and Husted 1999), most theoretical and simulation findings suggests that duopoly pricing will tend to be nearly as inefficient as monopoly (for example, Wallner 1999), a view also argued by the ACCC (sub. DR98, p. 12). That said, the empirical evidence is less clearcut, partly because of the conflating presence of regulation:

- The experience with Australia's past airline duopoly casts doubt on the efficiency of duopoly.
- Frieden (1997, p. 2) claims that the FCC's initial decision to allocate 40MHz for only two cellular radio operators in any locality resulted in high prices in this service in the US. But Fullerton (1998) claims that duopoly did facilitate some competition, albeit that the degree to which it did so varied from region to region.
- Wolfram (1999) found that prices in the duopoly British electricity market were not as high as standard oligopoly models predicted. But much of this finding was due to regulation and the threat of entry, which reduce the relevance of this case for the issue at hand.

The presence of network effects, and reservations about the likely efficiency outcomes of duopoly *where substantial entry barriers still persist*, suggest that adoption of the Part IIIA natural monopoly test might preclude declaration of some key originating and terminating telecommunications services.

That said, this might not be true for all of the local loop elements or for telecommunications services that do not originate or terminate calls. The question of whether access obligations to particular local loop services should remain after the development of facilities competition has come into recent focus. The ACCC (2000h) released a discussion paper on Telstra's application for an exemption for standard access obligations for local carriage services (LCS or local call resale) in CBD areas. Telstra (2000c) has claimed that in CBD areas there are several relatively close substitutes to the LCS including:

- rival fibre and wireless facilities that could provide local calls;
- domestic PSTN originating and terminating access services; and
- the ULL.

Most carriers¹⁸ with an extensive interest in the provision of such facilities claim that local carriage services should continue to be declared in CBD areas, arguing that they need to bundle data services provided via their own facilities with local call resale of Telstra's local call services. They also argue that facilities replication is patchy and that barriers to entry remain at the micro level. For example, Macquarie Corporate Telecommunications (2000, p. 4) has argued it is not the traditional last mile, but a new 'last corridor' that is a bottleneck:

Issues related to building access, cost of fibre lead-ins and interference to radio and microwave systems are real constraints to genuine facilities competition to a large segment of the customer base in CBDs.

Accordingly, geographical proximity of a rival's facilities to that of the incumbent does not, by itself, necessarily provide substantial substitution possibilities. The relevant market may be an aggregation of many very small sub-markets — in some cases specific buildings. CBDs may thus have 'holes' of residual market power. Whether these are material enough to warrant their exclusion from an exemption, is, however, another matter. The *prima facie* case for exemption of access obligations to LCS in the dense areas of CBDs is strong. In September 2001, the ACCC made a draft decision to remove current access regulation on Telstra and other carriers supplying wholesale local calls in various CBD areas (ACCC 2001k).

The case for exemption may extend to the ULL and to LPOTS in some cases. On the other hand, the case for exemption from access obligations to DPOTAS in these areas is weak because of their vital role in the basic interconnection of networks.

In the case of telecommunications services that do not originate or terminate calls — such as inter-city transmission facilities used for the carriage of long distance calls — the case for regulatory forbearance with potential or actual facilities replication is even stronger than for LCS. This is because any-to-any connectivity issues do not arise for such services if DPOTAS remains declared. Thus, any new entrant that builds additional transmission facilities can compete effectively with incumbents. Moreover, the scale of resources required for the construction of transmission capability is much less than that associated with construction of local loops. As a result, the Commission supports the decision by the ACCC to remove the remaining inter-capital transmission routes from declaration (ACCC 2000p, 2001a,l). However, regulatory forbearance in 1998 (when these inter-capital routes were declared) is unlikely to have produced any different outcome and would have avoided the need to subsequently remove these services from declaration.

¹⁸ For example, PowerTel 2000, Macquarie Corporate Telecommunications 2000 and Cable & Wireless Optus 2000f.

Accordingly, the Part IIIA natural monopoly test on its own is not appropriate for originating and terminating telecommunications facilities. The case for adoption of the test is stronger for other telecommunications facilities where network effects are missing, such as transmission services.

Should other sources of market power be encompassed by the competition test?

There may be other circumstances in which a telecommunications incumbent may wield market power, while not being a strict natural monopoly or subject to network effects. Some firms will gain advantages for a certain period with a given technology, marketing plan or product, but imitators and new phases in innovation allow for other entrants to succeed. Unlike most other utilities, these effects are accentuated in telecommunications because product and technological innovation is rapid, while demand is increasing strongly (chapter 1). This special feature of telecommunications leads to conflicting policy pressures.

- There may be significant first-mover advantages. This would tend to advantage incumbents — not only because they own bottleneck facilities, but also because they have large customer bases and a greater capacity for bundling products. This would suggest that the scope for strategic use of market power could be greater in this industry than in some others — thus requiring that declaration be broader than in some other industries (such as rail).
- The rents from new ideas and products are the signature of market power — but also its nemesis — since they provide the incentives for future entry and innovation. Thus, incumbency advantages can sometimes be eroded by unanticipated technological or market developments. For example, large firms like IBM with apparent dominance in the computer market lost out to newcomers with the advent of the personal computer. In principle, the TPA recognises the importance of pure intellectual property by exempting it from access, but the Act does not cover other aspects of innovation. A danger of regulatory overreach is that it might curtail market power at the expense of innovation in telecommunications.¹⁹

¹⁹ On the other hand, insufficient regulation can also adversely affect innovation. For example, suppose that insufficient ability to finesse or enforce contracts provided an incumbent with an incentive to foreclose markets. In that case, rivals that might otherwise have incentives to invest in innovation in downstream markets of the bottleneck (for example, lower cost switching or new compression techniques) may not do so. In effect, by controlling access to the bottleneck, the incumbent can also control any returns to other investments made by rivals.

The risks of encompassing the latter behaviours can be largely avoided by only declaring in circumstances when the characteristics of the service lend themselves to *enduring* market power.

However, this still may overly increase the scope of the access regime because some individual access providers may not possess market power in the relevant service — which is examined next.

Which firms' services should be covered by access regimes?

Part XIC differs from telecommunications competition regulations in the European Union and the US, where only carriers with dominance or market power are subject to telecommunications-specific access regulations.²⁰ Oftel, the UK telecommunications regulator, has recently announced that it would only take regulatory action to impose new open access regulation if the operator of the infrastructure had market power in the relevant market (Oftel 2001).

Under Part XIC services are declared, rather than particular facilities or services of firms with market power. In many services, there are a number of providers. For example, mobile, analogue pay TV services, local call services, inter-capital city transmission and non-dominant PSTN services are provided by entrants as well as the incumbent. Having been declared, these entrants' services are subject to the processes under Part XIC. In some cases — as in inter-capital city transmission, there have been no arbitrations. However, of the 43 Part XIC arbitration disputes notified to late August 2001, 6 involved Telstra as the access seeker and 6 did not involve Telstra at all. Consequently, around 25 per cent of arbitrations have involved disputes about entrants' services. As Cable & Wireless Optus observes, the disputes have sometimes been trivial in nature (sub. 8, p. 103).²¹

It might be questioned whether these rivals possessed any significant enduring market power. Cable & Wireless Optus argued:

²⁰ As noted by Henderson 1998; Cable & Wireless Optus (sub. 8, pp. 102–3), Cave (sub. 25, p. 14) and Boylaud and Nicoletti (2000, p. 31). The latter observe that only 4 of 22 OECD countries regulate all fixed network operators, 8 regulate only the dominant operator, 5 regulate only the public telecommunications operator and 5 do not regulate at all.

²¹ Cable & Wireless Optus claimed that: 'in one dispute, the ACCC arbitrated over a total sum in dispute between the carriers of \$12 per month! Notwithstanding the competitive triviality of the issue, the ACCC held a three hour hearing on the matter, and issued multiple papers requesting detailed submissions from the parties and large amounts of information'. Of the six disputes that took place between non-Telstra parties, five were resolved by the withdrawal of the dispute and one was still awaiting any determination (by late August 2001).

The ACCC's declaration decisions have included Telstra's network where it has substantial market power, and have also been inappropriately extended to new entrant networks where there is no market power. For example, under the ACCC's Local Call Resale (LCR) declaration, Cable & Wireless Optus and all other carriers rolling-out facilities are required to supply LCR services to competitors. This is notwithstanding Cable & Wireless Optus has less than 5% market share and no market power (sub. 8, p. 102).

If certain providers possess no sustainable market power, then arguably Part XIC declaration criteria should be changed so that they are freed of access obligations. This would represent a narrowing in the scope of the legislation, which would free some carriers from the costs of seeking exemptions and reduce the risks of regulated access pricing. This would tend to encourage greater investment by entrants — assisting effective competition. Such a change would imply that the brunt of declaration would fall on Telstra as the major incumbent.

However, there are dangers from some forms of asymmetric regulation of the incumbent and non-dominant market participants.

First, as AAPT noted, any-to-any connectivity may be threatened if some carriers do not agree to interconnection and there are no effective transit arrangements that can be obtained through the incumbent (sub. 41, p. 13).²² To the extent that network effects exercised by existing non-dominant carriers create persistent entry barriers for new entrants, then the wholesale immunity for non-dominant carriers from declaration may be unwarranted. However, as Vodafone has noted for the mobile market:

Mobile operators have commercially agreed access charges that have not seen foreclosure of smaller networks. In some cases this has involved declared services, in other cases it has not (access to CDMA networks) (sub. DR70, p. 7).

Second, the application of asymmetric access regulations and the existence of retail price controls may also sometimes *create* market power, as in the potential for non-dominant networks to exert large market power over terminating charges levied on the incumbent (chapter 2). This provides a rationale for the current inclusion of the declared services of non-dominant carriers and CSPs supplying terminating services within the access regime, and the use of arbitration to solve the problem. Telstra is reported to have lost about \$150 million a year from the problem (Bryan 2001), which casts some doubt on the effectiveness of the current arrangements. That said, some disputes have been resolved under access arbitrations and/or ACCC

²² It might be thought that a larger (non-dominant) carrier could also exploit network effects by setting high access prices for smaller competitors. However, as Vodafone (sub. DR70, p. 6) notes, if calling patterns by customers on both networks are roughly balanced, such a strategy does not favour the larger network.

involvement.²³ Eliminating the capacity for their resolution could lead to serious losses for the incumbent as well as the inappropriate use of the PSTN for long-duration data calls. However, there are other ways in which the problem could be resolved, based on removing the regulatory barriers to the exploitation of reciprocal bargaining power by the originating carrier or CSP:

- Retail price controls could be removed. However, unlike the access deficit which can be eliminated by re-balancing the usage and fixed components of local call charges, the terminating market power problem arises because of the untimed nature of local call charges (chapter 2). De-regulating untimed calls would have far bigger and broader consequences.
- There could be provisions in Part XIC or Part XIB that recognise this unique problem. Where, as a result of the access regime itself, a non-dominant network sets an ‘unreasonable’²⁴ terminating charge: (a) under part XIC, the incumbent could refuse interconnection to the relevant terminating carrier/CSP; (b) under Part XIC, the incumbent could charge a fee to the terminating party for terminating on that party’s network, with that fee subject to arbitration by the ACCC;²⁵ or (c) under Part XIB, the ACCC could be required to provide an exemption from action under the Part. Of these options, the Commission favours (b), since it allows for the setting of a reasonable terminating price that takes account of the specific circumstances of the two networks. The mere existence of these provisions is likely to provide the reciprocal market power for the incumbent to negotiate commercially with the non-dominant network.

The Commission considers that non-dominant networks should not be subject to declaration, but *only* so long as excessive terminating charges by non-dominant networks can be resolved through other policy measures.²⁶

²³ For example, the Telstra/COMindico dispute has been resolved commercially, against the background and pressures of the telecommunications regulatory regime (*Exchange* 6 July 2001, pp. 3–4).

²⁴ The definition of ‘unreasonable’ would have to take account of the large direct financial losses to the incumbent from being forced to connect with a network when there are unbalanced originating and terminating access charges.

²⁵ In Australia and many (but not all) other countries, the convention has been to make the caller accountable for costs, but not the receiver. However, by making the receiver at least partly accountable in this way, the problem of terminating market power is resolved (Laffont and Tirole 2000, p. 213). Such an arrangement would probably lead to the negotiation of ‘bill and keep’ arrangements, in which each network terminates without charge traffic originating from the other party.

²⁶ However, there are other areas where symmetric regulation may be appropriate — such as number portability and pre-selection. The Commission discusses the advantages and disadvantages of asymmetric pre-selection in chapter 15.

The Commission recommends that Part XIC should be amended so that where a non-dominant network sets an ‘unreasonable’ terminating charge, the provider of a declared service can charge a fee to the terminating party for terminating on that party’s network, with that fee subject to arbitration by the ACCC.

The Government could also signal that if non-dominant carriers find a way of gaming the immunity from declaration, then re-regulation would be a likely option.

Health, safety and the public benefit

There are several other tests that are used in Part IIIA for determining declaration (a health and safety test and a public benefit test). In most cases, such tests would have little bearing on declaration. There are no obvious differences between telecommunications and other industries that would provide an argument for not also applying these tests.²⁷

9.5 New declaration criteria

The Commission considers that the existing declaration criteria are overly vague and wide in scope. Excessive discretion risks encompassing services that should not be declared. This was a view echoed by some participants. For example, Cable & Wireless Optus said:

... the vagueness and the wide discretion afforded the regulator in the declaration test may have contributed to the excessive reach of the access regime (sub. DR72, p. 22).

This suggests the need for revised criteria. In developing new declaration criteria the Commission considers they should:

- promote overall economic efficiency;
- be targeted to those providers and services where the problems are clearly diagnosed;
- limit ambiguity;
- provide a balance between direction to and discretion by the regulator;

²⁷ C7 (sub. DR107, p. 3) strongly opposed the inclusion of Part IIIA’s ‘not in the public interest’ test, seeing its reversed onus of proof as lacking sense. However, the main purpose of this test is not to deal with the consumer benefits associated with declaration, but with some other adverse effects that might sometimes arise — such as environmental and security concerns (Hole et al. 1998).

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- ensure consistency between any criteria and the overall objects clause;
 - only diverge from a generic set of declaration criteria under Part IIIA if there is some significant qualitative difference between the telecommunications industry and other bottleneck facilities that justifies a different set of criteria. This allows for experimentation, but eliminates gratuitous differences in access regimes; and
 - require a high burden of proof that declaration will enhance overall economic efficiency. The high burden of proof is warranted because declaration invokes costly procedures associated with arbitration (as witnessed by GSM arbitrations) and exposes declared services to regulated pricing and regulatory risk. Declaring facilities that should have been left unregulated is not a low cost outcome relative to failing to declare facilities that should have been regulated. For example as Telstra argues:

... the reality is that declaration alters industry dynamics, as it changes market participants' perceptions of the choices and instruments open to them ... A regime that allows declaration to proceed **before** there is compelling evidence of market failure risks preventing markets from ever being allowed the time they need to do their work (sub. 38, p. 13).

The draft report proposals

In the draft report, the Commission advocated a hybrid natural monopoly/ network effects test that could allow declaration for originating and terminating services if there were substantial barriers to entry arising from networks effects or large sunk costs (box 9.3).

For other telecommunications services, the Commission proposed a natural monopoly test identical to that proposed for Part IIIA. These tests explicitly excluded other sources of market power — and so would not penalise the short term rents that motivate innovation. As well as these tests, the Commission also proposed other tests (encompassing significance, public benefit, efficiency and market power) that were identical to those proposed in the parallel inquiry into Part IIIA. The Commission also recommended that declaration should apply to all access providers of a declared service, even if they did not possess market power prior to declaration.

Many participants²⁸ were broadly sympathetic to a narrowing of the declaration criteria, though sometimes seeking modifications or elaborations:

²⁸ Ericsson sub. DR86, p. 3; Telstra sub. DR71, p. 19; Consumers' Telecommunications Network sub. DR76, p. 3; SPAN sub. DR78, p. 1; IPA sub. DR68, p. 6; Legg sub. DR85, p. 2; Cable & Wireless Optus sub. DR72, p. 22 and sub. DR95, pp. 34ff; Macquarie Corporate Telecommunications sub. DR97, p. 3; and Vodafone sub. DR70, pp. 12–13.

- Telstra (sub. DR71, p. 19) indicated several ambiguities with ‘economically feasible’ (test (a)(2)), reasonableness (test (b)), and ‘improve economic efficiency significantly’ (test (d)), suggesting that a minimalist approach to modifications to established Part IIIA criteria was warranted.
- Cable & Wireless Optus (sub. DR95, pp. 37–8) expressed concern that tests (b), (c), (d) and the national significance requirement were excessively stringent for application to originating and terminating services — and would risk declaration of the ULL and LCS. They recommended a substantial market power test as a substitute. Cable & Wireless Optus also considered that test (c) should be completely abandoned for all services — and gave some examples of its limitations.
- Vodafone (sub. DR70, pp. 11–12) considered that the criteria should apply to facilities, not services.

Box 9.3 The Commission’s draft report declaration criteria

For a telecommunications service to be declared it must meet all of the following criteria:

- (a) the telecommunications service is of significance to the national economy and
 - 1) for a service used for originating and terminating calls, there are substantial entry barriers to new entrants arising from network effects or large sunk costs; or
 - 2) for a service not used for originating and terminating calls, entry to the market of a second provider of the service would not be economically feasible;
- (b) no substitute service is available under reasonable conditions that could be used by an access seeker;
- (c) competition in downstream markets is insufficient to prevent the provider of the service from exercising substantial market power;
- (d) addressing the denial of access, or the terms and conditions of access, to the service concerned is likely to improve economic efficiency significantly; and
- (e) access (or increased access) to the service would not be contrary to the public interest.

Source: Productivity Commission 2001e, p. 8.24.

However, some participants were generally opposed to the proposed criteria (ATUG sub. DR69, p. 11; PowerTel sub. DR102, pp. 7–8; AAPT sub. DR100, pp. 19ff; C7 sub. DR107, pp. 1–3). A consistent concern was that the proposed national significance test might risk non-declaration of some regional services or a key

network element needed for any-to-any connectivity.²⁹ It was also argued that the new declaration criteria would make the requirements for declaration more onerous, that revocation mechanisms provided a safety valve against over-regulation and that the new criteria would lead to gaming and confusion. The ACCC (sub. DR98, p. 10ff) also expressed a range of specific concerns about the new criteria (box 9.4). The Commission also received much useful feedback on appropriate declaration criteria from a wide range of participants to the parallel inquiry into Part IIIA (Productivity Commission 2001c).

New criteria

On the basis of this feedback and the analysis in section 9.4, the Commission has developed a new set of declaration criteria for Part XIC. These reflect the Commission's view that only core services that pass exacting tests should be declared. Accordingly, the centrepiece of the new proposal is the strict application of competition and market power tests.

In particular, the Commission considers that the competition criterion is the key test for declaration, but that its application should be appropriately narrowed to circumstances where the market power of a service provided by a particular carrier or CSP is substantial and enduring. This allows network effects, natural monopoly, other lasting incumbency advantages or any matter that leads to enduring and substantial market power to be considered in declaring a service.³⁰ It would disregard matters where the carrier or CSP would not exercise market power or that were only likely to lead to transitory or trivial market power.

The competition test can also take into account the possibility of consumption or production side substitution. The competition test would also mean that a service would not be declared, even where there was market power, if effective competition was not the likely outcome. For example, if a service had capacity constraints, there might be market power, but declaration would make no difference to competition (or efficiency).

²⁹ Cable & Wireless Optus (sub. DR72, p. 27) expressed a related concern, suggesting that the ULL would not pass the national significance test due to its prospective nature. However, national significance can take account of the future. Notably, unbundling is seen as an important national objective in the EU and the US.

³⁰ In the Part IIIA inquiry, the term substantial has also been adopted, but not the term enduring. The reason for the difference is that the Part IIIA criteria narrow the application of the competition test through the addition of a natural monopoly test. As explained previously, a natural monopoly test is too narrowing in a telecommunications context, hence the application of the 'enduring' requirement.

Box 9.4 **Analysing the ACCC's response to the proposed draft report declaration criteria**

The ACCC (sub. DR98, pp. 10ff) made six key points, of which the Commission fully agrees with the first three. First, it argued that conduct arising from network effects that should be addressed will not always lead to substantial barriers to entry or competitive effects in the service potentially subject to declaration. For example, the ability of a non-dominant terminating service to exploit local market power through network effects may actually facilitate further entry. Similarly, network effects might lead to competitive impacts in a service other than the service subject to declaration (as in the *possible* case of high terminating charges set by mobile networks for fixed to mobile calls).

Second, it claimed that there could be cases where duopoly provision of non-originating and terminating services might maintain significant market power. The use of a natural monopoly test would preclude declaration in these circumstances.

Third, it pointed out that the national significance test (the *significance* of the service to the national economy) overlaps with the requirement to improve economic efficiency *significantly*, which itself overlaps with the proposed new objects clause.

Fourth, it suggested that the 'second provider' test might mean that a service would not be declared if there was a second provider in partial geographic areas of the market. The Commission agrees with the ACCC that it is important to define services on a geographical basis to exclude areas where facilities-based competition exists (as was done in the declaration of inter-city transmission services). However, the Commission considers that the proposed test probably takes account of facilities competition more explicitly than the current criteria.

Fifth, it argued that where production or consumption substitutes prevents a service provider from exercising market power, it is unlikely that the first criterion will be satisfied. This suggests that criteria (b) and (c) in box 9.3 are superfluous. The Commission acknowledges that this is true if services and markets are given a wide enough interpretation. However, the additional criteria remove ambiguity. To use King's (2000) non-telecommunications example, there might well be barriers to entry to a rail network for bulk wheat transport, which would compel declaration if rail transport was interpreted as the service (even though there might be a road running next to the rail or a requirement that wheat be sold in competitive world markets).

Finally, it claimed that assessing 'reasonable' conditions and economic efficiency under parts (b) and (d) of the criteria would require estimating the efficient costs of production and determining pricing as part of the declaration process. The ACCC considers this might lead to significant delays in the declaration process. However, the Commission notes that any subsequent arbitration must determine pricing principles and establish a benchmark by which to gauge reasonableness. If an indicative pricing methodology and reasonable test is done (once) under declaration then this avoids replicating them in subsequent arbitrations (so that arbitration takes correspondingly less time), provides greater transparency to participants about pricing principles and enables the regulator to better assess whether declaration is likely to promote economic efficiency (or the LTIE). For example, if GSM had been subject to these pricing/reasonableness tests as part of a declaration process, then (to the extent the service would have been declared at all), it would have prompted a tighter definition of declared services (fixed to mobile termination). It would have clarified the pricing rule. It is doubtful that any of the nine GSM disputes notified under the current arrangements would have proceeded.

The ACCC examined whether the application of the new criteria to actual services would have had led to declaration (sub. DR98, pp. 15ff). Its view was that domestic PSTN originating and terminating services would have been declared, GSM would not have and ULL may or may not have, depending on whether wholesale ADSL services were available on reasonable terms of conditions. The Commission considers that this diagnosis is correct, but also that these are likely to have been desirable outcomes.

Although the Commission has not conducted inquiries into specific services, application of the new tighter tests would probably have the desirable outcome that GSM, analogue pay TV, CDMA and intercity transmission would not be able to be declared — because of either the absence of substantial and enduring market power or the capacity of declaration to effectively increase competition.³¹

The new criteria also introduce a national significance test similar to that in Part IIIA. However, it is based on the ‘service’ not the ‘facility’, removes size per se as a relevant criterion and includes (b)(i) to deal with similar services that are nationally significant in aggregate, but are not so individually. It would be particularly troubling to exclude such geographically disparate services in an industry where any-to-any connectivity is a valuable trait. The proposed national significance test does not make a reference to the ‘importance of the service to constitutional trade or commerce’ (s. 44G2(c)(ii) of Part IIIA), since this is primarily a concern of state-based access regimes with interstate commerce effects.

In other respects, the new criteria are the same as the existing Part IIIA criteria — consistent with the Commission’s objective of like treatment of like regulatory matters.

RECOMMENDATION 9.3

The Commission recommends the adoption of stringent new declaration criteria, crafted to achieve the following intention:

The ACCC may not declare the telecommunications service of a carrier or carriage service provider unless it is satisfied of all of the following matters:

- (a) that access (or increased access) to the service would promote a substantial increase in competition in at least one telecommunications service;***
- (b) that there is enduring market power in the service;***
- (c) that the service is of national significance, having regard to:***
 - (i) the consideration that provision of a similar service in a number of smaller areas can be jointly described as a ‘service’;***
 - (ii) the importance of the service to the national economy;***
- (d) that access to the service can be provided without undue risk to human health or safety; and***

³¹ For example, there are capacity constraints that may frustrate access to analogue pay TV services even though it is a declared service (C7 sub. DR107, p. 4).

(e) that access (or increased access) to the service would not be contrary to the public interest.

The Commission also considers that a section like s. 152AB(4) be included to clarify the matters relevant to appraising competition and market power (box 9.5).

RECOMMENDATION 9.4

The Commission recommends that s. 152AB(4) in Part XIC be amended to provide more explicit guidance to the ACCC to the matters to which it should have regard when making an assessment of competition and market power in a declaration inquiry.

The Commission emphasises that the key message in the recommendations for new declaration criteria is not in the exact words, but rather in the need to provide greater statutory guidance about the circumstances where declaration is warranted. The hurdle should be higher (substantial and enduring), the services or facilities should be significant (the national significance test), declaration should only apply to access providers with substantial market power, and there should be closer affinity between Part IIIA and Part XIC unless differences are justified.

Regulatory interaction and sequencing issues associated with applying declaration criteria

Under Part XIC, judgment about each declaration is made on a counterfactual basis — comparing the hypothetical outcomes from declaration alone, with not declaring. However, it may be that the judgment about declaration depends on whether other declarations have already proceeded or on what other interventions are (or could be) in place. Consistent with the Commission’s view that declarations should be limited and focused, this then raises the issue of the appropriate sequencing of declarations and other interventions that could lead to a better outcome. For example:

- There may be a superior way of achieving the objective of declaration. This might include removing regulatory barriers to competition. Broadcasting regulations have implications for the feasibility of cable-TV networks as competitors with the local loop (chapter 17).
- While there might be a good prima facie case for declaration of a particular service, this might be insufficient to promote competition, with auxiliary measures needed (such as additions to the standard access obligations, the numbering plan or some aspect of the Telecommunications Act).

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- The grounds for declaration of service A may be stronger (or weaker) if it is preceded by declaration of service B. For example, the case for declaring local carriage is stronger before declaration of the local PSTN.

Box 9.5 Possible elaborations of the tests

The Commission suggests that an option would be to clarify the matters that would be relevant to appraising the competition and market power test in a more elaborate version of the present s. 152AB(4). For example, it might read:

Promoting competition and assessing market power

- (2) In determining the extent to which the condition in paragraph (1)(a) is met, regard must be had to whether a substitute service is available at reasonable terms for access seekers or end users;
- (3) In determining the extent to which the condition in paragraph (1)(b) is met, regard must be had to:
 - (i) the ability of a facility owner to acquire enduring market power by refusing any-to-any connectivity;
 - (ii) the existence of high sunk costs or other enduring obstacles to entry by potential competitors into the market for the relevant services;
 - (iii) the potential for new technologies or innovation to erode market power without declaration.

Subsections (2) and (3) do not limit matters to which regard may be had.

There are several options for dealing with these problems. One option is to allow the ACCC some flexibility in both requesting the Government to make other regulatory changes and the capacity to initiate the declaration process (as it currently does under s. 152AM(2)), so as to control sequencing. Revocation of declarations — rendered obsolete by subsequent declarations — may be an important part of such a regulatory process.

Another option, specifically for cases where existing regulations are the source of the problem that leads to market power, is to encourage the Government to deal more forcefully with these regulations directly, rather than circumscribing them through another set of regulations. One method of achieving this would be for the ACCC only to declare a service when the Government had provided formal notice that it would not reform the offending regulations that led to market power.

9.6 Maintaining incentives for investment

A key policy concern is that Australia has appropriate investment in telecommunications facilities — reflecting the increasing importance of broadband and other telecommunications services to the future growth of the Australian economy and our standard of living (chapter 1).

Accordingly, it is important to ensure that the access regime does not overly weaken the incentives for access providers to invest in core infrastructure. In part, this could be achieved through appropriate declaration criteria, as discussed earlier, and appropriate access prices, as discussed in chapter 11. In particular, the Commission has suggested that access prices must take account of regulatory uncertainty and the scope for error and has proposed some means of addressing aspects of these problems in practical pricing guidelines (chapter 11).

However, another approach to encourage incentives for investment is to quarantine, partially or fully, certain categories of investments from the obligations of the access regime *prior* to the investment being made. Such an immunity would provide a potential facility investor with greater certainty that it would be able to recover its investment costs.

There are two types of investments where such immunisation might be considered:

- investments that would not meet the declaration criteria and therefore should not be declared because there is weak potential for ex post abuse of market power (for example, they are not natural monopoly technologies); and
- investments that any number of players might be able to make ex ante (that is ex ante contestable), but which once made are ex post non-contestable (for example, a natural monopoly).

Different policy instruments can be used for each type of investment.

Binding rulings

While investments that are ex post contestable would be unlikely to be declared, an investor may wish to secure certainty by obtaining a ruling that this is the case ahead of any future possible declaration inquiry. Immunisation would take the form of a binding ruling — similar to those issued by the Australian Tax Office — that the investment (and associated services) would be free from the subsequent risk of declaration.

Currently, Part XIC has the scope for exemptions under s. 152AS and AT and for undertakings by access providers under s. 152BS to s. 152CD.³² The ACCC argues that exemptions, in particular, may reduce investment risk (ACCC 1999b, pp. 65ff). However, the existing arrangements cannot adequately address the concerns of an investor trying to reduce risk *prior* to making an investment in a new service because:

- exemptions and undertakings in Part XIC apply only after declaration; and
- declaration can only occur for an existing service.

Accordingly, exemptions are not an adequate substitute for binding rulings about whether the declaration criteria are met.

A binding ruling that a service does not meet the criteria would apply in perpetuity, unless there was a material change in circumstances that meant the service would meet the declaration criteria. Any such change would have to be demonstrated by the ACCC. Any resulting revocation should be appealable so as to ensure care in revocation decisions. It also would be appropriate to have an appeal process for an telecommunications infrastructure provider against a ruling of the ACCC.

RECOMMENDATION 9.5

The Commission recommends that there be scope in Part XIC for the ACCC to issue a binding ruling that the services provided by a prospective investment would not meet the declaration criteria. In that instance, the services concerned would be exempt from declaration.

A telecommunications infrastructure provider should have rights of appeal to the Australian Competition Tribunal against a determination of the ACCC.

A ruling should apply in perpetuity unless the ACCC could demonstrate that circumstances had materially changed. Such revocation should be appealable to the Australian Competition Tribunal.

It may also be appropriate for the ACCC to have a time limit for evaluating requests for such rulings.

³² The ACCC has also indicated that it is reluctant to apply cost-based pricing principles to services provided by entrants (such as non-dominant PSTN termination) or to workably competitive, but declared services, such as GSM. This reduces regulatory risk associated with some categories of investment. However, it is still the case that firms may not know the pricing principles to be adopted prior to making their investment. Moreover, as Henderson (1998) notes, any arbitration dispute that arose is appealable to the ACT, which may not follow the ACCC's judgment concerning non-cost-based pricing rules.

Access ‘holidays’ and other arrangements for protecting investments

A number of commentators have argued that facility providers investing in new facilities that ex post may not be contestable should be given a period when they are immunised from potential declaration under XIC and IIIA (box 9.6). The major argument for this is that regulated access reduces the ex ante assessment of returns from risky investments, and that an access ‘holiday’, like a patent, protects entrepreneurial returns that justify the investment in the first place. Of course, whether in fact specific investments — such as digitisation of the HFC network — should be subject to an access holiday is beyond the scope of this report.³³

Box 9.6 **The effect of declaration on investment: participants’ views**

News, as one of three FOXTEL shareholders, is currently considering whether to make an investment in digital subscription television broadcast carriage services, by cable (digital pay TV services). The discussion amongst the FOXTEL shareholders has proceeded on the assumption that the investment will be made in an environment in which access may need to be provided to digital pay TV carriage services. However, the uncertainty which is inherent in the processes makes it difficult, at best, and impossible, at worst, for News to predict the terms and conditions of access and the financial and business consequences thereof. Consequently, the likelihood of further investments decreases (News Ltd sub. DR105, p. 2).

In relation to access to infrastructure for the provision of specific services, Austar believes that it is only fair that parties who invest the time, money and other resources in rolling out networks should be given a window of ‘opportunity’ of a period of time for their sole use if they so elect for a period commensurate with the cost of rollout and development of the technology of those networks — meaning years, not weeks or months. Otherwise there is no incentive for developing these systems, particularly if the terms of access can be on terms that would not fairly compensate for incurring the risk involved in being the ‘first mover’, over and above the capital investment and the need for an actual return on that investment (Austar sub. 19, p. 2).

Investment in marginal markets is deterred by the prospect of future declaration or the required access under an existing declaration. Carriers that recognise the potential of marginal markets should be given adequate protection of what might be slender profits to maintain their interest in investing in that area (Northern Territory Government sub. 22, p. 10).

King (2000, p. 12–13) argues that where risky investments are subject to ‘regulatory taking’ that is anticipated, this may render the investment uneconomic. This is likely to be particularly salient to telecommunications where technologies are

³³ For example, C7 (sub. DR107, pp. 10–11) argued strongly against such a proposal — and their arguments would have to be considered in permitting any immunity from access provisions.

rapidly evolving and risk is high, as witnessed by the fate of Iridium satellite phones and the failure of Australian pay TV services to earn a net profit to date.

For example, King explores the case of a cable TV provider that is considering investing in a regional town. The investment costs \$51 million, and, if immune from access, returns \$100 million if pay TV is very successful, \$60 million if moderately successful and only \$20 million if unsuccessful. Suppose that the probabilities of each outcome are 25 per cent, 50 per cent and 25 per cent respectively, so that the expected return is \$9 million after having funded the investment.³⁴ Say, however, that the facility is not immune to access, and that the investor can anticipate that if the venture is very successful, an access seeker will try to benefit from the apparent 'super' returns and enforce access under Part XIC. Suppose that the maximum return drops from \$100 million to \$60 million. This would still leaving the access provider with a \$9 million ex post return in those situations where the investment was very successful. However, ex ante, the expected return with enforced access is a loss of one million dollars³⁵ — so that the investment would not proceed, although it would have had the regulator not expropriated the high returns when they occurred. This is the problem of regulatory truncation of returns.

The ACCC contended that the 'correct application of the [ACCC's] pricing principles should ensure that the access provider receives a normal commercial return' (ACCC 1999b, p. 65), a position it reiterated in this inquiry (sub. DR. 98, p. 2). However, Cooper and Currie (1999, p. 31) show that the adjustments to the cost of capital required to deal with the truncation problem are far from easy.

In principle, the correct way to deal with this problem is to adjust the expected cash flows by the impact of the asymmetric clawback provision. In practice it is unlikely to be easy to make the necessary adjustment in this way as it would involve estimating the probabilities of events about which, by their nature, the regulator must be uncertain. In reality, therefore, the adjustment is likely to take place by an *ad hoc* adjustment to the cost of capital that evolves over time with experience. The key thing to note, however, is that the size of this adjustment is potentially large if the clawback provision is draconian.

The fundamental problem stems from the difficulty that regulators have in distinguishing the ex post rewards for risky investments from monopoly rents, when just such a distinction is needed to achieve the required ex ante return for the investor. It is the fact that investors know the fallibility of regulators *before* they make their investments that can be the source of inefficiency. For projects that are

³⁴ That is: $(0.25 \times 100 + 0.5 \times 60 + 0.25 \times 20) - 51 = 9$.

³⁵ That is: $(0.25 \times 60 + 0.5 \times 60 + 0.25 \times 20) - 51 = -1$.

ex ante marginal — for example, because they are contestable³⁶ at the time they are made — the truncation problem can mean that the investment does not proceed or is delayed.³⁷

The policy dilemma is to develop mechanisms for dealing with investments that are made sub-marginal through regulatory truncation. At least partial exemption from access arrangements given prior to such risky investments increases certainty and reduces the truncation problem.

The companion inquiry into the general access regime (Productivity Commission 2001c) examines the policy options and issues in detail. Here, the view of participants in this inquiry are discussed, as are possible options — from a telecommunications perspective.

Access holidays

In the draft report the Commission floated the option of a particular mechanism for protecting such investments — an access ‘holiday’. Such a ‘holiday’ would exempt the investment from any access requirements for a period of time, just as in a patent. However, it would not normally last for the full life of the investment. There may need to be some scope for the regulator to declare the service after the holiday period, if the carrier concerned has developed substantial market power.

Given rapid technological and market change, the period of protection for telecommunications should be less than for some other utilities, such as electricity and gas. Even so, protection could extend for a significant period. As Telstra noted:

³⁶ If investment is delayed so that higher returns can be obtained in subsequent years, then other potential investors may enter earlier, forcing investment to be made at the time that it is just marginal.

³⁷ In some cases, the impact may be to delay rather than stop an investment. Analysing the impacts of access regimes and pricing on investment timing and associated aggregate welfare is complex. One of the costs of monopoly is that resources may be expended by parties competing to capture rents. Just as rent-seeking costs, such as lobbying, reflect real economic welfare losses, so too can premature investment in cases where the first builder wins a monopoly. This may sometimes be relevant in considering the design of access holiday arrangements, which may facilitate inefficiently early investment. Gans and Williams (1999) have examined the potential benefits that an access regime may have in creating incentives for socially optimal timing decisions that cannot be achieved in the absence of regulation. Guthrie, Small and Wright (2000) investigate how different asset valuation approaches in an access regime affect investment timing and welfare. The proposals by Telstra (sub. DR101, pp. 56ff) cap returns on projects covered by the access ‘holiday’ arrangements, and should therefore reduce the risk of inefficient pull-forward where it arises.

... time-limited access holidays would typically apply during the early, loss-making period of a new asset's life, offering little benefit when the investment is proved and access seekers want to share in the success of the venture (sub. DR101, p. 57).

Sometimes, however, new investments are not *ex ante* contestable. This would occur for example, if the capacity to undertake the investment depends on some capability peculiar to a particular carrier. The case for granting an access holiday for new investments is weak in this case.

Participants in the inquiry were divided about the value of such immunity provisions (box 9.7). The ACCC (sub. 98, pp. 17ff), in particular, was sceptical about the desirability of access holidays, arguing for a presumption in favour of an access regime when there is *ex post* market power. The ACCC considered that forgoing this regulatory presumption might risk:

- imposing a monopoly for a given period, consequently reducing the expected benefits of intervention;
- insulating a facility from mandated access during precisely those (early) years when competing facilities and services were likely to be in their infancy — thus accentuating its bottleneck market power; and
- that it would provide first-mover advantages that could create long-term market power, even after the cessation of the holiday.

The Commission agrees that all of these arguments have some validity³⁸ — but also notes that they could all be advanced as an argument for relinquishing patents. However, as in the somewhat analogous patent debate, it is also recognised that the incentive to invest and innovate in risky activities are important to economic growth (Legg sub. DR85). Accordingly, the ACCC's critique of access holidays has to be balanced by the dynamic efficiencies arising from innovation and risky investment that may be put at risk by fallible regulators — an issue that gains particular prominence in fast moving, risky and innovative telecommunications markets.

Moreover, access holidays do not only have to take the form of complete immunity for a fixed time period. Telstra (sub. DR101, pp. 57ff) provided a number of other options for giving investors some *ex ante* certainty, but which also moderate any *ex post* market power.

³⁸ Some of the arguments put by the ACCC are more questionable. For example, it likened access holidays to infant industry protection, where the government provides regulatory barriers to entry by others. However, access holidays do not provide protection from market competition by other facility providers — if it emerges in the market place — but from regulators that might *ex post* seek to appropriate the upside in a risky investment.

Box 9.7 Views about access holidays

The introduction of ‘access holidays’ could be contentious, particularly if the service/facility subject to the holiday became a bottleneck in competitors’ development of different but related services and facilities. This would have to be provided for (SPAN sub. DR78, p. 2).

Telstra therefore believes that the Commission is correct to focus its attention [on contestable investments] — the type of project that would be covered by an access holiday under these rules would not be one that afforded the owner any expectation of earning returns in excess of the cost of capital (Telstra sub. DR101, p. 56).

We believe that access holidays would need to be carefully specified, given their arbitrary nature and potential for amendment or withdrawal in the political processes ... If access holidays were to be adopted as a part of policy they would need to be expressed in the form of contracts with compensation clauses so that companies could make long term investment decisions that factored in a firm set of rights to the proceeds of their enterprise...The length of the holiday would be determined by the size of the investment, the risks involved compared to the expected profit over time (IPA sub. DR68, pp. 5–6).

A number of other modifications to the existing regime that are suggested in the Draft Report will improve its efficiency and should be adopted. These include the introduction of ‘access holidays’ ... (Austar sub. DR79, p. 2).

AAPT considers that the existing provision for an exemption is a useful method of providing an “access holiday”. It is surprised that operators such as CWO who appear to seek access holidays, have not made use of this provision and applied for them. (sub. DR100, p. 37).

... [subject to a qualification] access holidays are sensible. Guidelines should indicate that, under most circumstances, the ACCC would expect to grant an access holiday in respect of investments made by non-dominant operators (PowerTel sub. DR102, p. 15).

Vodafone does not consider that Access Holidays would be beneficial, nor that they are necessary under the PC’s proposed new declaration criteria (sub. DR70, p. 16).

Optus supports the granting of access holidays for prospective marginal investments and/or where the investment opportunity is contestable. In such instances competition over the investment opportunity is the appropriate means to regulate prospective commercial returns ... Our experience has been that the access regime has, without economic basis, extended to ex-post-successful investments. It has even been applied to where there is competition and returns are not high — for example, analogue cable TV delivery. In this industry capital investment requirements are high, and as the financial results of all pay-TV carriers demonstrate, returns are negative even in accounting terms, let alone economic terms ... Mobiles was ex-ante contestable, therefore the ex-ante expected returns are normal. Nevertheless the ACCC has been conducting a two-year inquiry into whether to price regulate mobile interconnection charges, notwithstanding the total returns earned by mobile operators are, at best, normal (sub. DR72, pp. 22ff).

For example, in one option, the regulator and the firm would agree on the relevant cost of capital for the project and the share of the profit the firm would be able to keep after (or if) the project becomes net present value positive. This option is analogous to the Petroleum Resource Rent Tax. The access holiday length is then determined by the period until the NPV of the project reaches zero, with no

regulation until that point. The fact that the firm is able to keep some of the ‘blue-sky’ returns partially deals with the truncation problem, while the residual claims of the regulator on behalf of end-users partially deals with ex post market power. On the other hand, administering such a scheme for a vertically integrated firm whose cash flows stem from many sources may be difficult and could be gamed by the access provider. The parallel inquiry into the general access regime raises a number of other options (Productivity Commission 2001c).

The ACCC has also pointed to some other practical implementation issues. In particular, potential investors may not be willing to submit to a public process similar to an undertaking in Part IIIA. However, the alternative, private determinations, might not have the necessary level of transparency and consultation. The Commission agrees that these are pertinent matters, but how serious they are depends on the nature of the immunity arrangements in place. For example, Telstra (sub. DR101, p. 56ff) outlined a mechanism in which:

- criteria for awarding access holidays are very clear and limit regulatory discretion;
- there are rules for determining the length of the holiday;
- the regulator has to bear the burden of proof that a project not constituting renewal or maintenance of an existing network asset should **not** qualify for an access holiday. In particular, the regulator would have to show that a risky, new investment was not contestable.

Under such an approach, the visible criteria and mandated process give it probity rather than public consultation on the details of each individual investment. That said, as Telstra notes, there are significant challenges in constructing the detailed architecture of such a system. This inquiry does not go into that detail — the parallel inquiry provides a more thorough assessment of the options and their implementation.

Open access regulatory compacts

Access holidays guarantee that *if* there are ex post entrepreneurial rents that they won’t be fully expropriated — and in many cases, this guarantee is a socially useful way of encouraging investment. However, in telecommunications there is substantial concern that vertically integrated incumbents seek to lever off upstream investments to foreclose downstream markets,³⁹ with long-run adverse economic impacts (a concern raised by SPAN sub. DR78, p. 2). Many of these specific

³⁹ That is, by foreclosure they gain true rents by making what would be a future contested investment non-contestable.

foreclosure risks have been dealt with for the legacy copper-wire network, but different risks emerge for new types of networks. For example, in a broadband context, Bar et al. (2000) have indicated the many foreclosure strategies available to dominant broadband infrastructure owners — such as manipulation of caching to favour financial partners.

The question is whether there may be a mechanism that largely preserves the benefits of an access holiday (maintenance of incentives to make ex ante contestable lumpy investments that would subsequently risk declaration) while discouraging foreclosure. Clearly Part XIB and Part IV can be used to discourage anti-competitive behaviour, but neither are particularly effective as incentive mechanisms for genuine open access (chapter 5).

An alternative mechanism that might be considered is that (subject to the same criteria as that for an access holiday) the investor would enter an open access regulatory compact with the regulator. It would be entitled to set the price level of the bottleneck infrastructure as it pleased, earning any returns on that bottleneck that it wished. This freedom would provide the incentives for investment and avert regulatory taking. However, the freedom would be contingent on maintaining a genuine open access network, which would be subject to monitoring. An open access network is one where the owner allows any other party to connect to its network at prices and other terms and conditions that match those it would provide to its own downstream arm (if it has any) for a similar service. For example, TransACT's Canberra network is intended to be an open access network, with firms other than TransACT intended to provide pay TV and ISP services. At ECPR prices (chapter 11), the network owner would usually have strong incentives for encouraging efficient access.

However, given that residual foreclosure incentives may remain for some highly vertically integrated carriers, an additional incentive for open access is to penalise foreclosure. If the facility owner started to set the *structure* (not level) of prices in a way that foreclosed entry downstream by any entrant — or used other anti-competitive strategies (such as delay, low quality interconnection) — then this would trigger action by the regulator.

Initially, this regulatory action might be simply of the kind available under part XIB, but on repetitive or serious matters, the compact would be deemed void and the regulator could proceed to declare the facilities. If they were declared, access prices would be set at a level that would eliminate ex post 'rents', thus truncating the return on the investment. This confiscation of 'rent' amounts to the punishment of the regime. The intent of the compact would be to signal to the incumbent that the returns from bottleneck investments were guaranteed — no matter how large — so long as the incumbent did not foreclose. The objective would be to change the

behavioural incentives of the investor so that it would concentrate on building facilities where returns were high and in developing services for customers (access customers as well as downstream ones), rather than allocating resources and effort to regulatory gaming and foreclosure.

A regulatory compact of this kind is a less permissive access holiday that gives priority to avoiding foreclosure. It would clearly only have application in circumstances where it was considered that the service may meet the new declaration criteria and that the risks and costs of foreclosure were regarded as high. These are areas where:

- the competition, market power, national significance and other declaration tests are likely to apply;
- technology and demand is moving rapidly and first mover advantages are substantial; and
- there is substantial scope for new services by entrants based on access that might threaten incumbent interests — thus risking foreclosure in the absence of a requirement for open access.

Such a compact would most likely be confined to certain segments of the telecommunications sector and have less relevance to non-telecommunications infrastructure, like gas, electricity and water.

Whether it is feasible or desirable in telecommunications will also depend on how the structure of markets develops over the next few years. If convergence and other market forces lead to vertical disintegration and whole new modes of facilities and service competition, then there would be little basis for such a policy option. However, were convergence to lead to accentuated market power then such regulatory compacts may be a way of both facilitating innovative investments, while discouraging foreclosure.

A possible area of application of the regulatory compact is digitisation of the HFC networks, which will expand those networks' capacity tenfold.

Conclusion

Notwithstanding a tighter set of declaration criteria, mandated access still presents formidable regulatory risks to investors. Telecommunications technology and markets are rapidly moving and very risky (chapter 1). If firms consider that regulators are fallible and may have difficulty separating rewards for risk from monopoly returns, then this has adverse consequences for investment. Access pricing that fully recognises regulatory uncertainty and the scope for regulatory

error may be a remedy (chapter 11) — but this may be hard to implement and may lack *ex ante* credibility. Access holidays, regulatory compacts and other *ex ante* options may provide greater certainty for carriers prior to making their investments, but they too have some practical implementation problems.

The parallel inquiry into Part IIIA has recommended that the Commonwealth Government should through COAG initiate a process to refine mechanisms for dealing with the problem (Productivity Commission 2001c). Such a process would provide a basis for also determining approaches that might also be used in Part XIC. No separate recommendation is required in this inquiry.

9.7 Monitoring as an alternative to declaration

The ACCC already has considerable information gathering powers in telecommunications.⁴⁰ These include the tariff filing directions (s. 151BK–s. 151BTA) and record keeping rules (s. 151BU–s. 151BV) in Part XIB of the TPA and other information provisions in s. 155 of Part XII (examined in chapter 6). Other, more informal, price monitoring can also take place. Under separate provisions the ACCC also collects price information for compliance with the price cap regime. The ACCC has explicitly advocated monitoring as a complementary feature of the telecommunications access and conduct regime. For example, it monitored market structure and market conduct on both declared and undeclared intercapital transmission routes (ACCC 2000p, pp. 2–3).

However, beyond these complementary roles, price monitoring might be a potential *substitute* for declaration in certain contexts. Price monitoring may be a lighter-handed alternative to declaration that avoids the elaborate, resource-intensive and potentially distortionary set of regulatory arrangements that follow declaration. A formal process of monitoring could be used in circumstances where the grounds for declaration were weaker, but where doing nothing also seemed inappropriate. Without the option for formal monitoring, the ACCC might elect for declaration.

On the other hand, there is a risk that such formal price monitoring may be used in circumstances where the most appropriate option was doing nothing. However, the historical tendency of the telecommunications competition regime has been to

⁴⁰ Currently, the collection of price information is used as an input into the retail cap controls; the assessment of appropriate access prices for some declared services (as in local call resale and to a lesser extent, GSM pricing); the assessment of whether a firm has behaved anti-competitively (including predatory pricing or discriminatory pricing behaviour at the access level); and deciding whether to revoke the declaration of a service (as the ACCC has done for intercity transmission services).

declare most services, so that the risk of bringing many formerly untouched services into the regulatory fold appears to be low.

One possible mechanism for triggering such formal price monitoring would be as follows:

- A complaint about access would lead to an inquiry into declaration, as now.
- Arising from the inquiry, the ACCC would have three options. It could decide to declare the service so that it is subject to the access regime, decide against its declaration or put in place a formal process of price monitoring for a fixed period.
- During that fixed monitoring period, no other access complaint for that service could re-initiate a declaration inquiry. However, at the end of the fixed period, the service could, on a complaint, be subject to another declaration inquiry. Information from the formal monitoring program would be evidence that would be considered in deciding whether or not to declare the service. While a formally monitored service would not be subject to declaration during the fixed period, the service would not be exempt from actions under Part IV or Part XIB for anti-competitive behaviour, were this to arise.

The existing provisions for information gathering by the ACCC would not appear to empower it to use such formal price monitoring as an explicit substitute for an access regime. In its inquiry into the PSA (Productivity Commission 2001d), the Commission has recommended that a new section be included in the TPA providing that, after an independent public inquiry, the ACCC can undertake prices monitoring in nationally significant markets where there may be monopolistic pricing. Given the value of consistency in price monitoring arrangements, it is appropriate that any formal telecommunications price monitoring triggered by the declaration inquiry under Part XIC would be governed by any such new legislative arrangements.⁴¹ A declaration or revocation inquiry held by the ACCC under Part XIC would be deemed to have met the requirement for an independent public inquiry prior to the use of price monitoring under this new section.

However, while the new section of the TPA would provide the principal legislative basis for such monitoring, it also would be necessary to amend Division 2 of Part XIC to allow the ACCC to:

- apply this new section of the TPA as a substitute for declaration;
- determine the relevant data to be collected and the time period for the formal monitoring; and

⁴¹ Were the Government not to accept the Commission's recommendations in the PSA inquiry, then telecommunications-specific monitoring provisions would be required.

-
- provide immunity from declaration for the life of the formal monitoring program.

The intention of the formal monitoring scheme is to avoid declaration where a lighter-handed alternative would be superior. However, there is a danger that the capacity to institute such price monitoring might be used in circumstances where complete revocation or non-declaration may actually be warranted. This suggests possible grounds for parties to appeal against monitoring. Given the relatively light-handed nature of the intervention, any such appeals could either have strict and short time limits imposed on them; and/or not stop the application of the monitoring regime while the matter is being heard. However, there are grounds for forgoing an merit appeal right altogether, recognising that the worse thing that can happen with a monitoring arrangement is declaration at its completion. The Commission has argued that declaration under Part XIC should be appealable (chapter 10) — so providing parties with an ultimate appeal right.

Price monitoring could also be employed to effect a transition from regulated prices under declaration to deregulation. Thus, the ACCC could hold a revocation inquiry for a declared service and as in a declaration inquiry, an alternative to revocation or continued declaration would be a formal price monitoring scheme of the kind outlined above. Amendments to Part XIC similar to those above would also be required to allow revocation to act as a trigger for formal monitoring.

RECOMMENDATION 9.6

The Commission recommends that, on the completion of a declaration or revocation inquiry, the ACCC may use formal price monitoring for a fixed period as an alternative to existing regulatory options.

The draft recommendations of the Productivity Commission's (2001f) concurrent inquiry into price regulation of airport services are also relevant to the circumstances in which monitoring may be appropriate.

9.8 Exemptions

The Commission has recommended that declaration of services should only relate to services produced by carriers or CSPs with significant market power. In part, this reduces the need for exemptions. However, exemptions may still be required for services in particular areas or as a particular access provider loses market power.

Exemptions can be sought for particular providers on an individual or class basis under s. 152AS and AT of Part XIC. While no exemption application has been lodged by an entrant (ACCC sub. 47), Telstra has lodged an exemption for the local

call service (LCS) in CBD areas. It has criticised the exemption process as ‘insurmountably difficult’ (sub. 24, p. 46 and sub. DR71, pp. 22–3).⁴²

As well as a number of procedural hurdles to the use of exemptions,⁴³ the onus of proof may also limit its application. To accept an exemption, the ACCC is required to establish that such an exemption is in the LTIE rather than to establish that refusing an exemption is in the LTIE. If the same approach were used for declaration of services, it would amount to the de facto declaration of all services, unless the ACCC could be satisfied that non-declaration was in the LTIE. In practice, the difference is probably minor when it is considered that the standard of proof is not ‘beyond reasonable doubt’ but the ‘balance of probabilities’. However, were the ACCC uncertain about the impacts of an exemption on the LTIE it could not grant an exemption, whereas under the reverse onus of proof it would be obliged to do so. Accordingly, the Commission considers there are grounds for amending s. 152AS(4) and s. 152AT(4) to reverse the onus of proof.

Another difficulty with the existing exemption provisions is their reliance on the vague LTIE test, which provides substantial discretion to the regulator about whether to provide an exemption. Were the declaration criteria to be changed — as recommended by the Commission — then s. 152AS(4) and s. 152AT(4) should be altered to reflect the new criteria. The new requirement would be that an exemption would be granted to a provider for the declared service if all the declaration criteria were not met for that provider for that service. A new entrant’s facilities and services would often fail to pass the declaration tests, given the availability of regulated services from the incumbent’s facility.

Change to the exemption provisions is particularly warranted if non-dominant networks continue to be covered by the access regime. Moreover, with technology change and the construction of new competing facilities, some services of the incumbent in certain geographic areas may also appropriately be covered by exemptions.

RECOMMENDATION 9.7

The Commission considers that s. 152AS(4) and s. 152AT(4) should be amended so that the ACCC must grant an exemption to a carrier from declaration unless it is satisfied that the declaration criteria are met for the services subject to the exemption request.

⁴² Ultimately, Telstra’s application was successful, though implementation of the exemption was deferred (ACCC 2001k).

⁴³ For example, there is a potential requirement for widespread consultation and the scope for review by the ACT if the exemption is appealed. The current LCS exemption application has so far taken about one year.

9.9 The duration of declaration

In its current form, Part XIC has specified expiry dates for undertakings, but not for declarations. In contrast, Part IIIA of the TPA (s 44I) requires expiry dates for declarations.

There are some grounds for sunseting declarations. The ACCC is in favour of inserting sunset provisions into declarations (sub. 40, p. 35), a measure that was widely supported by other participants.⁴⁴ Sunseting would reflect the fact that the underlying motivations for declaration of a particular service may vanish in time — with technological change, with the declaration of substitute services or maturing competition in facilities. As noted by the Northern Territory Government:

... telecommunications technology is developing extremely fast. Convergence of functions previously considered separate, the developing role of the internet, massive mobile telephone growth ... continue to create a volatile environment. Significant changes may occur within the period of review of competition legislation or the life of the current declarations. There is a real danger of regulating on the assumption of a particular service regime when the immediate future is not known (sub. 22, p. 12).

For example:

- Competition between mobile providers appears to be relatively high (although how the market structure will evolve over time remains unclear). Thus a number of participants (Vodafone sub. 15, p. 35; Cable & Wireless Optus sub. 8, pp. 98ff and Ericsson sub. 23, p. 4) called for the removal of the mobile market from the access regime. Ericsson considered:

Given the evidence of significant competition within the Australian mobile industry, Ericsson Australia considers that there is no further need for continuing industry specific regulation in the mobile market ... continuing to apply industry-specific regulation would be counter-productive as the policing of the regulation is both expensive and resource consuming for the ACCC and the industry.

- Local PSTN originating and terminating services and local carriage services (local call resale) were declared,⁴⁵ though they both can be used to make local calls. One obstacle to revocation of local carriage service — at least in CBD areas — is that the ACA has so far not made a pre-selection determination for carriage of local calls. The ACCC (2000h, p. 19) has argued that revocation prior to pre-selection would mean that rivals to Telstra would not be able to effectively bundle local calls with other services in a single package. However, domestic PSTN, the ULL and other facilities might also be used for the carriage

⁴⁴ For example, Telstra (sub. 24, p. 38), Austar (sub. DR79, p. 2), Ericsson (sub. DR86, p. 2), Vodafone (sub. DR70, p. 15), Australian Consumers' Association (sub. DR89, p. 2) and AAPT (DR100, p. 22).

⁴⁵ They were declared as a single package of local telecommunications services, including the ULL.

of local calls in CBD areas. The ACCC argued that partial revocation of local carriage service would depend on the capacity to provide substitutes through other services:

Once ... local PSTN originating and terminating services can be used to supply local calls, the competitive significance of the local carriage service is likely to diminish. Service providers will then have other inputs that they can use to supply telephony services to end-users. At that time it may be appropriate to revoke or modify the scope of the declaration of the local carriage service (ACCC 1999c, p. 105).

It has recently proposed partial revocation (ACCC 2001k).

In principle, there should be no redundant persistence of access regimes. If, at any point, it is deemed that the conditions that originally led to declaration now no longer hold, then declaration should cease. Of course, any commercial contracts framed during a period when declaration would have applied should be honoured even if the declaration is revoked. In this context, one of the advantages of sunset declarations is that it would provide an incentive for entrants to write longer term contracts with the facility provider — reducing the problem of regulatory risk and stranded assets that besets investment by the incumbent.

At the sunset date, declaration would lapse unless a further declaration inquiry had indicated that continuation (or price monitoring) was warranted. To overcome the potential problem of a regulatory gap between the sunset date and a future re-declaration date (if re-declaration was deemed desirable), it may be necessary to permit a (re-) declaration inquiry prior to the sunset date.

Macquarie Corporate Telecommunications (sub. DR97, p. 4) argued for some flexibility in the sunset date — such as a six months extension to the sunset time if the ACCC believed the service would still meet the declaration criteria (without the need for an inquiry). It cited the example of local call resale, noting that had it been sunsetted for the end of 2001 with the expectation that the unconditioned local loop would be providing alternative services, then Telstra would have reverted to having an unregulated monopoly of local call services until access to alternatives for access seekers became available. One way in which this risk could be diminished is to allow the possibility of a sunset clause specifying ex ante a set of clearly observable circumstances at which the sunset provision will be triggered, such as when available alternatives emerge (Australian Consumers' Association sub. DR89, p. 2). The Commission has altered the draft report's recommendation to take account of this option.

RECOMMENDATION 9.8

In addition to the existing revocation mechanism under s. 152AO, the

Commission recommends that Part XIC of the TPA should include an explicit provision for sunseting declaration. The maximum life of any given declaration should not exceed five years unless a further inquiry recommends its extension, but there should be scope for earlier sunseting based on:

- ***a shorter pre-specified period; or***
- ***the achievement of pre-specified observable conditions based on the declaration criteria.***

Six months prior to the sunsetted expiry of a declaration, the ACCC could seek public comment on whether re-declaration may be required and conduct a new declaration inquiry.

If no inquiry takes place or the inquiry concluded against declaration, then at the sunset date, the declaration would automatically lapse.

Minor revocations not permitted

Although the ACCC is able to make minor variations to existing declarations (in practice, ‘minor’ is defined by the agreement of all parties) without conducting a public inquiry, all revocations must be subject to a public inquiry.

This has resulted in some declarations outliving their useful lives. For example, although the analogue mobile service has been discontinued, the ACCC cannot revoke the declaration of those services without a public inquiry (ACCC 2000r). This procedural requirement uses resources that must be diverted from other tasks. As a result, the declared AMPS services have remained declared despite there being no AMPS services in operation. The ACCC should be able to revoke a declaration without a full public inquiry if the service has either expired or is of residual importance. There are a number of possible mechanisms for achieving this.

- If the TAF is retained (see chapter 10), then it may make a recommendation to revoke a declaration, which the ACCC could implement without an inquiry.
- S. 152AO(2) could be amended to include automatic revocation of expired services or allow the ACCC to revoke such services if it was satisfied that their role in telecommunications services was a minor one.

RECOMMENDATION 9.9

The Commission recommends that where a service has expired or becomes of residual importance, declaration may be revoked by the ACCC without a full public inquiry.

10 Telecommunications access: evaluating institutions and processes

Box 10.1 Key messages

In the generic access regime, there are two regulators, the NCC (which conducts declaration inquiries) and the ACCC (which implements the access regime). The Commission does not consider that the procedural advantages of a similar dual regulator approach for telecommunications would justify the transition costs and delays in decision making.

Unlike many countries, Australian telecommunications access is overseen by a general competition regulator, the ACCC, rather than by a telecommunications-specific regulator. The Commission considers that the status quo should be maintained.

The Minister for Communications, Information Technology and the Arts has the power to make pricing determinations. This is a vestigial power from the previous more prescriptive regulatory regime. The Commission recommends the removal of the discretion for Ministerial pricing determinations or, as a less preferred arrangement, a requirement for published reasons for pricing decisions.

The Telecommunications Access Forum was intended to have a useful co-regulatory role by developing access conditions. To date, it has failed. The Commission recommends the TAF should be abolished.

Current processes for determining conditions for access are cumbersome, resource-intensive and tardy, reflecting the failure of undertakings as a mechanism, the extensive resort to regulatory gaming and the predominance of lengthy bilateral arbitrations.

The Commission has recommended a range of options for greater regulatory efficiency:

- multilateral price setting and reference prices;
- short binding time limits for processes;
- a quick method for updating final determinations as costs change; and
- the elimination of some anomalies in Part XIC that lead to confusion or gaming.

The Commission does not favour eliminating appeals of final determinations, though they add to delay, because of their importance to accountability — but it recommends a time limit. The Commission also recommends the introduction of an appeal mechanism for declaration, subject to strict timing and other conditions so as to counteract their possible gaming.

Backdating provisions for final determinations (and appeals) should be clarified so as to reduce the risk that a regulator will favour access seekers.

10.1 Introduction

Even where regulation is warranted — as appears in the case of telecommunications access — regulators need to ensure that existing governance and administrative arrangements are working well, and to adapt them as circumstances change.

There is little theoretical or empirical guidance about the best arrangements for an access regime. The extent to which regimes allow information flows, their vulnerability to capture by stakeholders, the extent of checks and balances, subtleties in their design and culturally specific factors may have a significant bearing on their effectiveness. Experimentation may be needed. It is also possible that there are a number of options that may produce similar results. Nevertheless, experience to date with the telecommunications regime and lessons from other parts of the economy and elsewhere in the world suggest what governance arrangements are likely to be appropriate — with current arrangements falling short in some areas.

The issue of whether there should be separation, as in Part IIIA, between the regulator that conducts the declaration inquiry and the one that arbitrates is dealt with in section 10.2. A related issue is whether the regulator overseeing telecommunications competition regulation should either be specific to telecommunications or have responsibility for all competition regulation (section 10.3).

The regulator, while central, is not the only decision maker. The weight given to various decision makers (courts, bureaucrats, ministers) can have significant implications for the efficiency and effectiveness of the competition regime (section 10.4).

Regulatory processes are also central to the efficiency of the access regime. Bad regulatory processes may lead to inconsistent decisions, high compliance costs for participants, lack of transparency (or excessive divulgence) or overly slow procedures. The risk of slowness is particularly relevant in an industry with rapidly changing technologies and demand conditions, in which first-mover advantages may be important. These issues are examined in sections 10.5 to 10.8.

After publication of the Commission's draft report, the Government introduced the Trade Practices Amendment (Telecommunications) Bill 2001 to streamline various processes in Part XIC. The Bill drew on various recommendations in the draft report. The Bill has passed the House of Representatives (on 30 August 2001) and is currently being examined by the Senate Environment, Communications, Information Technology and the Arts Committee. This chapter examines some of

the arguments put forward by parties to that Committee in considering process issues¹, as well as the matters put to the Commission in submissions in this inquiry.

10.2 One or two regulators of competition regulation?

There are often grounds for separating the regulatory body making the judgment about whether to regulate from the body that implements the regulation. Which governance model is best depends on circumstances. Regulatory separation is justified where gains from increased probity, increased transparency², reduced scope for regulatory error and any other gains in better governance are warranted by the loss of any economies of scope or timeliness.

In the case of Part IIIA, the National Competition Council (NCC) conducts the declaration inquiry, while the ACCC arbitrates any access disputes that arise for declared services. In its Part IIIA inquiry, the Commission advocates maintenance of dual regulators (Productivity Commission 2001c). In its PSA Inquiry, the Commission recommends separation of the body undertaking any inquiry into monopolistic prices and the body implementing prices monitoring (Productivity Commission 2001d). In contrast, currently both the declaration and arbitration phases of Part XIC are overseen by a single regulator, the ACCC.

Telstra (sub. DR71, p. 23–24) argued that separation was appropriate for Part XIC:

Telstra submits that [the] division [of regulators in Part IIIA] correctly recognises the need to distinguish between the policy decision (whether to regulate or not) and the regulatory process (on what terms and conditions should access be provided). This distinction has been removed in Part XIC with little or no justification having been provided for such a radical step. One of the direct consequences of handing the powers of declaration to the ACCC has been regulatory creep ... Telstra submits that the continued combination of judge and jury in this manner is unacceptable and the Commission should recommend that, consistent with the provisions in Part IIIA, responsibility for declaration of service under Part XIC should lie with the NCC.

The risk of regulatory creep and other forms of regulatory bias is real and warrants careful examination by government on a periodic basis. At this point in time the Commission considers that there are other remedies for these risks (such as better declaration and revocation criteria) than splitting regulatory responsibilities. In the case of Part XIC, the Commission considers that two regulators would slow down regulatory procedures (which would be particularly costly in telecommunications).

¹ Available at http://www.aph.gov.au/senate/committee/ecita_ctte/TPA%20Tele/TPASublist.htm.

² Transparency is usually increased because it is the means by which information is conveyed between two arms' length regulators.

There would also be transitional costs associated with a shift to dual regulators.³ Moreover, part of the justification for the NCC's role in Part IIIA is that it is a body adapted for consideration of State and Territory, as well as Commonwealth, matters. This consideration is absent in telecommunications.

RECOMMENDATION 10.1

The Commission recommends the retention of one regulator to conduct declaration inquiries and oversee arbitration under Part XIC.

10.3 Specific versus generic regulators

The ACCC not only oversees telecommunications-specific competition regulation, but also competition policy generally. Most other countries use telecommunications-specific regulators, for example Oftel in the UK and the FCC in the US.⁴ A recent report into New Zealand telecommunications competition recommended the creation of an industry specific regulator — the Electronic Communications Commissioner (Fletcher 2000) — moving oversight of access policy in telecommunications away from general competition law. Broadcasting — which has closer links to telecommunications with convergence — is typically managed by separate broadcasting-specific regulators, although both South Africa and Canada use a combined broadcasting and telecommunications regulator.⁵ Singapore and Malaysia have regulators that cover information services (including telecommunications) more generally (Intven and Tetrault 2000, pp. 1.8–1.10).

Accordingly, Australia's incorporation of telecommunications oversight into a general competition regulator, the ACCC, is rather unusual by world standards. That said, there is relatively little empirical or theoretical evidence to guide the choice of a specific versus generic regulator. In reviewing access regulation around the world, the OECD (1999, p. 8) claimed it was unclear which option was better.

If there are economies of scope and scale in administering a generic set of regulations, then horizontal integration of regulatory functions is likely to be efficient. In the case of telecommunications, economies of integration, combined

³ For example, C7 notes the staff expertise that is built up within such specialist regulators (sub. DR107, p. 12).

⁴ Boylaud and Nicoletti (2000, p. 32) show that Australia is unique among a wide group of OECD countries in using a general competition authority to oversee regulations on interconnection. In 18 of the 24 countries a sectoral regulator sets access prices, while in 5 others a ministry department undertakes this role. In 24 of 29 countries, a sectoral regulator undertakes access dispute resolution, while in 4 this is undertaken by a ministry department.

⁵ In the UK, five regulators encompassing TV and radio broadcasting, radiocommunications and telecommunications will be combined into a new super regulator — OFCOM (OFCOM 2001).

with political economy considerations, suggest a generic regulator has some advantages:

- There are fixed costs associated with administering common elements of competition regulation that may be more efficiently spread across many industries under one regulator.
- It is less likely to be captured by a specific industry, although it may be ‘captured’ by other agendas, such as popularity or a regulatory mentality.
- Administration of access regimes and anti-competitive provisions across many industries by a single regulator is more likely to lead to consistency in methods and principles, and transfers of knowledge between experts responsible for different sectors. This guides investment and demands across the economy on a more consistent basis (IPA sub. 20, p. 3; ACA sub. 30, p. 6; Smith 1997). On the other hand, as noted by the World Bank, failure by the multi-sector regulator in one sector may cascade to others (Intven and Tetrault 2000, p. 1.9).
- It may provide an effective means of dealing with converging sectors (such as telecommunications and broadcasting). However, the ACCC does not have specific regulatory responsibility for broadcasting (this being with the ABA), so that this gain cannot be realised in Australia at present.⁶
- It is possible that there is scope for the telecommunications-specific regulation to be wound back in the future, if effective competition could be sustained under the umbrella of Parts IV and IIIA of the TPA. A telecommunications-specific regulator has a stake in the continuation of specific regulation (as the justification for its existence) — and may pressure government to prolong the specific regime beyond its useful life. In contrast, the ACCC does not have the same incentives: its existence would not be under threat if telecommunications-specific regulation were to be replaced by more generic regulation.

In practice, these advantages are not likely to be very large. For example, the actual approach of the ACCC to key aspects of telecommunications access regulation is not markedly different from that of telecommunications-specific regulators such as the FCC and Oftel.

The choice between specific versus generic regulator should take account of any transactions costs associated with creating a new body. Shifting to a new entity would involve some, but not appreciable, transitional costs. The TPA would require amendment, while a new entity would require a careful description of its functions,

⁶ In its report on broadcasting (Productivity Commission 2000), the Commission recommended that the TPA be amended to include a media-specific public interest test for proposed media mergers, to be administered by the ACCC.

well-specified governance arrangements and substantial expert staffing — probably acquired from the ACCC.

Without a compelling argument for a shift to a telecommunications-specific regulator, this suggests that the status quo be preserved.

RECOMMENDATION 10.2

The Commission recommends that the ACCC remains the appropriate body to oversee telecommunications-specific competition regulation under Parts XIB and XIC of the TPA.

That should not imply that the ACCC is the only source of expertise in telecommunications competition regulation. The ACA has an advisory or auxiliary role. ACIF has responsibilities in number portability, pre-selection, churn and other issues that are also important for effective competition — but no legislated role under Part XIC. The TAF has a legislated role, but has failed (section 10.4).

There may be greater scope for the ACCC to use more outside expertise. The Commission has floated the option of expert panels when the ACCC is examining pricing principles (chapter 11), and industry participants have also suggested some areas where outsourcing may be appropriate.⁷

10.4 Decision makers: courts, bureaucrats and others

Currently, there are eight potential decision makers under Part XIC (figure 10.1), although most power is concentrated in the ACCC.

The three main decision makers

The ACCC is the dominant decision maker. Among other things it can:

- initiate declaration inquiries;
- determine whether a service will be declared;
- initiate class exemptions for standard access obligations and accept or reject individual exemptions;
- accept or reject undertakings;

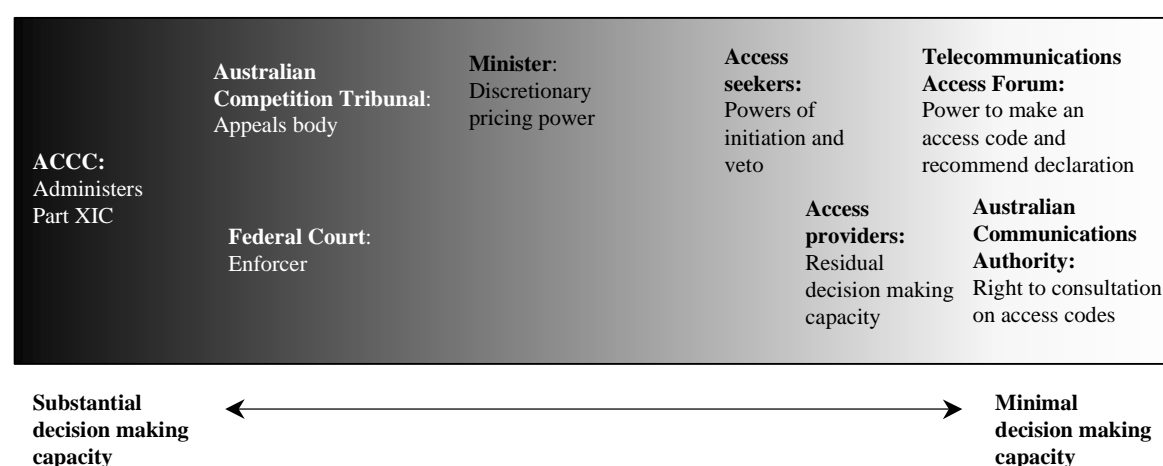
⁷ For example, a number of participants considered that speedier and better arbitration outcomes would be achieved by outsourcing of arbitration to professional arbitrators (One.Tel sub. 18, p. 9 and Macquarie Corporate Telecommunications sub. 11, p. 13).

- give directions in relation to negotiations (such as requiring parties to attend mediation);
- make interim and final determinations during arbitration of access disputes; and
- require information from parties.

The Australian Competition Tribunal (a quasi judicial body) has some key review powers. It hears appeals on their merits in relation to decisions by the ACCC in relation to individual exemptions (s. 152AW), access undertakings (s. 152CE and CF) and final determinations (s. 152DO).

The Federal Court has a wide set of enforcement functions. It may make orders if a carrier or CSP contravenes standard access obligations or fails to preserve confidential information provided by access seekers (s. 152BB). It can impose pecuniary penalties if a party has tried to circumvent directions given by the ACCC in regard to commercial negotiations or arbitrations (s. 152BBB and s. 152CU). It can hear disputes in relation to declarations, exemptions and determinations on matters of law, but not merit (s. 152DQ and *Administrative Decisions Judicial Review Act 1977*). It can make orders — including requirements for compensation and restraining injunctions — if a party contravenes a determination (s. 152DU – s. 152DZ). It enforces the requirement that no party may engage in any conduct for the purpose of preventing or hindering access to a service, including through injunctive and compensation powers (s. 152EG to s. 152EL).⁸

Figure 10.1 **Decision makers under Part XIC^a**



^a The direct role of the ACA in Part XIC is very minor and is not discussed further.

⁸ The extent of use of Federal Court and ACT appeals is covered in chapter 7.

These three decision making institutions are independent from industry interests, allow for input from relevant stakeholders and usually must provide reasons for their decisions — good aspects of regulatory design. They allow for separation of administration, review and enforcement — which is desirable.

One potential problem with the existing arrangements is regulatory overlap with other parts of the TPA and with other legislative provisions. This is examined in section 10.7.

Another issue is the desirability or otherwise of shifting responsibilities from bureaucrats to courts. Courts and judicial officers are historically developed institutions for resolving legal disputes impartially. In this sense, they might be expected to have a natural role in access disagreements. They also allow for accountability of a lower court's judicial decisions by appeal to higher courts. Courts also involve different judges from case to case, so reducing the risk of a culture of favouring one interest group over another.

In contrast, regulators tend to have wider discretionary powers. For example, the ACCC has considerable discretionary powers — such as for declarations, interim determinations and backdating of final determinations. Other telecommunications regulators, such as the FCC (US) and Oftel (UK) wield similar powers. However, even independent regulators may sometimes be 'captured' by certain pre-dispositions to one party or another in disputes.

The existing focus of a regime in which decisions are dominated by the regulator could be changed to one in which courts played a greater role:

- One option would be to have a general requirement against certain anti-competitive conduct, and let courts interpret whether limiting access constituted such conduct (removing both Part XIC and Part IIIA). Until now, New Zealand has adopted such an arrangement, relying on its Commerce Act (which has provisions akin to s. 46 in the TPA).
- Another option would be to maintain telecommunications-specific legislation governing access with more precise obligations by access providers and seekers than contained in standard anti-competitive legislation. Parties could bring actions under the Act to the relevant court (probably the Federal Court), rather than let a regulator arbitrate. This could overcome some of the problems of interpretation and scope that beset anti-competitive legislation when it is used to remedy access disputes.

The second option is not dissimilar to the current one, except that the court would make judgments — governed by standard court processes and the law as it interpreted it — rather than the regulator.

However, courts suffer some major general limitations when trying to achieve the outcomes required of a successful access regime. The objective of an access regime is to encourage efficient entry and competition. Except where prices and interconnection terms are prescribed by regulation, this typically requires that an arbitrator oversee the creation of commercial relationships between disputing access seekers and providers. Courts, however, are better suited to enforcing existing contracts than adjudicating in the formation of new ones. They also tend to be slow. Slowness favours the incumbent. The access disputes between Clear and NZ Telecom have been extraordinarily protracted under a court-oriented approach. Partly reflecting this, the recent New Zealand inquiry into telecommunications has recommended that regulation move towards the Australian model.

Unlike courts, regulatory decision making often involves teams of internal experts who accumulate specialised knowledge in the relevant economic issues — such as the complex models used to estimate costs.

To the extent that there are concerns about discretion and risks of capture in primarily regulatory rather than court-based decision making, these can be remedied by specifying responsibilities better and by having appeals processes (for example, to the ACT as under Part XIC).

The Commission does not consider that there are grounds for shifting the orientation of the telecommunications-specific access regime away from the ACCC to courts.

The Minister

The Minister (the Minister for Communications, Information Technology and the Arts) may make access pricing determinations that are binding in all cases (s. 152CH). Any other pricing determination cannot be inconsistent with the Ministerial pricing determination. The Ministerial decision is a disallowable instrument, so that only Parliament may review the determination. The Minister has made no determinations on this single, but influential, matter since the introduction of the 1997 amendments. The power is largely one that carried over from the prior regulatory regime for telecommunications, in which prescriptive pricing was a feature.

ATUG (sub. DR69, p. 12) supported the Ministerial pricing power, arguing that it provides an important measure of support for the ACCC's access pricing principles. PowerTel (sub. DR102, p. 12) also supported the power, but argued that it should be limited to carriers with substantial market power.

The Commission's view is that the Ministerial discretion to make pricing determinations fails to meet good design criteria since there is no specified requirement for consultation or public disclosure of reasons for any decision, nor any mechanisms — other than Parliament itself — to challenge such determinations. Nor is it clear why this single access matter — access pricing — should be subject to discretionary Ministerial intervention, when the ACCC already performs this function as one part of arbitrations.

RECOMMENDATION 10.3

The Commission recommends the removal of the discretion for Ministerial pricing determinations under Division 6 of Part XIC of the TPA. If this is not accepted, published reasons for any Ministerial pricing decisions should be required.

The role of co-regulation — the Telecommunications Access Forum

The TAF is an industry body whose purpose was to help resolve access issues. It is seen as performing the co-regulatory component of decision making under Part XIC. The TAF membership is open to all carriers and CSPs. The TAF provides a streamlined approach for declaration and the development of access codes, with a more limited role for the ACCC. Before an access code or request for declaration can be put to the ACCC for its approval, it must have the unanimous support of all TAF members. Such co-regulation was intended to make the access regime more light-handed by either providing binding terms or limiting areas of dispute.⁹

The regulatory hurdles for implementing a TAF access code or declaration are lower than alternative procedures. At the time of introduction, the Government argued that this lower hurdle was appropriate given that the TAF represents all groups in the industry (including access seekers and access providers):

As the TAF represents the interests of the industry generally, the ACCC has the flexibility to accept that recommendation without itself undertaking an inquiry into the service's declaration (Explanatory Memorandum, Trade Practices (Telecommunications) Bill 1996, p. 46)

To date, however, the TAF has not recommended any services for declaration, reflecting the difficulty of achieving the required unanimity among participants. Further, some participants questioned whether the access code it has generated has been useful (AAPT trans., p. 100).

⁹ The codes are binding for a declared service if a carrier submits them as an undertaking (s. 152BW). Otherwise, codes developed by the TAF are not binding on parties, but may lower the costs of bilateral negotiations by narrowing areas of dispute.

The marginal role of the TAF was severely criticised by many participants in the inquiry. For example, the Australian Consumers' Association argued that:

Self-regulation is useful to the extent that it delivers outcomes. The slowness of the self-regulatory system in telecommunications when grappling with competition and consumer issues has come perilously close to vitiating its usefulness. The system in the shape of the TAF has practically broken down (sub. 30, p. 8).

Many perceived it as at best irrelevant and, at worst, as a source of delay in achieving effective access arrangements (One.Tel trans., p. 218; PowerTel sub. 14, p. 7; Hutchison Telecommunications sub. 6, p. 7). Some called for its abolition (One.Tel sub. 18, p. 11; Macquarie Corporate Telecommunications trans., pp. 122, 147–8). Telstra considered that it had a future important role as a forum for discussion among access seekers and providers (Telstra sub. 24, p. 42). But Telstra also claimed that the ACCC had unnecessarily intervened in some TAF issues, reducing its effectiveness (sub. 24, p. 42). AAPT considered it might have some value as a forum, but without any explicit functions cited in Part XIC (sub. DR100, pp. 25–26).

While the TAF has the power to make decisions, its incentive structure obstructs their realisation. This is a major defect in institutional design. There are two major reasons for these incentive problems.

First, the requirement for unanimity is a hard test to pass. It implies that for the TAF approach to succeed *no* party is worse off than it would be if it were to use regulatory arrangements outside the TAF.¹⁰ The difficulty of finding an area of common ground that leaves no party worse off is bigger because access seekers and providers are heterogenous. They have differing degrees of sophistication, market power, vertical and horizontal integration and operate in diverse markets. A forum that brings together such diverse stakeholders is less likely to achieve a practicable and consensual code for access compared with bilateral negotiations between particular access seekers and providers. Further, the scope of negotiations is not broad enough to involve trading off one issue for another, as in, say, multilateral trade negotiations.

Second, the fact that any TAF code must pass some additional tests by the ACCC¹¹ — albeit weaker ones than usually applied — is presumably anticipated by participants. This further narrows the possible set of conditions on which they can negotiate.

¹⁰ Gains might be possible for *some* players (for example, there may be a tradeoff between a higher access price and avoidance of time delays in seeking a lower access price through arbitration), but this is not sufficient for unanimity.

¹¹ For example, the ACCC can reject a TAF access code if the model terms and conditions are not seen as 'reasonable' (s. 152BF).

In this context, the failure of the TAF is a reflection of the fact that self-regulation typically fails in circumstances where the stakeholders do not share a sufficient common interest (Wallace et al. 2000, pp. 35ff; Telstra sub. 42, p. 2 and Leonard 2000). It is notable that, in another arena, technical aspects of the telecommunications network, the ACIF has been widely regarded as successful, precisely because of such common interests.

There are no obvious solutions to the incentive problems of the TAF that would not have other adverse effects. For example, the consent of the access provider might not be required, nor unanimity among the remaining access seekers. This would lead to more rapid processes, but it would do so by tilting the bargaining power to access seekers,¹² with a substantial risk of over-regulation and under-pricing of access. The implication is that in the absence of workable alternative forums for dispute resolution, a body like the TAF will lead to outcomes that are inimical to the purpose of Part XIC.

A body such as the TAF is better suited to parties that have more common interests and more equal bargaining power. This might emerge in time as carriers develop rival facilities to the main incumbents and more parties need to negotiate two-way access agreements. As noted in the previous chapter, the TAF might also have a role in allowing the easier revocation of expired or minor services. However, there are alternative mechanisms for achieving this. The task of maintaining the TAF access code could also be undertaken by another body, such as ACIF (Macquarie Corporate Telecommunications sub. DR 97, p. 3).

In the draft report, the Commission concluded that the TAF has not been an effective decision making body to date and suggested its possible abolition. In their response to the draft report, participants generally agreed with this proposition.¹³

RECOMMENDATION 10.4

The Commission recommends the abolition of the Telecommunications Access Forum.

However, as noted by some participants (AAPT and PowerTel) there may be grounds for some sort of non-statutory advisory body or forum that allows telecommunications carriers to discuss common issues. Since such a body would

¹² The game theory literature suggests that, in the absence of alternative dispute resolution methods, bargaining by unequal parties will lead to the appropriation of most of the rents by the powerful party (Kreps 1990, Binmore et al. 1992 and Rubinstein 1982).

¹³ Macquarie Corporate Telecommunications sub. DR97, p. 3; Australian Consumers' Association sub. DR89, p. 2; PowerTel sub. DR 102, p. 12; SPAN sub. DR78, p. 1 and ATUG sub. DR69, p. 12.

have no statutory basis, the Commission considers that it is up to carriers to determine whether such a forum is useful or not.

Access seekers and providers

An access regime is intended to achieve a balance of power between access providers and seekers. This is largely accomplished by vesting power in third parties — mainly the ACCC — as arbiters, and granting relative minor powers to access seekers and providers (table 10.1). Of these powers, c, d and e in table 10.1 raise some policy questions.

Objections to interim determinations by access seekers

An objection to an interim determination under s. 152CPA delays the determination, but it does not end arbitration. The explanatory material to this section reveals the reasoning behind the provision:

The purpose of this provision is to give an access seeker a right of veto over an interim determination for a limited period after the issue of the draft [interim determination]. The veto protects the access seeker from being subject to an interim determination which it considers onerous or otherwise unacceptable given its circumstances ... This may include the access seeker's estimation of any impact possible retrospective charges may have on it should such charges be applied in a final determination to the period covered by the interim determination (Supplementary Explanatory Memorandum, Telecommunications Legislation Amendment Bill 1998, p. 27).

Table 10.1 Main powers of access seekers and providers

<i>Power</i>	<i>Access seeker</i>	<i>Access provider</i>
a Request declaration — s. 152AM(2)(b)	yes	yes
b Notify an access dispute — s. 152CM	yes	yes
c Block interim determinations on any grounds without appeal — s. 152CPA	yes	no
d Withdraw a notification of dispute by an access seeker — s. 152CN(1)	yes	no
e Withdraw a notification of dispute by an access provider — s. 152CN(1)	yes ^a	yes
f Propose an undertaking — Division 5	no	yes
g Seek exemption from standard access obligations — s. 152AT	no	yes
h Seek reviews of undertakings (s. 152CE) and final determinations (s. 152DO)	yes	yes

^a Whereas in all other cases, notifications can be withdrawn at any time before the ACCC makes a final determination, the right of an access seeker to withdraw a dispute notified by an access provider only applies after the draft final determination and before the final determination.

Perkins (sub. DR91, p. 3) and AAPT argue that s. 152CPA reduces risk for access seekers:

The fact is that an interim determination involves considerable risk to an access seeker accepting that interim determination, because there's the prospect that on the making of a final determination, if it is in variance with the interim determination, then the difference will have to be made up effectively to the incumbent. So there's a contingent liability that goes along with an interim determination and that's why the legislation makes it possible for an access seeker to refuse to accept an interim determination, because of that risk (AAPT trans., pp. 98–99).

However, the right to refuse an interim determination that risks a future backpayment by the access seeker does not necessarily achieve a real risk reduction (box 10.2).

AAPT (sub. DR100, p. 27) also argued that s. 152CPA(3) was justified because it countered the informational advantages of the incumbent:

The ACCC's practice is to issue a draft interim determination to the parties prior to making it and, if the access provider considers an interim determination will expose it to the risk of having to make a large payment at the time of the final determination, it can provide information to support a revision of the interim determination. Conversely, if it considers the interim determination will result in under compensation it can provide information to the ACCC to support an increase in the interim price. The access seeker does not have that option. Instead, the access seeker's entitlement to refuse an interim determination provides it with scope for avoiding undue risk ...

However, if the incumbent behaves the way characterised by AAPT, this reduces the expected difference between the interim and final determination prices, which *reduces* the risk for access seekers. Accordingly, the information asymmetries argument does not provide a rationale for the preservation of the section.

In theory, there are two other concerns with the section (as raised in the Commission's draft report). First, an access seeker with market power might be able to set inefficiently low monopsony access prices when buying services from an access provider that depended on the access seeker's continued business. In that case, the access provider might notify a dispute in order to try to attain a *higher* access price, but the access seeker might seek to place pressure on the provider to reach a commercial accommodation (at a lower price) by refusing the interim. However, while Waterman (1995) and Marsden (1997) cite monopsony power by cable system operators when purchasing programming content in the US and Europe, it is less clear that there would be a capacity to monopsony price in traditional telecommunications markets.

A second concern is that the access seeker's veto may encourage the ACCC to pre-dispose its pricing in favour of access seekers. However, this is unlikely as ultimately the terms and conditions of access are subject to appeal. Thus, while the

provision confers an asymmetric power on access seekers, the power is more apparent than real.

Box 10.2 Does the right to reject an interim determination reduce an access seeker's risk?

The fact that the ultimate access prices faced by access seekers and providers may vary from the interim determination generates risks for all parties. This stems from the risk of backpayments and from investments that may be sustainable at the interim price, but not at the final price.

It has been argued that these risks can be significantly reduced for access seekers by allowing an access seeker the right to refuse an interim determination. However, it is not clear that such a right achieves this objective.

The ACCC indicates that it is customary for entrants to have an unregulated commercial access arrangement with the incumbent prior to the notification of the dispute (it is precisely disagreement over the terms of such an arrangement that motivates the dispute). It is this (high) commercial price (P_c) to which it would revert were it to reject an interim determination price (P_i) that it thought might be lower than the final price (P_f). If the access seeker is confident that $P_f < P_c$ — it could expect a backpayment of $(P_f - P_c) \cdot S$ if it rejects an interim (where S is the volume of access services used over this period). Accordingly, the overall expected payment received by the seeker is composed of a current liability $P_c \cdot S$ and a contingent backpayment of $(P_f - P_c) \cdot S$, which overall equals $P_f \cdot S$.

However, if the access seeker were *obliged* to accept an interim when it thought it likely that $P_f < P_i$, it can still achieve exactly the same outcome as above. It does this by setting retail prices as if the unregulated commercial access price prevailed and setting aside $(P_c - P_i) \cdot S$ as an asset. If the access seeker cannot set prices in the final market that way because of others' pricing behaviour, that problem is not overcome by rejecting the interim, since the counterfactual price would still be P_c . Thus its current payments are now $P_i \cdot S + (P_c - P_i) \cdot S$ where the first payment is to the access provider and the second into a reserved account. When the final determination is made, the backpayment of $(P_f - P_i) \cdot S$ is paid out of the reserved account of $(P_c - P_i) \cdot S$. The payments exactly match those paid in the respective periods had it refused the interim.

Accordingly, *if* an access seeker is willing to deal at unregulated commercial rates when it rejects an interim, it cannot be worse off by being obliged to accept the interim. This is not true if it is unwilling to buy access services at all if it rejects the interim determination, which may be the case. In that instance, a requirement to trade at the interim price does involve risk, but it can be mitigated by setting aside an amount equal to the expected value of $(P_f - P_i) \cdot S$.

Moreover, Perkins has argued that the possibility of setting the interim price below the final price is 'so low as to be negligible' (sub. DR91, p. 2). The ACCC has advised that of the three interim determinations that had reached a final determination by August 2001, the price fell from the interim to the final determination (with the final determination being lower by 14.1 per cent, 2.8 per cent and 1.9 per cent for the three cases).

In that context, the presence of the provision has probably done no harm. However, it does not appear to offer genuine insurance against risk for access seekers, as was its original intention, and is therefore redundant.

RECOMMENDATION 10.5

The Commission recommends that s. 152CPA(3) of Part XIC of the TPA — which does not permit the ACCC to make an interim determination if an access seeker objects to it — be repealed.

The capacity to withdraw disputes

The capacity for an access seeker to notify the end of an access dispute under s. 152CN(1) is generally a sensible one — since it encourages ongoing commercial negotiation during arbitration. However, it has the implication that access seekers have an effective capacity to veto both interim *and* final determinations. This is because there is a requirement that the ACCC provide a draft final determination to parties prior to the final (s. 152CP(4)). In most circumstances, an access seeker would have little incentive to notify the ACCC that the access dispute is over. Such an action ends arbitration and, by default, means the access seeker will have to negotiate commercially with access providers, where its negotiating leverage is typically low.

However, the powers given to access seekers under s. 152CN(1) may be significant when the outcome of a draft final determination provides for access prices appreciably higher than under the interim determination. If the ACCC has signalled it will seek back-payment of the deficit to the access provider (under s. 152DNA), then it is possible that the access seeker would decide that commercially arranged access is superior to this debt. Effectively, the access seeker has the capacity to cancel this debt. There are few circumstances in which this would credibly arise. Even so, as a matter of principle, it is not clear why the access seeker, having sought arbitration, should be able to escape its consequences if it does not like the draft final decision. This is especially so, given that there is a formal appeals process. It is, however, desirable that parties are able to withdraw notification of a dispute prior to the ACCC's signalling the final price through the draft final determination.

One solution to this problem would be to amend s. 152CN(1)(a)(ii) so that access seekers may only withdraw notification of an access dispute *before* the ACCC issues a draft final determination. However, this remedy does not deal with a further problem — the potential strategic abuse of s. 152CN(1) by access seekers or providers. This potential arises in two contexts.

First, an access provider could notify the ACCC of an access dispute when it considered that one was shortly to be forthcoming from an access seeker. The provider then could withdraw the notification of the dispute just prior to the finalisation of arbitration. This would require a new notification and some delay before an effective arbitration could be achieved — a situation that would favour the incumbent access provider.

Second, an access seeker may sometimes have strong bargaining power relative to an access provider.¹⁴ That may mean that an access price achieved under arbitration could be expected to be higher than one reached under commercial negotiation. An access provider's bid to reach an arbitrated price — or to use this possibility as negotiating coin in commercial negotiations — could be frustrated by the capacity of the access seeker to withdraw notifications (ACCC sub. 62).¹⁵

The ACCC proposed that strategic use of s. 152CN could be avoided by vesting some additional powers with the ACCC:

The ACCC suggests that s 152CN(1) be amended to provide that, where the carrier or provider notifies a dispute, the access seeker may only withdraw the dispute under s 152CN(1)(a)(ii) with the permission of the ACCC. Section 152CN should further provide that the ACCC may only refuse permission where it is satisfied that the withdrawal of the carrier's or provider's notification by the access seeker would not be in the long-term interests of end users (sub. 62, p. 6).

This would be a solution for the problems that arose with an access seeker that sought to use s. 152CN strategically, but it does not deal with strategic use by a provider and it may overly increase regulatory discretion. In the Commission's view, the danger of providing discretion to the regulator in these circumstances is that it undermines the proposed amendments to s. 152DNA (the backpayment provisions, which are discussed below). For example, it might become apparent that an access seeker would be in financial difficulty were it required to make a backpayment because the final determination price is higher than the interim. A regulator may feel substantial pressure to avoid this situation by consenting to a withdrawal of the dispute by the access seeker.

¹⁴ For example, a large carrier might seek to gain access to a facility constructed by a small carrier, but which the large carrier could credibly threaten to duplicate. Such an access seeker might have other power by being able credibly to threaten action on other fronts in its capacity as an access provider. This underlines the point that carriers and CSPs negotiate many agreements with each other, and their role as providers and seekers switches depending on the service. The negotiations struck by such parties cannot be treated as independent of each other.

¹⁵ *Exchange* (2 March 2001, p. 2) claims that Telstra, as an access seeker, strategically used s. 152CN in relation to a dispute notified by two ISPs (the access providers).

Any regulatory discretion of this kind also effectively weakens the role of s. 152CS, which allows the ACCC to terminate an arbitration, but only in certain prescribed circumstances (for example, where it would make no significant contribution to competition).

Alternatively, as suggested by the Commission in the draft report, s. 152CN(1) could be amended so that notifications of disputes by any party could be withdrawn only with the joint consent of the access provider and seeker. This would deal with both sources of gaming and does not require any judgments by the regulator. In that case, s. 152CS in combination with the Commission's suggested amendment to s. 152CN(1) provides the complete basis for the appropriate termination of a dispute.

RECOMMENDATION 10.6

The Commission recommends that s. 152CN(1) of Part XIC of the TPA be modified to allow notifications by an access provider or seeker to be withdrawn only with the joint consent of the access provider and seeker.

10.5 The right processes

The main issues

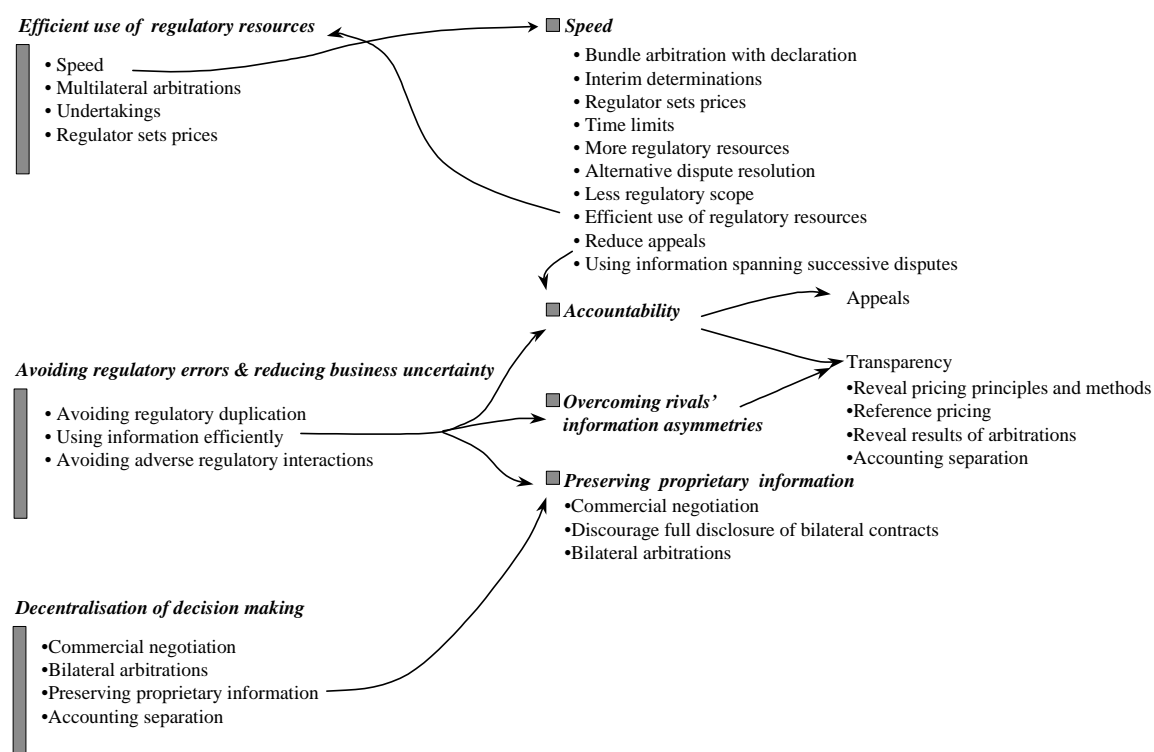
Chapter 8 has argued that the main goal of telecommunications access is to encourage efficient use of, and investment in, telecommunications facilities. Ultimately, the most important element in achieving this goal is appropriate access terms and conditions, particularly pricing (chapter 11). However, choices among regulatory processes (figure 10.2) can also affect the realisation of economically efficient outcomes. For example, long delays typically advantage the incumbent, while uncertainty may adversely affect efficient investment by all parties.

There is no simple recipe for efficient access regimes because there are tradeoffs between the various features of the regime. Thus, were the regulator to set prices for all access seekers after declaration, it would reduce delay significantly, but it would also limit the capacity of negotiating parties to reach terms and conditions that reflected their specific circumstances.¹⁶

¹⁶ However, the regulator may be able to set a price menu that allows for some variation in pricing depending on the nature of the contract between the access seeker and provider (for example, taking account of volume discounts and contract periods).

A key concern is that gaming permeates the operation of the regime, as parties strategically try to use procedures to their advantage. An efficient regime should anticipate such gaming, try to minimise incentives for it and contain provisions to counter it.

Figure 10.2 **Choices among processes for achieving access**



Declaration, commercial negotiations, undertakings and bilateral arbitrations — with limited recourse to appeals — are currently the main mechanisms for settlement of access terms and conditions in Part XIC — as they are in the generic access regime, Part IIIA. Participants have raised many issues about processes — especially after declaration — which reflect their perception of the appropriate tradeoffs between the goals shown in figure 10.2. Among these issues are that:

- regulatory resources may be inefficiently used because:
 - although they often involve similar issues, current processes rely on sequential bilateral arbitrations, thus consuming substantial time and resources. In contrast, undertakings, price setting by the regulator or multilateral arbitrations provide access pricing outcomes for all access seekers; and
 - processes take too long;

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- different parties wish to strike different deals, and this is undermined to the extent that the regulator sets uniform prices or the confidentiality of bilateral agreements is not preserved.
 - the level of accountability is inadequate;
 - there is too much uncertainty prior to arbitration of what the eventual terms and conditions will be, with adverse effects on business planning (SPAN sub. 9, p. 3); and
 - there are potential overlaps and adverse interactions of access provisions in different legislation.

Each of the above concerns is considered separately in this section, although links between them are also drawn out.

10.6 Efficient use of regulatory resources

There are often potential gains to regulatory efficiency from appropriate ‘bundling’ of regulatory decisions and faster processes.¹⁷ Undertakings and multilateral arbitrations (which are also close to posting and enforcement of prices by the regulator) are options that spread the costs of regulatory decision making across more players. There is a plethora of options for more rapid decision making.

The role of undertakings

In Part XIC, a facility owner (or potential owner) may submit an undertaking to the ACCC that sets out terms and conditions of access. It may do so only after declaration of the relevant service, not before (as is the case for Part IIIA). If the undertaking adopts model terms and conditions in an approved TAF access code, the ACCC must accept the undertaking. Otherwise, the ACCC must publish the undertaking and invite and consider submissions. If the ACCC accepts the undertaking, it is enforceable in the Federal Court.

If an undertaking is accepted, then parties may still agree on terms and conditions different from those in the undertaking. Telstra noted:

The undertaking sets market-wide terms and conditions for access, which can be used to settle disputes when commercial negotiation fails (sub. 24, p. 40).

¹⁷ Such bundling may also encourage negotiations as the parties see options for tradeoffs that they may not pursue if one-to-one arbitration is the fall back.

The prime role of undertakings in Part XIC is to avoid costly and time-consuming bilateral arbitrations after disputes (Telstra sub. 24, p. 40 and ACCC sub. 16, p. 9).

In contrast, under Part IIIA, undertakings on terms and conditions for access are lodged prior to declaration. They are a substitute for declaration (conversely, a declared service cannot be the subject of an undertaking). The rationale for undertakings is to provide certainty on the access conditions that will apply to the service. In particular, it allows access arrangements to be settled prior to the investment in a new or additional facility. There is no comparable capacity under Part XIC for an owner or potential owner to immunise its services from declaration.

The Commission has floated a range of options for providing limits on access regulations for certain projects prior to the actual investment — and therefore prior to declaration (chapter 9). These options somewhat resemble a pre-declaration undertaking — but with limited access obligations.

It is less clear that other forms of undertaking are desirable in telecommunications before declaration. A concern is that the ACCC has taken a long time to evaluate undertakings — although this may decline as its expertise increases (chapter 7). The risk is that if undertakings were available as a pre-declaration mechanism they would delay declaration of telecommunications services — and access on appropriate terms and conditions for access seekers. Quite apart from the problems of delay occasioned by the regulator's need to deliberate, a facility owner might use undertakings strategically to frustrate declaration if it suspected declaration was imminent. The capacity for strategic delay is greatly enhanced because rejection of an undertaking is appealable to the Australian Competition Tribunal. Under the existing arrangements in Part XIC, undertakings and notifications of access disputes (which lead to arbitration) — can proceed simultaneously, *after declaration*.

Moreover, declaration and pre-declaration undertakings are imperfect substitutes where there are several providers of origination and termination services. Thus even were Part XIC to be amended to allow an undertaking by a particular access provider to be accepted prior to declaration, that would not necessarily obviate declaration of the service more generally.

Given the menu of options for immunising investments from access arrangements discussed in chapter 9, the Commission does not consider that there would be substantial gains from introducing *pre-declaration* undertakings for telecommunications. Were they to be introduced, they should not be appealable.¹⁸

¹⁸ By not permitting appeals of pre-declaration undertakings, then the overall delay occasioned by pre-declaration undertakings could probably be managed. In that case, in circumstances where the ACCC accepts an undertaking it may result in earlier access than otherwise. And in

Telstra has indicated that it is not willing at this stage to lodge any further undertakings (sub. 24, p. 44). One of the barriers to using undertakings apparently is ambiguity in the TPA about the scope of the appeals processes for undertakings (s. 152CE) compared with final determinations (s. 152DO). Certainly, s. 152DO is more explicit about the role of the Australian Competition Tribunal than s. 152CE. AAPT (sub. DR100, p. 38) and Vodafone (sub. DR70, p. 18) suggested that rejections of undertakings should be subject to similar merits review to that applying to final determinations, and the Commission agrees.

RECOMMENDATION 10.7

The Commission recommends amendment of the appeals process for undertakings (s. 152CE of Part XIC of the TPA) so that it mirrors the appeals process for final determinations (s. 152DO of Part XIC of the TPA).

Bilateral versus multilateral arbitrations

As noted in chapter 7 and in appendix G, there are many bilateral arbitrations before the ACCC — several covering the same sort of issues, and each using up the time and scarce resources of all parties. Arrangements for arbitration can be contrasted with both undertakings and declaration. The first relates only to the two parties in dispute; the second covers the access provider and any party that might wish to gain access to the facility specified in the undertaking and the latter applies to all the parties providing the relevant services. Moreover, the ACCC has the power to aggregate two or more public inquiries into declaration of services into one inquiry (s. 152AN) — thus enabling just one inquiry if a number of participants make complaints about access to a facility.

The ACCC considered that undertakings had failed as a mechanism to achieve industry wide interconnection terms and conditions for relevant services:

[The absence of undertakings] ... has resulted in pricing decisions for essentially non-differentiated services ... of general importance to the industry being determined in private, bilateral arbitration settings rather than in public, multilateral processes (sub. 16, p. 9).

The Commission sees merit in the scope for multilateral price setting of some form because it:

- economises on the regulator's resources;

circumstances where the ACCC rejects an undertaking, subsequent declaration and arbitration could proceed more rapidly than otherwise, so that the overall delay could be small.

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- allows all rivals to gain access simultaneously to the incumbent's facilities at prices that are deemed by the regulator to be economically efficient;
 - avoids the delays and costs of individually seeking effectively the same result through bilateral arbitrations; and
 - overcomes some of the information asymmetries that may disadvantage small rivals to the incumbent.

There are several options for increasing the efficiency in setting prices.

One option is for the regulator to determine and enforce prices for all access seekers in disputes over a common service. In many other countries — for example, Finland, France and Japan — operators with significant market power must publish standard interconnection offers specifying the technical conditions and tariffs applicable for interconnection (Productivity Commission 1999a, p. 133). The regulator requires that the offers meet cost-based pricing principles. Eighteen of twenty four OECD countries have a mandatory requirement to publish interconnection or access charges (Boylaud and Nicoletti 2000, p. 48).

The ACCC has proposed a similar approach for Australia¹⁹:

A possible amendment would be to allow the ACCC, in limited cases, to require a carrier or carriage service provider to submit an access undertaking in relation to a declared service where it is in the long-term interests of end-users. In the event that the carrier or carriage service provider fails to comply with the direction or the ACCC rejects the access undertaking proposed by the carrier or carriage service provider, the ACCC may, after conducting a public consultation process, draft and accept an access undertaking with which the carrier or carriage service provider must comply provided that the conditions in subsection 152BV(2) are satisfied (sub. 16, p. 92).

Such undertakings would not be negotiated in a multilateral setting, but rather between the ACCC and the access provider, but they would allow for consultation with affected access seekers. Perkins (sub. DR112) also proposed a similar arrangement, whereby, immediately following declaration, the ACCC would set interconnection charges for services of national significance, such as PSTN (but with the additional feature that these regulated charges would not be subject to appeal).

The main access provider, Telstra, opposed such broad price determination on four grounds (sub. 24, p. 41 and sub. 42, p. 1, 5). It argued it would:

¹⁹ In a similar proposal, ATUG (sub. DR69, p. 10) suggested that the ACCC should be able to oblige an access provider to give an undertaking within 60 days of declaration and to require it to be re-submitted if prices were clearly gamed.

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- tend to lead to uniform terms and conditions, which would be inimical to efficiency;

- A risk of prescriptive uniform pricing is that it may obviate the ability of heterogeneous access seekers to develop custom-made terms and conditions appropriate for their pattern of demand for services. On the other hand, the ACCC argued that such heterogeneity does not hold for most telecommunications services:

... any particular input service is likely to be largely homogeneous and undifferentiated in both cost and quality, so that a similar price should be appropriate for all access seekers except where quantity discounts or other special circumstances exist (sub. 16, p. 87).

As well, Telstra's own undertakings offered uniform pricing. In any case, even under multilateral price setting there could be scope for common price menus that allowed some variations in prices, depending on the nature of the exchange. For example, the terms and conditions of an arbitration that yielded a long-term contract could not reasonably carry over to a 'spot market' transaction.

- be inconsistent with the primacy given commercial negotiation in the access regime;
 - It is true that Part XIC was clearly set up in a way that intended to encourage bilateral commercial negotiations, with the threat of arbitration as a discipline on the negotiated terms and conditions. However, it is also the case that undertakings were intended to be the dominant means by which access conditions were determined. The form of arbitration suggested by the ACCC is like a mandated undertaking;
- be at odds with competition law and practice in that it facilitates collusion; and
 - Against this, it is likely that confidential bilateral negotiations that soak up spare capacity in some facility would be exposed to a greater risk of collusion than transparent arrangements.
- undermine undertakings, which were intended to fulfil this role.
 - This point is at odds logically with the others. If undertakings are a substitute for multilateral price setting then they are also subject to the other criticisms. In any case, Telstra has indicated that it is not currently willing to issue fresh undertakings.

Some participants suggested a variant on the ACCC's proposal for undertakings as a way of increasing the efficiency of regulation. AAPT (sub. 41, p. 18) suggested that all providers of an active declared service could be required to lodge an undertaking. Since there are a number of providers of some declared services, this

could lead to multiple undertakings, even by providers with little market power, with considerable regulatory effort in evaluating them (although this would not be required were firms with low market power to be exempted from declaration, as recommended in chapter 9). In any case, such a requirement to lodge an undertaking need not accelerate matters or result in a generally applicable access agreement for seekers, simply because no access provider can be obliged to lodge a reasonable undertaking.

Another option would be to allow any group of access seekers to exercise a voluntary option for ‘class’ arbitration with an access provider, leaving others to pursue bilateral arrangements if they wished (One.Tel sub. 18, p. 10; Hutchison sub. 6, p. 8–9; AAPT sub. 41, p. 15). This would preserve bilateral arbitrations where access seekers were heterogeneous. As noted by Vodafone (sub. DR70, p. 18), class arbitrations need not apply in all circumstances. For example, in some cases, varying chronologies of events leading to disputes, differences in pricing, timing or structures and different access seeker’s needs may require some matters to be pursued bilaterally. But where services were relatively undifferentiated, consolidated arbitrations would improve the efficiency of negotiations. It could also lead to the construction of a ‘menu’ of access prices that took account of differences in the types of contracts that access seekers wish to form with providers. It would not rule out the capacity for commercial negotiation if a particular access seeker were trying to get a better price (for example, negotiating a discount because it was willing to enter a long-term contract). A variant of this proposal could vest the ACCC with the power to undertake joint arbitrations where the disputes involved a sufficient degree of commonality.

Of the options for increasing the efficiency of bilateral arbitrations, the Commission favours the scope for multilateral arbitrations because it allows greater flexibility. Moreover, it could be combined with a greater degree of price disclosure (discussed later), to better inform those arbitrations that do proceed bilaterally.

Class arbitrations could occur when:

- the individual access seekers mutually agree to a joint arbitration; and/or
- when the ACCC judges that there is a sufficient degree of commonality in a set of disputes. This could be subject to the caveat that if a relevant access seeker refused to enter such a class arbitration, it could request a bilateral arbitration, but would be required to pay the full costs borne by the regulator and reasonable costs borne by the access provider associated with such an individual arbitration.

The Commission recommends that there should be the capacity under Part XIC of the TPA for class arbitration for bilateral disputes that have a sufficient degree of commonality.

Increasing the speed of regulatory processes

The declaration phase

On average, it took around one year for the ACCC to decide whether or not to declare a service (chapter 7).²⁰ The ACCC has an indicative timeframe for inquiries (of seven to ten months depending on complexity), but has exceeded this timeframe in all but one of the declaration inquiries that ultimately resulted in declaration.

PowerTel argued that the delays in declaration accentuated incumbent advantages:

The ‘declaration’ process is flawed because it takes too long and does not provide the flexibility necessary to bring new services within the reach of access seekers ... By the time a service declaration process is complete, the incumbent access provider has invariably made a similar commercial service available, effectively rendering the achievement of the declaration less significant (sub. 14, pp. 6–7).

On the other hand, the ACCC argued that:

A tradeoff between the speed, comprehensiveness and transparency of decision processes is inevitable. The ACCC is aware of some criticism in relation to the timing of declaration processes. However, the ACCC believes that declaration decisions have significant consequences and that it is important to take the time to ensure that high quality decisions can be made (sub. 16, p. 85).

The Commission considers that the problems occasioned by delays in declaration are largely transitional — the core services have been declared. The narrowing of declaration criteria recommended in chapter 9 should also reduce the number of declaration inquiries, enabling the ACCC to concentrate resources on the few that may pass this hurdle. The Commission considers that the present indicative timeframe should remain.

²⁰ Not including the deemed services.

The arbitration phase

Delay during the arbitration phase was one of the key areas of concern to participants and the Government.²¹ Almost all participants argued that the arbitration processes under Part XIC were slow and cumbersome — reducing the effectiveness and efficiency of the access arrangements (box 10.3).

Delays can be protracted. For example, for the fundamental telecommunications access service (originating and terminating PSTN access services), the delay between the first notification of dispute and the finalisation of the appeal is expected to be around five years (ACCC sub. DR98, p. 39).

However, to some degree, the delay has reflected the bunching of a series of highly complex evaluations of declarations and associated access pricing issues by the ACCC — and can be expected to fall in the future. Further, using the delay between a dispute and finalisation of an appeal can give an exaggerated impression of the slowness of the access regime. Workable competition emerges after the first determination (usually the interim), and so it is the delay to this point that is most relevant in assessing the delays in the access regime. Even so, there still have been long delays by this measure (appendix G).

Delays after the interim determination may also be problematic. Access seekers or providers face the risk of backpayments associated with revised prices under final determinations and appeals to the ACT. This risk grows with the extent of delay — and, unless prudently managed (box 10.2), could have a significant impact on the ability of a smaller player's financial viability if backpayments are required. Moreover, access seekers and providers must make decisions to invest in long-lived assets whose returns are dependent on *long-run* access prices. Carriers and CSPs will tend to delay more marginal investments until they achieve greater certainty through an ACT determination or if there is no appeal, a final determination by the ACCC.

Some of the general options for reforming regulatory processes canvassed in figure 10.2 (such as multilateral negotiations) may reduce delay. Those options are considered elsewhere in this chapter, because they have a wider significance. Here the focus is on measures targeted specifically at reducing delay in the arbitration phase.

²¹ Delay in Part XIC processes was a major reason for the Government's 'Trade Practice Amendment (Telecommunications) Bill 2001'.

Box 10.3 **The need for speed?**

... protracted delays in the arbitration of access disputes are impeding competition in the telecommunications sector, and delaying lower cost and higher quality services to consumers (Second reading speech for the Trade Practices Amendment (Telecommunications) Bill 2001, p. 1).

... recent history has demonstrated that incumbents have economic incentives to delay access to facilities for as long as possible and to offer access only on their own terms (iiNet sub. 5, p. 2).

The Part XIC processes have been too slow to cope with the rapidly changing dynamics of the telecommunications industry (Cable & Wireless Optus sub. 8, p. 73).

... it is Telstra's observation that the ACCC's management of the arbitration mechanism has been characterised by delay and uncertainty, as evidenced by the ACCC's failure to make final decisions in a timely and effective manner (Telstra sub. 38, p. 15).

[The evidence] highlights the inefficient arbitration process and the inherent duplication that wastes the time and resources of smaller carriers and CSPs (PowerTel sub. 14, p. 7).

[There is] no timely equal access to bottlenecks. PSTN equal access [was] delayed for 3 years ... But Telstra gives itself access from day 1 ... XIC regulation [is] slow and resource intensive (Davnet sub. 13, pp. 7–8).

The chief evil mentioned in commentary on the operation of the system is delay. Delay in settling interconnect and access pricing, delay in settling arbitrations and disputes, protracted self regulatory processes and slow resolution of competition issues generally (Australian Consumers' Association sub. 30, p. 7).

The statutory mechanisms for access under Part XIC tend to be slow to produce outcomes, a fact which is often exploited by the incumbents, allowing them first-mover and other advantages as a result (One.Tel sub. 18, p. 8).

In Hutchison's view, the length of time to reach negotiated outcomes is the most significant issue for the viability of the business case for market entry (sub. 6, p. 7).

Four years after the service [GSM] was declared, no costing methodology has been determined which could form the basis for negotiated settlements to the disputes (AAPT sub. DR100, p. 33).

Time limits

Time limits could be imposed on both the negotiation and arbitration phases (for example, Hutchison sub. 6, p. 8 and Macquarie Corporate Telecommunications sub. 11, p. 13).

Prior to implementing mandatory time limits, it is important to know why the processes take so long. The case for short time limits is weaker where the reason for delay is that:

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- the regulator is under-resourced. One.Tel (sub. 18, p. 9) and Macquarie Corporate Telecommunications (sub. 11, p. 12) argued for more resources to speed up decisions;
 - the access provider tries to stymie the arbitration by slowly providing information, and challenging every step. A (binding) time limit reduces this incentive by the provider, but only partially. Even under a time limit, by frustrating information flows or the process in other ways, the access provider can reduce the ability of the pricing determination to survive a subsequent appeal — which has strategic value; and
 - the matters are very complex and it takes a long time for the ACCC to reach an appropriate judgment. A short time limit might lead to a hasty and incorrect decision (AAPT sub. 41, p. 21). Where decisions set precedents, this can have ongoing adverse effects. The ACCC emphasises that it is important to take the time to ensure that high quality decisions are made (sub. 16, p. 85).²²

In the draft report, the Commission rejected binding time limits for the reasons above and suggested that *indicative* time limits may provide a guide to participants about the length of the process and provide some (weak) disciplines on participants. This was advocated by the NCC for the Commission's parallel inquiry into Part IIIA of the TPA. Indicative time limits are already published by the ACCC for declarations under Part XIC (ACCC 1999b, p. 26) and for actions under Part XIB (ACCC 1999a, p. 16). Participants had varying views about their worth. AAPT (sub. DR100, p. 39), PowerTel (sub. DR102, p. 16) and SPAN (sub. DR78, p. 3) supported time limits for arbitrations. On the other hand, Macquarie Corporate Telecommunications considered that they would be 'flaunted and therefore pointless' (sub. DR97, p. 6). Vodafone (sub. DR70, p. 19) thought it would be counterproductive to legislate a common time limit, but advocated that the ACCC be directed to issue an indicative timetable for each arbitration.

While it considers that indicative time limits would be of some value, the Commission has also re-considered its initial judgment that *binding* time limits are not appropriate. With recent budget augmentation of the ACCC, resource constraints are less likely to make time limits impractical.²³ Also, it is not clear that failure to provide information by access providers has been a major source of delay (and in any case the ACCC has extensive powers for gathering information were

²² The ACCC is already required to make its decisions as speedily as circumstances allow (s. 152DB(1)(b)).

²³ Moreover, the Commission has proposed a number of changes to the access regime (such as narrowed declaration criteria, monitoring and 'class' arbitrations) that may also enable ACCC resources to be concentrated on fewer access disputes.

this to arise).²⁴ Concern about getting complex matters such as access pricing ‘right’ are relevant to final determinations, but less so to interim determinations. Interim determinations are intended to provide a workable price within an acceptable band at which competitive access can commence. As Perkins has noted:

The ACCC’s emphasis should, therefore, not be on getting the interim determination ‘right’ but getting it ‘in the right ballpark’, that is, on making an ‘educated guesstimate’ of the right price (sub. DR91, p. 2).

Finally, a number of countries impose time limits — suggesting their workability. Sweden, for example, sets a time limit on negotiations on telecommunications interconnection tariffs (Productivity Commission 1999a, p. 134). The New Zealand *Telecommunications Act 2001* stipulates that the Commerce Commission must make ‘reasonable efforts’ to complete a determination in 60 days or less (clause 24). A time limit of 10 months applies to state commissions conducting binding arbitrations in the US (Kahn 2001, p. 20).²⁵ And indeed the ACCC itself is already subject to what is effectively a binding time limit on one phase of the arbitration process. S. 152CPA(5) requires that the interim determination will lapse after 12 months, so that the ACCC must effectively produce a final determination within one year of the interim determination.

This suggests that there are grounds for short mandatory time limits for making *interim* determinations that allow the ACCC to provide an estimate of the access price.²⁶ For example, ATUG suggested 45 days (sub. DR69, p. 9). The Commission proposes a short period— such as four months — for making an interim determination.

Moreover, there are grounds to shorten the existing 12 month life of an interim determination, so that final determinations are made more quickly. The existing 12 month life was set in a period when the ACCC was inexperienced and facing simultaneous complex arbitrations and undertakings.²⁷ However, the ACCC:

²⁴ Other changes, such as those discussed by the Commission in regard to the provision of information under s. 155 of the TPA (chapter 6), may also serve to overcome the obstacles posed by lack of information.

²⁵ Gilbertson (2001, p. 82) says that specified time periods for decisions have been used in Europe, which bind both the regulator and the affected party.

²⁶ Such a time limit would also overcome the problem noted by AAPT (sub. 7, p. 34) that the ACCC had sometimes delayed making an interim determination until it had assessed a relevant access undertaking (as in the Telstra PSTN undertaking).

²⁷ Indeed, often a long time elapsed after the dispute notification before the ACCC reached a final determination. Patrick (2001) claims that some of the delays in interim determinations reflect the ACCC’s desire to have enough overall time from the notification of the dispute to reach a final determination that will survive an appeal.

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- is now highly experienced in the complex economics of telecommunications, has developed pricing methodologies for the key difficult services and has good international contacts with other telecommunications regulators tackling similar problems, all of which should enable it to reach speedier decisions;
 - could also pro-actively devote resources to likely future declared services ahead of their declaration, thus reducing the time taken to reach future determinations;
 - could employ experts who already have the information or models for emerging problem areas; and
 - could be given more resources to hire staff or fund expert consultancy work, but only *if* it could be demonstrated that this would substitute for the time elapsed in reaching determinations.

An additional basis for reducing the life of interim determinations is that the risks associated with investment and contingent liabilities increase with delay, while there are diminishing returns from additional time in getting the ‘right’ price. It is revealing that the difference in access prices from the draft to the final reports in the ACCC assessments of Telstra’s PSTN undertakings were small (ACCC 1999g,l, 2000c,s). And while the apparent degree of uncertainty associated with the ACCC and ACCC-sponsored evaluations of Telstra’s PSTN undertakings appears to have fallen over time, this may be more illusory than real (table D.1 in appendix D). Long-standing methodological debates over aspects of TSLRIC have still not been resolved by experts. After an initial period for assessment, providing more time to the regulator is unlikely to resolve parameter uncertainties and major ongoing methodological issues.

On those grounds, the Commission considers that there are grounds for reducing the life of an interim determination to around six months (so that the overall elapsed time from notification of a dispute to a final determination is less than one year). It should be noted that this time period is greater than that being proposed for Part IIIA access arbitrations, recognising the often greater complexity of telecommunications pricing issues. Such a time limit may not have been feasible when the ACCC was first tackling PSTN pricing issues, but circumstances have since changed. However, because the future nature of declared telecommunications services remains uncertain, mandating a shorter life for interim determinations might sometimes put at risk the quality of the final determinations. This justifies the inclusion of a provision that allows an extension, but only in extraordinary circumstances.²⁸

²⁸ It might seem that an indicative rather than a binding time limit could be applied under s. 152CPA(5). However, a binding time limit is necessary so that the ACCC does not permanently defer a final determination, putting off any appeal.

There should also be an *indicative* time limit of around four months for the duration of an appeal to the ACT — which also matches that considered by the Commission (and the NCC) to be appropriate for the Part IIIA access regime (Productivity Commission 2001c). As in the Commission’s proposals for Part IIIA, if the Tribunal wishes to extend a target limit in a particular case, it should be required to publish notification to that effect in a national newspaper — this provides some discipline for speedy results.

RECOMMENDATION 10.9

The Commission recommends that:

- 1. The ACCC must make an interim determination within four months of the date of the notification of a dispute; and that s. 152CPA(5) of Part XIC of the TPA be amended so that:***
 - (a) interim determinations remain in force for no longer than six months; and***
 - (b) this period can only be extended if a public request stating reasons is agreed to by the relevant Minister.***
- 2. S. 152DO should be amended so that the ACT has a four month target time limit for completion of an appeal of a final determination after lodgement of the appeal. If the Tribunal wishes to extend a target limit in a particular case, it should be required to publish notification to that effect in a national newspaper with reasons.***

In the event that the Government does not implement binding time limits of this kind, the Commission considers that an *indicative* time limit be legislated for making interim determinations.

Alternative dispute resolution methods

Alternative dispute resolution (ADR) methods may sometimes be useful in resolving disputes.²⁹ ATUG suggested that there be mediation/conciliation before the ACCC agrees to arbitrate an appeal (sub. DR69, p. 8).

ADR will be most appropriate where there all disputing parties can do better than under arbitration. However, in the context of rivalry that arises from differences in market power, it is unlikely that dispute resolution procedures will be effective at reaching a commercial negotiation (analogous to the problems that arose in the TAF). However, ADR may sometimes also narrow the basis for the a dispute,

²⁹ For example, in the circumstances cited by Cable & Wireless Optus in footnote 21 in chapter 9.

allowing more focused subsequent arbitration. The danger of a mandatory requirement for ADR is that it could be gamed to produce delays.

For these reasons, the Commission considers that alternative dispute resolution should be a discretionary element in the arbitration process, which is used where the ACCC considers it likely that it will accelerate the resolution of a dispute.

Better use of information over successive disputes

It is also possible that some moderate time savings could be achieved by allowing the ACCC to use and make available to the contesting parties of an arbitration relevant material submitted in other arbitrations, current or past, without some of the present restrictions (Macquarie Corporate Telecommunications sub. 44, p. 1). The ACCC is currently required to seek and consider submissions from all relevant parties prior to using such material to ensure that divulgence will not prejudice a party's commercial position — a process that can take some time (six weeks in one case involving Macquarie Corporate Telecommunications).

Macquarie Corporate Telecommunications (sub. 44, p. 1) noted that courts often hear commercial disputes with full disclosure. The Commission considers that there are grounds for the ACCC to have the discretion to refer to such material. In exercising that discretion it should have regard to the potential commercial sensitivity, but should be able to determine, without appeal, the appropriate degree of consultation required to ascertain that. Even if cited in another arbitration, such material would be only released to the contesting parties to an arbitration — and these must sign confidentiality agreements.

RECOMMENDATION 10.10

The Commission recommends that the ACCC should exercise its discretion in allowing the arbitrator to use and disseminate to contesting parties in an arbitration relevant material submitted in other telecommunications access arbitrations, subject to the requirement that the ACCC has regard to the material's potential commercial sensitivity.

A better method for updating determinations

The TPA does not specify the life of final determinations, but the ACCC has advised the Commission that they usually last for one to three years. The determination itself can include scope for adjustments that take account of changing costs over the life of the final determination, but otherwise the ACCC is not

permitted to change the determination without the consent of all relevant parties (s. 152DT).

It is possible that after a protracted appeal process, the residual life of a determination might be less than a year. A fresh interim/final/appeal process would then ensue, with the potential for further delays in achieving access at appropriate prices. However, in chapter 11 the Commission suggests an approach for the pricing of the core bottleneck services that would permit more rapid re-determinations when an existing determination lapses. This, with time periods, would reduce the problems associated with uncertainty and future delays associated with re-arbitration.

10.7 Avoiding regulatory errors and reducing business uncertainty

Accountability

Accountability processes are mechanisms that enable judgments by regulators to be scrutinised and challenged. They provide incentives for prudence by the regulator, provide new sources of information to regulators and serve to weaken the risks associated with regulatory capture and error. One of the key mechanisms is transparency. This provides others the opportunity to assess whether the decisions made by a regulatory body are appropriate, and increases the care exercised by the regulator. A complementary and sometimes alternative accountability mechanism is an appeals process.

Transparency

Declaration

Declarations are not appealable on their merits, but the ACCC is required (amongst other things) to hold a public inquiry into declaration if it is ‘appropriate and practicable’ to do so (s. 497 of the Telecommunications Act).³⁰ The latter caveat provides a reasonable balance between the need for transparency and the costs of achieving it. When invoked, the public inquiry procedures contain relevant measures for procedural transparency — including publication of discussion papers,

³⁰ In contrast, there is no such requirement for the NCC under Part IIIA, though it has, in fact, undertaken public inquiries for declarations.

the holding of hearings, public comment (and submissions), consideration of comments received, and publication of a final report.³¹ The Commission considers these public inquiry arrangements are appropriate.³²

Arbitrations

In contrast to declarations, to date arbitrations have been conducted bilaterally and in a commercial-in-confidence setting — resulting in the repetition of matters that have been dealt with in previous arbitrations. The Commission’s proposal for multilateral arbitrations (above) is likely to resolve this problem in the majority of cases. However, multilateral arbitration can only proceed where there is a group of access seekers with a like dispute. In some instances, a dispute will arise for only one access seeker, with others following sometime later. In that case, there may be grounds for some transparency of that bilateral arbitration so that future like arbitrations can proceed more efficiently:

[Where there is a general access dispute] in which industry-wide arrangements are required in areas where a dominant position is held by a single access provider ... [then] at a minimum, transparency of disputes would considerably speed up competitive processes (FlowCom sub. 12, p. 4).

Open arbitrations are merely a further step towards parity with the judicial processes. Open arbitrations would reduce the number of telecommunication arbitrations brought before the ACCC, currently in excess of thirty, by providing precedents on methodology, terms and pricing. Fuelled by multi party arbitrations with parties able to share costs and information, precedents would quickly be established (Macquarie Corporate Telecommunications sub. DR97, p. 4).

According to the ACCC, there is little interest in opening up proceedings to other relevant parties:

There has been little preparedness on the part of either access providers or access seekers to embrace proposals by the [ACCC] for concurrent processes across a range of disputes relating to the same service (sub. 40, p. 27).

There are some disadvantages with fully transparent bilateral arbitrations because:

- the terms and conditions of any contract may incidentally reveal the commercial plans of access seekers and providers — which is appropriate proprietary information;

³¹ S. 155AB of the TPA also enables the ACCC to disclose information to other parties in certain contexts.

³² Indeed, the ACCC’s inquiry processes are similar to those used by the Productivity Commission.

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- transparency about such details is contrary to the customary way in which businesses contract with each other — and opens up to external scrutiny the minutiae of negotiation arrangements between private parties; and
 - it may also create free-rider problems associated with efficient contracting. Contracting is a way of dealing with transactions costs between parties — and is in this sense a form of ‘technology’ that can be expropriated by others if it is fully disclosed — thus weakening the incentives for efficient contracting arrangements.

For these reasons the Commission opposes full transparency of bilateral arbitrations, but notes that under the proposed changes for arbitration, many disputes may be resolved multilaterally.

Another option — advanced by PowerTel (sub. 14, p. 7) — is that following the first bilateral arbitration on a class of services, the ACCC could set benchmark prices, similar to the prices that might be set in an undertaking. These could take the form of a ceiling and floor rate. Other access seekers that subsequently notified disputes could then try to negotiate commercially within this price range, with the pricing outcome determined by contract duration, volume or market demands of the access seeker. Since this would not divulge the actual bilaterally negotiated terms and conditions, it would not breach confidentiality per se, but it would provide some information to other parties as a starting point for arbitration — or preferably for commercial negotiation outside arbitration.

Such a reference pricing arrangement is complementary to the proposal for class arbitration (section 10.6) and the publication of the specific pricing methodology associated with the declaration of a particular service (chapter 11). It would further encourage the efficient resolution of a sequence of bilateral arbitrations that could not be dealt with by multilateral arbitration.

RECOMMENDATION 10.11

The Commission recommends that there be provision for the ACCC to publish an indicative price range that reflects the outcomes of an interim or final determination, so that other parties are in a better position to negotiate commercially.

Appeal processes

While appeals increase accountability and may reduce regulatory error, they also slow regulatory decisions and increase compliance burdens and administrative costs. As argued by C7:

Delay can kill a project in the telecommunications industry through lost opportunity and by draining the resources of the proposed competitor through responding to review processes (sub. DR107, p. 9).

In relation to access declaration and arbitration, any such costs probably bear more on new entrants trying to establish a presence in rapidly changing markets. As well, rivals to the incumbent may not have the deep pockets³³ needed to meet the high legal costs of representation, or if they do, lack the financial incentive to use them.³⁴ Accordingly, determining the extent of appeal processes under Part XIC requires balancing their pros and cons. In some cases, these pros and cons can be altered by more closely specifying aspects of the appeal, such as time limits, the coverage of the appeal and backpayment provisions.

Undertakings, individual exemptions and final determinations under Part XIC are appealable to the ACT, but not declarations or interim determinations. Appeals can be lodged with the Federal Court on other matters, but only on matters of law, not merit.³⁵

The ACCC raised the question of the appropriate scope of appeals of final determinations under Part XIC, indicating that there are limits to merit reviews in many other assessments by regulatory bodies (sub. 16, p. 93; sub. DR98, attachment B). For example, there is no provision for merit reviews of determinations under the *Telecommunications Act 1997*, arbitration determinations under the National Gas Code or access matters arbitrated by the NSW Independent Pricing and Regulatory Tribunal.³⁶ On the other hand, Telstra noted that merit review processes are still a feature of Part IIIA of the TPA (the companion access regime to Part XIC) and effectively a common feature in international telecommunications access regimes (sub. DR101, pp. 104ff). It is not clear that worldwide institutional practice indicates a convention in favour or against full merit review.

³³ Against this Telstra has noted that many of the major rivals are subsidiaries of global telecommunications companies whose overall size is greater than Telstra.

³⁴ Imagine a prize of value V , currently held by one party, that could be shared among n other rivals on successful appeal by any single party. Only one appeal can be heard. The worth of the prize to the incumbent is V and they will expend up to V resources defending it. But to each rival, the expected value of the prize is only V/n . Unless they coordinate an appeal and pool resources, each rival faces weak incentives to spend as many resources as the incumbent.

³⁵ For example, Telstra and Foxtel (ACCC sub. 16, p. 45) lodged an appeal with the Federal Court on a matter of law against the declaration of an analogue-specific subscription television broadcast carriage service.

³⁶ And sometimes merit review processes are more apparent than real. For example, the new access regime for New Zealand (The Telecommunications Bill 2001) allows a merit review, but it is exercised by the original arbitrator, rather than an independent review body.

The ACCC and a number of other parties³⁷ also argued against merit review on the grounds that it was inefficient and encouraged gaming by powerful incumbents:

The ACCC does not believe that the benefits of full merits review of final determinations justify the costs and delay involved ... Merits review by the Australian Competition Tribunal in addition to appeals to the Federal Court on questions of law increases the incentives for incumbents to achieve strategic delay through appeals and further delays the resolution of disputes (ACCC sub. DR98, p. 39).

In addition, Telstra games the system and appeals interconnection pricing determinations which adds significant uncertainty to start-up businesses. Blocking strategies of this nature must be eliminated and replaced with a more reasonable process mandated and overseen by the Regulator (SaskTel sub. DR90, pp. 3–4).

ATUG believes such delay [associated with the merit review process] goes against the Government's objective of a speedy and efficient access regime in Part XIC (ATUG sub. DR94, p. 2).

On the other hand, as noted by Telstra (sub. DR101, pp. 64ff, pp. 104ff) and Vodafone (sub. DR70, p. 20) there are good grounds for a merit review process for final determinations. The Administrative Review Council (1999), as a matter of principle, favours a full merit review process, except in rare circumstances that do not seem to apply to final determinations under Part XIC.³⁸ At stake is infrastructure worth billions of dollars and the pricing of access services that are the key to the nature of competition in Australian telecommunications. The matters are complex, basic methodologies have been questioned and continuing debates ensue over key parameters. There is unquestionably scope for regulatory error. Were there to be no review process, the care taken by the ACCC to set efficient terms and conditions could be reduced. Eliminating the scope for an appeal removes the possible divulgence of regulatory error, but it does not remove its consequences for the affected parties. The extent to which appeals generate delay costs is also over-dramatised. Appeals produce delay costs, but they do not prevent effective interconnection in the meantime given that the interim or final determination applies (s. 152DN).

Even if a merit review process is retained, that still leaves the question of whether any such merit review should be subject to other conditions, such as limited

³⁷ AAPT (2001a), Primus (2001) and Cable & Wireless Optus (2001d) and Cable & Wireless Optus et al. (2001) made submissions to the Senate Environment, Communications, Information Technology and the Arts Committee in September 2001 recommending that appeal rights for determinations be removed. Telstra (2001d) and Vodafone (2001b) had contrary views.

³⁸ It does note, however, that where decisions involve an extensive inquiry process that would be repeated on review, this may constitute grounds for not having a merit review — a perspective adopted by the ACCC (sub. DR98, p. 39). However, as noted by Telstra (sub. DR101, p. 108), the type of inquiry conducted by the ACCC does not seem to be of the kind considered relevant by the Administrative Review Council.

evidentiary scope, limited backpayments, and indicative time limits. The Commission has already proposed the latter to counter delay and to reduce commercial risks. The other two potential conditions are more complex to resolve.

Limited evidentiary scope?

ATUG (sub. DR94, p. 4) argued that were a merit review to be retained, it should be obliged only to consider evidence already put to the ACCC. Whether ATUG's position is an appropriate compromise depends on the degree to which it is likely:

- to weaken 'natural justice'. In favour of ATUG's position is that the inability to provide new evidence is only transitory. An aggrieved party can admit the new evidence when the final determination lapses. However, it could not receive backpayments for the period covered by the previous determination — and this determination may have a reasonable duration;
- that fresh evidence significantly material to the review becomes available after the ACCC's determination process. While the Commission questions whether much new evidence is likely in the context, the economics of telecommunications networks is still developing and new theoretical and applied approaches are emerging (for example, applications of options theory to valuation). As well, findings in other jurisdictions or in other areas of infrastructure as to appropriate depreciation or other methodologies are also constantly appearing and may also clarify pricing in Australian telecommunications. Indeed, if ATUG's measure were put in place this year, the ACT may not be able to use the Productivity Commission's final report as a relevant material in considering the appeal before it;
- to reduce the time taken to review matters. Generally, the greater the scope for new information, the greater the amount of argument and evidence that the Tribunal must sift through — increasing time pressures. However, sometimes new information — particularly a new pricing methodology — may simplify (and shorten) decision making, especially if it displaces a complex model. In any case, if the principal concern about appeals is that they take too much time, then a direct measure — a time limit — is probably the best method for dealing with this. In that sense, measures that constrain the ACT constitute braces to the belt of the time limit — and have a weaker foundation. On the other hand, the Commission has proposed an indicative rather than a binding time limit, so that reducing the scope of the review may reduce the risk of time overruns;
- to invite legal disputes over admissibility. It is feasible to introduce limits on the scope of evidence, as it applies in several other appeal mechanisms. Rules of evidence are usually employed to determine what matters are admissible or not. However, even with these rules, disputes can arise over what constitutes

admissible evidence — suggesting that there would be scope for wasteful legal debate and time delays, before even considering the substantive matters that need to be resolved; and

- to have adverse or positive incentive effects on parties. ATUG points out that without limited evidentiary scope, parties have a potential incentive to hold back material information from the ACCC in arbitration and introduce it in an appeal. On the other hand, Telstra (sub. DR101, p. 9) argues that such a measure would impel parties to overload the arbitration phase with any possible information so as to be able to refer to it later in a review. The Commission questions whether either incentive is likely to be that strong or significant.

Overall, the Commission concludes that time limits are the more appropriate discipline over delay and does not recommend that the evidentiary scope of the Tribunal be reduced.

The scope for limiting backpayments from an appeal?

The ACT may ultimately settle at a price that is different from that determined by the ACCC in its final determination. This exposes access seekers or providers to potentially large and possibly debilitating backpayments — especially with current protracted processes. This may suggest limiting backpayments resulting from an appeal.

However, to some degree, parties can manage the risks associated with backpayments by setting market prices from the time of the interim determination that take account of the possibility that the appeal price diverges from the ACCC's pricing determinations (box 10.2).

Backdating also provides parties with incentives to ensure that the regulator behaves in an unbiased way, since that also reduces the risks associated with appeals. Backdating payments also signals the costs of regulatory error and provides a clear criterion by which to judge the performance of the regulator.

If the payments are statutorily barred, it does not make the regulatory liability vanish, but simply shifts it to the party that has been the victim of the error. If it is argued for some sound reason that a particular access seeker (provider) should not meet a backpayment, arguably the liability should be met by Government rather than the access provider (seeker).

Either way, s. 152DO does not clarify the nature of backpayments associated with a revision of the final determination price. Such clarity is required in order that parties can plan better their investments, pricing and market strategies; and

The Commission recommends that merit review of final determinations by the Australian Competition Tribunal be retained, but that provision for backdating of an appeal determination should be clarified by cross referencing to the Commission's proposed amendment to s. 152DNA of Part XIC.

The question also arises of whether there is sufficient existing scope for reviews of other decisions by the ACCC. Currently, there is no scope for an appeal of a declaration or interim determination under Part XIC. In contrast, under Part IIIA, there is full provision for review of declarations by the relevant Minister and the ACT, and no interim determinations.

Telstra claims that the existing appeal provisions are biased against access providers and, in the absence of more speedy appeal processes, exposes them to the risk of regulatory taking:

Telstra could, and will if necessary eventually address these shortcomings in the ACCC's approach through appeal to the Australian Competition Tribunal. However, the reality is that the ACCC, by relying on its powers to issue Interim Determinations, can postpone if not escape vulnerability to appeal. Further, while it relies on these Interim Determinations, it alters market processes in ways that are difficult, if not impossible, to reverse (sub. 38, p. 18).

Part XIC service declarations made by the ACCC are *not* subject to a full merits review and can only be appealed to the Federal Court on administrative grounds (sub. 24, p. 37).

Telstra proposes that interim determinations be removed from Part XIC (sub. 38, p. 5), leaving final determinations, which are subject to merit review. However, the Commission considers that interim determinations permit workable competition to emerge in a relatively speedy way, a view that a number of entrants also maintained (AAPT sub. 41, p. 14; Macquarie Corporate Telecommunications sub. 44, p. 4).

Telstra also proposes merit review of declarations, which it says might increase delay, but would also increase the accuracy of decision making (sub. 24, p. 37; sub. DR71, p. 23). Vodafone (sub. DR70, p. 20) also argued that declaration is a 'highly interventionist regulatory response' meriting a review mechanism. Others disagreed, arguing that speedy processes were an essential element in an effective telecommunications access regime (AAPT sub. DR100, p. 29).

Whether or not declaration should be subject to review depends on the tradeoff between the potential for costly gaming by incumbents and improved regulatory accountability:

-
- If declarations could be appealed, then an incumbent will typically have an incentive to contest any declaration decision, even one where there is a strong prima facie case for declaration. This incentive arises because appeals take time, with the potential effect of lengthening the period that the incumbent can use high access prices (or even deny access) to earn rents in downstream markets, exploit first mover advantages in the development of any new services, and develop other strategies for locking in customers in advance of intensified competition. The need for speed is greater in telecommunications than most other regulated utilities with stable demands and technologies.
 - Against this, an appeal process implies that the regulator will take greater care in applying the declaration criteria and reduces the scope for inappropriate declaration.

In the draft report, the Commission recommended that merit appeals by access providers not be extended to declarations because safe-harbour provisions and the more restrictive declaration criteria recommended by the Commission reduced the likelihood of inappropriate declaration.

However, the Commission has re-assessed this argument and notes that there remains a risk that the declaration provisions could embrace services that should not be declared. The Gas Code uses analogous declaration criteria to Part IIIA — which are tighter than the proposed Commission's criteria for telecommunications. Yet, it is revealing that the NCC's decision on the Eastern Gas Pipeline was successfully appealed by Duke Energy to the ACT, suggesting that even tighter criteria do not necessarily avert the need for merit reviews (Telstra sub. DR 71, p. 23 and Productivity Commission 2001c).

There is also some question over past declarations of analogue-pay TV and intercity transmission services on the grounds of effectiveness and/or appropriateness. The ACCC has indicated that it may be appropriate to 'extend the GSM service declaration so that it also applies to other mobile technologies' and has proposed an inquiry into CDMA services in order to potentially align those services with the pricing decision on GSM (ACCC 2001n, p. 79, 2001s). Yet, it also acknowledges that mobile services are effectively competitive. As noted by Cable & Wireless Optus (sub. DR72, p. 23), the ACCC is in fact using mobile declaration as a basis for re-structuring charges for the components of mobile service in manner that it considers is more Ramsey efficient than that determined by the mobile operators themselves. This rationale for declaration is a long way from the original intent of the access provisions, and at least merits the scrutiny of review.

Consequently, the Commission considers that there is a basis for some sort of review capacity, *if this can be done without allowing scope for strategic delay by*

incumbents. There are a number of ways in which the time lost by an appeals mechanism could be minimized or potentially completely abated:

- a binding time limit could be imposed on the appeal body (for example of four months), with the appeal lapsing if the time is exceeded;
- to the extent that such time limits do not suit a quasi judicial body like the ACT, another body could fulfil the function;
- an access seeker could be able to notify a dispute at the completion of an ACCC inquiry into declaration, with backpayments applying to the time of the notification of the dispute, if an appeal upholds the declaration of the service; and
- several activities that would normally follow declaration could still occur while a judgment on appeal was pending. Parties could commence commercial negotiation (a requirement of the TPA in any case), the ACCC could propose and supervise alternative dispute resolution, and the ACCC could gather information under its information gathering powers and commence detailed pricing research. To the extent that the time taken for these activities would normally exceed the appeal period, no time would be lost from having an appeal.

RECOMMENDATION 10.13

The Commission recommends that declarations be subject to a merit appeal process, but the appeal should:

- ***be lodged within 21 days after the Commission has made its decision;***
- ***be limited to four months; and***
- ***not stay other processes under Part XIC, with the exception of the capacity of the ACCC to make a determination under an arbitration.***

Issues of interaction, inconsistencies, loopholes and duplication

Between Parts XIC, XIB, IV, IIIA of the TPA and the Telecommunications Act 1997

The capacity for access seekers to gain access through multiple forums raises both the possibility of opportunistic forum ‘shopping’, added complexity to legislation and the scope for inconsistencies.

There are a number of overlaps between various legislative instruments applying to telecommunications, but the Commission’s judgment is that they are not serious.

Access conditions are not just specified under part XIC, but also under carrier licence conditions. The licence conditions are reviewed in chapter 12, where, on pragmatic grounds, the Commission recommends their continued separate application.

Access arrangements are also specified under Part IIIA. Part XIC is currently constructed in a way that would deter an access seeker from choosing Part IIIA as the vehicle for declaring a telecommunications service (box 10.4). If a telecommunications-specific regime continues, then it will be important to continue to define the boundaries of the two Parts carefully. The Commission has emphasised that provisions of Part XIC should mirror, sometimes by simple reference, the counterpart clauses in Part IIIA to ensure consistency.

Part IV of the TPA and Part XIB could relate to access matters where the conduct of the access provider was an abuse of market power. This means that on occasions the ACCC may have a choice of taking action under anti-competitive provisions of the TPA, Part XIC or requesting amendments to the *Telecommunications Act 1997*. Moreover, s. 152EF of Part XIC outlaws conduct that has the purpose of preventing or refusing access — effectively replicating features of Part XIB.

Unlike the draft report, the Commission has recommended the retention of Part XIB for the time being, so that these overlapping functions will persist. As noted in chapter 5, a case can be made that there were other potentially superior regulatory approaches to both major matters dealt with under Part XIB (churning and peering), such as Part XIC or arrangements akin to number portability. Inevitably, it will be a matter of regulatory judgment whether action is taken to solve a problem using one tool over another. The Commission's proposed amended appeal provision for Part XIB should provide one discipline over the use of Part XIB compared with alternatives. The Commission also reiterates its view that Part XIB is still only a transitional provision, hence the need for a new review of that part in a reasonably short time-frame.

Problems of overlap of Part XIC with Part IV are currently minor. However, overlap might become a more significant issue if the Government were to implement mechanisms for 'immunising' prospective investments from declaration (chapter 9), and an access seeker were to try to gain access via Part IV. This is a much broader question dealing with the general interaction of access and anti-competitive parts of the TPA. It is dealt with in the companion inquiry into Part IIIA (Productivity Commission 2001c).

Box 10.4 How does the TPA prevent multiple or conflicting actions under Part XIC and Part IIIA?

As Part IIIA is a generic regime open to any party, the TPA must set out how Part IIIA and Part XIC interact to prevent situations in which multiple or conflicting actions are undertaken. The TPA resolves the potential overlaps and conflicts between the two parts by giving precedence to Part XIC. For example:

- although an undertaking under Part IIIA is intended to ‘immunise’ a facility provider from subsequent declaration, for telecommunications services such an undertaking can be rendered null and void by declaration under part XIC;
- if a service is declared under Part XIC, the ACCC cannot accept an undertaking under Part IIIA. As a result, there is no method by which an owner of a telecommunications facility can be immunised from declaration under Part XIC; and
- although a telecommunications service can be declared under either part (but not simultaneously), any subsequent arbitration on terms and conditions may only occur under Part XIC.

The effect is that telecommunications access arrangements have in practice been wholly based on the legislative provisions within Part XIC.

Sources: ACCC 1999b and s. 152 CK TPA.

Within Part XIC

Some matters, such as the issue of backpayments and the potential for the gaming of access seeker’s rights, have already been considered. C7 (sub. DR107, pp. 6–7) raised a number of other concerns about inconsistencies and loopholes in Part XIC that merit consideration.

Section 152AR(4) imposes limits on standard access obligations that are relevant to the scope of the determinations made by the ACCC when arbitrating an access dispute. Under this section, there is no obligation to supply access to the extent that it prevents the access provider obtaining a sufficient amount of the declared service to meet the access provider’s reasonably anticipated requirements. This capacity consideration is rarely relevant for Part XIC services, but it is applicable to the analogue pay TV service because the number of channels available is limited. Section 152AR(4) provides that reasonably anticipated requirements are to be measured at the time when the *access request was made*. However, s. 152CQ (1)(a) and (b) specify the relevant time as when the *access dispute was notified*. This inconsistency has created legal uncertainty as to the applicable date. It also provides an incentive for early notification of a dispute to avoid a situation in which the access provider might seek to ‘manufacture’ other uses for whatever spare capacity remains.

Setting the date at the time that the access request was made solves these strategic problems.³⁹ However, the date at which such a request is made may be ambiguous, unlike the dispute notification date (for example, is an expression of interest an access request?). This could be resolved by allowing a party to notify the ACCC formally when an access request is being made (only parties that believe s. 152AR(4) will be relevant would generally do so). However, this would still require the ACCC to judge whether that request was a genuine one. In that case, it may be better for the relevant time to be the date of a legitimate access request, as determined by the ACCC after consultation with both the access seeker and provider.

RECOMMENDATION 10.14

The Commission recommends that s. 152CQ(1)(a) and (b), and s. 152AR(4) be amended so that the relevant time for assessing ‘reasonably anticipated requirements’ is the date at which the access request was made, as determined by the ACCC after consultation with the access seeker and provider.

C7 also maintains that s. 152CQ(1)(f) also contains a clause that may unintentionally limit the scope of an access seeker to gain access to a facility. The section states that the Commission must not make a determination that would require any party (other than the access seeker) to bear some or all of the costs of extending or enhancing a facility. One interpretation of this untested section is that in circumstances where an access provider is required to bear *any* facility costs as a result of the determination — no matter how small — a determination would be set aside. C7 indicates that the section has inefficient and unintended impacts:

- the first access seeker would have to bear the costs, on which subsequent access seekers would free ride;
- the calculation of the cost may be problematic. For example, an access seeker may only want access for a particular period (such as during the Olympics) but would be required to finance the full enhancement to the facility, rather than on a lease or some other basis that spreads the costs across the life of the enhancement (and hence future users of the enhancement); and
- the access provider may game the requirement by insisting on goldplated modifications, thus affecting the costs of the access seeker.

C7 suggested that the words ‘some or all of the costs’ in s. 152CQ(1)(f) be amended to ‘an unreasonable amount of the costs’.

³⁹ Unlike the issue of backpayments raised later it does not risk commercial contracts. This is why the Commission endorses a different approach for the assessment of the time at which ‘reasonably anticipated requirements’ is to be gauged than for backpayments.

The Commission agrees that the existing section may have unintended impacts. The section is also inconsistent with other parts of the access regime, where exposure by the access provider to costs would not be grounds for limiting access. Under the standard access obligations, all sorts of costs must be met by the access provider in giving access, from opening up exchanges, providing billing information and meeting the incremental costs of the network itself. The fundamental problem is to ensure that any costs borne by the access provider are efficient, rather than arbitrarily exempting certain costs from the calculus of access arrangements. There are a number of disciplines that can help achieve this:

- If it is possible to assign efficiently the property rights of the enhancements sought by an access seeker to it, then it is appropriate that it bear the full costs — and then have the capacity to charge other parties (including the access provider) for their use.
- If it is not efficient or possible to assign such property rights to the access seeker⁴⁰ and the regulator regards the investment as economically efficient, then the regulator must, as part of any pricing determination, ensure that the costs of the enhancement will be fully recovered by the access provider over the life of the investment. This provides a test of whether the enhancement should proceed.

RECOMMENDATION 10.15

The Commission recommends that the words ‘some or all of the costs’ in s. 152CQ(1)(f) be amended to ‘an unreasonable amount of the costs’. In deciding what was ‘unreasonable’ the ACCC would consider whether:

- *it was inconsistent with the objects clause of Part XIC;*
- *it was possible or efficient for the enhancements being sought by the access seeker to be owned by the access seeker;*
- *investment in the enhancements (by a party other than the access seeker) is economically inefficient; and*
- *the access provider would not be able to recover the full costs of enhancements it was required to make.*

Finally, an anomaly may arise as a result of an interpretation of when standard access obligations (SAO) are enforceable. C7 notes that s. 152EF, which prohibits a person from ‘engaging in conduct for the purpose of preventing or hindering access by a service provider to a declared service’, requires that access is in accordance with either the SAO or a determination by the ACCC. Section 152AY(2) specifies

⁴⁰ For example, the cost may be incurred in respect of software that operates the incumbent’s facilities.

that a carrier or CSP must comply with the SAO if there is a commercial relationship agreed by the parties, an undertaking or a determination by the ACCC.

C7 suggests that this implies that if an access seeker had no commercial agreement with the access provider (through an undertaking or otherwise) then the carrier or CSP would not be bound to comply with the SAO, until the ACCC had made a determination. Consequently, the prohibition on hindering under s. 152EF would be delayed, which would preclude access until that time. C7 suggests amendment of s. 152EF to eliminate the problem.

In response to a question of clarification by the Productivity Commission, the ACCC cast some doubt on C7's interpretation of the interaction between s. 152EF and s. 152AY(2), suggesting that:

The Commission would argue that standard access obligations exist independently of either agreed terms and conditions or terms and conditions determined by way of arbitration.

However, the ACCC also acknowledged that:

... our interpretation is not free from doubt. In the circumstances, an amendment could be warranted.

While it is unlikely that this possible anomaly in s. 152EF would surface very much,⁴¹ the Commission nevertheless agrees that it is reasonable to remove it as part of any legislative 'tidy-up'.

RECOMMENDATION 10.16

The Commission recommends the repeal of s. 152EF(1)(b).

10.8 Decentralised decision making: the role of and incentive for commercial negotiations

Commercial negotiations leading to contractual terms for access can, of course, occur at any time. However, as in Part IIIA, Part XIC requires that there be a notification of a dispute before arbitration can occur.⁴² Accordingly, the process

⁴¹ And might, in any case, be accommodated through part XIB.

⁴² The Commission understands that there is no statutory requirement that parties should have sought commercial negotiation for any given period, merely that the access seeker is unable to agree with the access provider about access terms and conditions (s. 152CM(1)(c) and (2)(c)). However, the ACCC may terminate arbitration if it considers that the notification of the dispute was vexatious, the subject matter of the dispute trivial, misconceived or lacking in substance, or a

requires that parties conduct commercial negotiations after declaration, and that these must fail before arbitration can be invoked.⁴³ The potential advantages of commercially negotiated contracts over arbitration are that they:

- allow parties to negotiate terms and conditions appropriate to the particular circumstances of the parties;
- preserve any proprietary information inherent in such negotiations; and
- may permit a more decentralised and light-handed regime by letting private parties determine terms and conditions, rather than requiring the regulator to prescribe these.

Many CSPs negotiated access contracts commercially without using arbitration (chapter 7). Mostly these were low volume arrangements involving a small carrier or CSP, where the transaction costs of arbitration were high and the commercial threat to the incumbent low. In other cases, commercial contracting reflected the capacity of the access seeker to build its own infrastructure. For example, Hutchison, a mobile provider, stated that it was not willing to call upon the ACCC's dispute resolution process:

... Hutchison has, as a matter of commercial principle, not sought to engage in formal dispute resolution processes in relation to its concerns or negotiations. Instead, it has entirely focused on resolving issues at the negotiating table or moving away entirely from the negotiation process and endeavouring to resolve the problem unilaterally (for example, by building infrastructure rather than negotiating colocation) (sub. 6, p. 7).

The option of building infrastructure is only economic when the technology cannot readily be characterised as a sustainable natural monopoly. This experience suggests that the ability to negotiate commercially is strong where the threat of economic facilities duplication is feasible — which is precisely an area where the case for declaration in the first place is conceptually weak (chapter 9). The same argument may also explain why there have been no disputes notified over intercity transmission.

By corollary, the stronger the grounds for declaration, the weaker is the threat of economically duplicating facilities. Where the threat is weak, the negotiating power

party in the dispute has not engaged in negotiations in good faith (s. 152CS(1)). These provisions require serious pre-arbitration negotiations.

⁴³ The fact that a dispute is notified does not usually mean that there is no commercial supply. The normal practice is for an access seeker to notify a dispute over access terms and conditions to apply after an existing commercial contract has expired or if there is no contract in place, if the access seeker is unable to negotiate a better price than standard commercial terms. Generally, the terms and conditions of the existing commercial arrangements will continue until the ACCC determines the matter.

of an access seeker depends on being willing to go to arbitration were commercial negotiations to fail.⁴⁴

When commercial negotiations are undertaken in a context where failure to reach a negotiated access agreement results in regulated outcomes, the access regime could not be described as light-handed. Such negotiations may involve less time and less administrative expense by the disputing parties, regulator or courts, but the bargain struck between the parties inevitably is conditioned by the anticipated outcomes under regulation.

There are some conditions in which both parties will have incentives to negotiate (box 10.5). However, even when commercial arrangements are consummated, these need not be at economically efficient prices. For example:

- a rival that faced high costs associated with arbitration will be more willing to strike a commercial deal with an incumbent at a high access price, even if this does not facilitate efficient use of telecommunications facilities; and
- any defects in arbitrated access pricing carry over to commercially negotiated terms. If the anticipated regulated access prices were inefficiently low or high, then it is likely that commercially negotiated prices would also be inefficiently low or high respectively.

Accordingly, while there may be economies in such commercial arrangements, they do not replicate unregulated commercial arrangements reached in a competitive environment.

In most cases, access seekers indicated that even with the threat of arbitrations, commercial negotiations rarely went smoothly:

... the existing legislation envisages a wide range of negotiated outcomes in instances where there is a clear imbalance of negotiating power, and relies on market mechanisms where there is information asymmetry and other asymmetries of bargaining power ... In some instances, such a situation will act as a further barrier to entry to potential new entrants (One.Tel sub. 18, p. 7).

Experience has shown ... that negotiation has proved in many instances to be difficult, protracted, even impossible. There needs, then, to be an effective and expeditious set of safety net regulatory arrangements to ensure that the industry can move forward when commercial negotiations break down (SPAN sub. 9, p. 1).

⁴⁴ In some cases, where the access seeker in one service has market power in another, it may trade access rights.

Box 10.5 When might there be gains from commercial negotiation for seekers and providers after declaration?

Under some circumstances, there may be gains to access seekers and providers from reaching commercial settlement after declaration, rather than seeking an arbitrated arrangement. An access seeker has an expectation about the final access price (p_f) that will be determined through arbitration. However, there is some price ceiling, $p_f + \epsilon$, up to which the access seeker will be willing to pay in a commercial negotiation to avoid the costs associated with seeking access through arbitration. There are several costs that lead to this premium:

- arbitration involves the access seeker in an adversarial role with the access provider, which may undermine the establishment of long-term business relationships;
- arbitration processes involve resource costs and diversion of management time;
- backpayments do not include interest payments;
- backpayments do not (usually) cover the full period from the notification of the dispute, but rather only the time lapsed after the expiry of the pre-existing contract and the final determination; and
- uncertainty over the timing of interim and final determinations, and the terms and conditions they set, means that a party may be willing to 'insure' against regulatory risk by paying a premium now. For example, resolving such uncertainty may be important for investment.

Similarly, there is some access price floor, $p_f + \eta$, down to which the access provider will be willing to accept in a commercial negotiation to avoid the later commercial consequences of the lower arbitrated access price. Consequently, so long as $\epsilon \geq \eta$ then the two parties will negotiate commercially somewhere in the access price band between $p_f + \eta$ and $p_f + \epsilon$.

However, it is uncertain how often this condition will be met. One case would be if final market competition were imminent from a source other than the access seeker. In that instance, the value of η is low, and the access provider will only require a small premium over the expected final determination price to negotiate successfully prior to an arbitrated outcome. But if this is the case, then it is questionable why the service was declared in the first place or why negotiation would not have been successfully concluded prior to declaration.

A second case might be a rival whose expected downstream sales have weak displacement effects on the incumbent's downstream sales.

And another case might be a rival that is less able to bear the costs associated with arbitration or that has a higher discount rate than the incumbent, implying that ϵ is large. Such a party may be able to reach a commercial settlement prior to the final determination. AAPT noted:

Although AAPT is aware that a significant number of access agreements have been concluded by commercial negotiation, AAPT notes that many of these agreements have been entered into by smaller CSPs which have no effective bargaining power and limited ability to sustain an arbitration (sub. 7, pp. 30–31).

On the other hand, such a settlement may not always be a good outcome from a policy perspective, since the outcome of asymmetric bargaining power may mean significantly higher prices for the rival than the prices set for the incumbent's downstream arm — regardless of relative efficiencies.

Given the potential for delay associated with typically failed commercial negotiations after declaration, and the fact that commercial negotiations may have

already occurred prior to declaration, this raises the question of whether there should always be a requirement for commercial negotiation after declaration. There may be grounds for waiving this requirement for any access seekers that had notified a pre-declaration access dispute.

However, this would save only a little time. Moreover, the bargaining power of access seekers changes after declaration, so that an inability to negotiate commercially prior to declaration does not necessarily carry over to after declaration. Thus, waiving the requirement may forgo some opportunities for successful commercial negotiation. Accordingly, the Commission does not favour such waivers.

Another approach would be to provide greater incentives for commercial negotiation outside of arbitration.

The threat of line-of-business restrictions

Macquarie Corporate Telecommunications argued that there may be grounds for giving the ACCC the power to restrict specified activities (eg ADSL services by Telstra) until key access milestones have been achieved (sub. 11, pp. 13–14). The FCC has used this approach in the US, where the local telephone monopolies were not allowed to provide lucrative long-distance services until they had allowed competitive access to the local loop. However, there are considerable dangers in this approach, particularly the risk that it might delay the introduction of valuable services.

Backdating

There is already one mechanism in Part XIC that may increase the incentive for commercial settlement. A distinctive feature of Part XIC (over Part IIIA) is that any or all of the provisions of a final determination can be backdated to the date of notification of an access dispute. In general, the implication of backdating will be that where access was being provided during the post-notification period, the seeker would typically be compensated.⁴⁵ This decreases the gains to the access provider

⁴⁵ S. 152DNA allows for backdating of any or all of the provisions of a final determination. Backdating cannot be to a time earlier than the date of notification of a dispute, and typically would apply from the time of the expiry of the contract existing when the dispute was notified. The size of any backpayment depends on the differences between interim and final determination prices and the level of access prices that prevailed prior to the interim. In most contexts, it is likely that access seekers can expect to receive rather than pay a backpayment (box 10.2 and Alston 1999, p. 7).

from setting a high access price during the post-notification period and increases the incentive to reach a commercial settlement.

However, while the backdating provision may increase incentives to settle commercially, the provision has an unwarranted discretionary element. The ACCC is not required to backdate, can choose the feature of the final determination to be backdated and choose any time to backdate to between notification and the final determination. There is no requirement to incorporate interest payments for the implicit loan that has been made by one party to the other. The Act does not specify the criteria on which these discretionary decisions should be made. This increases uncertainty for all parties. It also exposes the ACCC to a greater risk of favouring those with few resources. For example, say that the price under an interim determination is actually lower than the final price, and that the entrant is exposed to insolvency if it is obliged to pay the incumbent the shortfall. The ACCC may be reluctant to make the discretionary choice that led to a business failure — although on competitive neutrality grounds this would be appropriate.

In the draft report, the Commission recommended clearer guidelines for backpayment. PowerTel (sub. DR102, p. 13) generally supported the Commission's proposed approach, but considered that some residual discretion was appropriate. Vodafone (sub. DR70, pp. 20–1) generally opposed rigid backpayment guidelines and suggested the ACCC should exercise discretion. For example, it cited a hypothetical case where an access seeker might pass on a low interim determination access prices to retail customers, only to be required to make a backpayment when a final determination price was higher. However, a prudent forward-looking access seeker would generally factor such a risk into its retail pricing decisions.⁴⁶ As emphasised above, failure to pay a backpayment does not eliminate risk, it merely transfers it.

Another issue raised by participants in response to the draft report is the date to which any backpayment should be paid. Currently, s. 152DNA specifies that any backpayment be to a date no earlier than that when the access dispute was notified. Some participants argued that the current provisions give access seekers an incentive to notify disputes prematurely, even if negotiation for the disputed service has not been completed (AAPT sub. DR100, p. 30; ATUG sub. DR87, p. 6; and Perkins sub. DR91, p. 3). They suggested that backpayment should be to the date of full supply of the service after declaration, rather than the date the dispute was notified.

⁴⁶ A possible concern is that limited liability reduces the downside of risky behaviour, so that some access seekers might gamble by trying to increase market share with a low interim price, without insuring against the possibility of a higher final (or appeal) price.

However, it is not clear that this proposal has the benefits claimed:

- Unlike the date of notification of a dispute, the date of ‘full’ supply or other measures of the commencement time of a relationship between an access seeker and provider may not be unambiguous — creating legal uncertainty.
- The costs associated with a notification are not very large and a notification does not preclude subsequent commercial negotiation. Indeed, commercial settlements after notification are relatively common (appendix G). Consequently, the existing provision is not a genuine obstacle to commercial negotiation.
- Such an amendment might undermine commercial contracts negotiated in good faith by both parties under the access regime. For example, after declaration of a service, two parties may contract commercially. Then, the access seeker, observing that some other seeker had obtained a better access price, may then be able to notify a dispute and backdate the new prices to the date of initial supply. S. 152CS(c) and (d) provide the ACCC with the capacity to terminate an arbitration if it thinks that access should be governed by a pre-existing contract. But that power, in itself, pre-supposes that the ACCC has the capacity to override existing contracts in certain circumstances⁴⁷ — which creates some ambiguity for parties about what sort of contracts will be honoured.

The Commission is not in favour of changing the existing date to which a backpayment is made, but reiterates the benefits of clarifying the provisions. If the Government does not implement such a recommendation (below), another way of dealing with the uncertainty of backpayments is for the ACCC to indicate to arbitrating parties what the binding backpayment provisions will be within a short time period of the dispute notification.

RECOMMENDATION 10.17

The Commission recommends that:

(a) The ACCC produce a published method for calculating any backpayment under s. 152DNA of Part XIC of the TPA, which should include the provision for payment of interest and indicate how the appropriate time period for backpayment should be gauged;

- ***while, as now, limiting backpayment to a date no earlier than the date of notification of the access dispute concerned.***

⁴⁷ Other sections of Part XIC add to the ambiguity of this capacity. Under s. 152CQ(1)(d), the ACCC must not make a determination that deprive a person a right under a contract that in force at 13 September 1996. s. 152AY(2)(a) appears to bind parties to any agreed terms and conditions.

(b)s. 152DNA specify that an access price consistent with the published method should be backdated and that obligations to pay backpayments should not discriminate between access seekers and providers.

Final offer arbitration

Another approach for encouraging commercial negotiation is to alter the nature of arbitrations in a way that makes commercial negotiation more attractive. Final offer arbitrations (FOA) are one option, and was suggested as a possible radical option by the NCC (2001, pp. 15–16) for the Part IIIA access regime. Under FOA, if a commercial settlement is not possible, then each party to a bilateral dispute makes a final offer, with the arbitrator choosing the one that best meets some set of appropriate criteria. It is widely used for determining baseball player salaries in the United States and has also been applied in industrial dispute settlements, workers' compensation cases⁴⁸ and infrastructure access disputes.⁴⁹

FOA is intended to deter arbitration in the first place. And when arbitration does occur, FOA may encourage honest revelation of costs and reduce regulatory effort by the arbitrator. However, several studies have found that, in practice, FOA has had a mixed impact on the efficient settlement of disputes (box 10.6), so that it is uncertain whether its application to telecommunications access disputes would be beneficial.

If the current negotiate/arbitrate model continues to face enduring problems after the present set of reforms, one option could combine features of FOA and arbitration that might work better than each in isolation. The ACCC would conduct an inquiry into pricing the relevant declared service, and would be required to provide an indicative price range that reflected the uncertainty over pricing methodologies and parameters. Parties would then post a price offer to the ACT (or a similar independent body) that would have to fall within the range found by the ACCC, and the ACT would determine which offer to accept. There would be no appeal. This process could be relatively speedy, directly confronts the genuine uncertainty over the 'right' price, while providing a discipline over price offers made under FOA.

⁴⁸ While it continues to be used for baseball arbitrations, the Commission on Health and Safety and Workers' Compensation abandoned final offer arbitration for workers' compensation decision processes in 1999 after using it for six years (CHSWC 2000, p. 7).

⁴⁹ In Canada, FOA is used for rail access disputes (Canada Transportation Act Review Panel 2000, p. 21). When the new Telecommunications Act of 1996 was introduced, the FCC indicated that it would use FOA for arbitrating access disputes (FCC 1996, p. 11) where States had not successfully resolved them.

Box 10.6 **The effects of final offer arbitration**

Most studies suggest that in the areas where it has been used FOA leads to more frequent pre-arbitration settlements than conventional arbitrations — which is the desired outcome.

However, the outcomes under FOA tend to favour the less risk averse party. In a telecommunications context, the contesting parties are firms not individuals — and so the degree to which they are risk averse is moot. To the extent that they do have risk aversion, it seems likely that some of the smaller access seekers are probably more risk averse than the larger access providers, and would expect worse outcomes under FOA as compared with orthodox arbitration. However, in its use in rail access disputes in Canada, access providers, not seekers, have complained that FOA disadvantages them, and have urged its removal (Canada Transportation Act Review Panel 2000, p. 22).

The evidence is equivocal about whether the offers that are made in arbitration under FOA converge on each other, rather than diverging as under conventional arbitration — which has large implications for the efficiency of outcomes.

FOA may have a number of other practical limitations:

- unless constrained, pricing outcomes may be inconsistent with any pricing principles;
- it may produce significant variations in access prices across different access seekers reflecting the bargaining strategy they adopted under FOA rather than any factors that might appropriately drive different access prices (such as different contract periods or volumes). These variations could then distort downstream market efficiencies. There is no comparable risk for baseball salaries or compensation cases;
- it relies on uncertainty about the behaviour of the arbitrator in successive disputes (to provide the incentive for pre-arbitration settlement). Yet, the ACCC reveals its attitude to pricing in responses to undertakings and in its discussion papers on declaration;
- getting the access price ‘wrong’ for a major entrant would have significant medium term market effects with large impacts on users, whereas an error in dispute outcomes in the conventional areas where FOA applies has only small impacts;
- an appeal mechanism under FOA could only function by re-considering which of the two offers to accept, but could not select any other superior price, since the incentive effects of FOA arise from the non-negotiability of the offers; and
- FOA is intended to be applied in situations where the arbitrator would otherwise tend to average the offers made by the two parties, rather than using objective criteria for its decisions (Milner 1993). It is this averaging behaviour that leads to diverging offers under conventional arbitration. However, the ACCC uses several objective criteria under telecommunications arbitrations — such as NERA modelling. This casts doubt on whether this averaging behaviour, and the incentives for gaming entailed by it, is relevant to current telecommunications arbitrations. If it is not present, then FOA yields fewer benefits.

Sources: Benson 1998; Milner 1993 and Commission on Health and Safety and Workers’ Compensation (CHSWC 1999).

The threat of disclosure

Another option is to make public the full outcomes of arbitrations. Both access seekers and providers have incentives to maintain commercial confidentiality for bilateral arbitrations:

- The access seeker may prefer confidentiality because the arbitrations inevitably disclose some of its commercial intentions, which generally it will not want other parties to know.
- The access provider may prefer confidentiality because disclosure of arbitrated prices will set a precedent for pricing for other access seekers — strengthening seekers' bargaining power by overcoming information asymmetries.

The extent to which the threat of subsequent disclosure of arbitration outcomes will encourage prior commercial negotiations depends on the relative costs of disclosure. Unwanted disclosure is like a fine that varies for the two parties. For certain services, such as originating and terminating domestic PSTN access services, the ACCC's assessment of Telstra's undertakings (1999g,l, 2000c,s) has been seen as signalling the approach the ACCC would take in arbitrations (AAPT trans., p. 111).

The ACCC's papers on ULL access pricing (ACCC 2000i) and local carriage services (ACCC 2000t) may have performed a similar signaling role (Leonard 2000). Thus, while an access provider may resist divulgence of a bilateral arbitration, it may be less costly to it than might be thought because of prior signals from the ACCC about appropriate prices.

In some instances, therefore, divulgence of arbitrations might impose a bigger cost on access seekers than providers, stemming from the risk to the access seekers' intellectual property (such as, marketing plans, market segmentation and particular pricing options).

Overall, the threat of disclosure will impose different costs on access seekers and providers, with the balance depending on context. The threat of disclosure may sometimes encourage commercial negotiation, but there would be no guarantee that the terms and conditions of the contracts would be passably economically efficient.

There may be other reasons for *partial* disclosure of access prices negotiated in bilateral arbitrations (which is the essence of proposals for reference pricing discussed earlier). But full disclosure of the negotiations is not likely to yield a bargaining situation in which economically efficient access prices will be realised. In any case, as raised previously, full disclosure would probably be unacceptable on other grounds.

Both pure final offer arbitration and the threat of disclosure of confidential information have limitations as devices for encouraging commercial negotiation.

Accounting separation

In chapter 8, accounting separation combined with a non-discrimination clause was mooted as a possible option for dealing with some of the incentives that a vertically integrated bottleneck owner has to frustrate access by other parties. Other telecommunications competition regimes require accounting separation. For example, British Telecom must provide separated accounts for its wholesale and retail business for each of the relevant services, including the recording of internal transfer charges (Cable & Wireless Optus sub. 8, p. 134).

New record keeping rules — the regulatory accounting framework — (chapter 6) have been developed that allow for a greater degree of accounting oversight of Telstra by the ACCC than previously, while Telstra has operationally separated its business units (sub. DR101, p. 51). A possible requirement for non-discriminatory pricing is discussed in the next chapter.

Telstra has stated that it is implementing a voluntary process of accounting separation and non-discriminatory pricing, although that process is not fully complete:

... many of the complaints, the issues of perceived delay or unequal treatment, as between Telstra retail and other access seekers, will be removed as the internal accounting separation and contracting relationships between Telstra wholesale and Telstra retail are put in place (trans., p. 11).

At the moment we haven't moved to a system of full internal transfer prices. In considering that option a number of practical difficulties have arisen and we've found that the best option at this point in time is to have a transfer of our direct cash costs, so the costs are incurred outside the business, if you like, and the transfer of our network costs on a more aggregated basis, rather than on a unitised service-specific basis. We face the option, going forward, as to whether we continue to address those network costs in that way or move down a path of more specific unitised costs for the network part of the business. I think that will depend on our practical experience in that regard over the next 12 months (trans., p. 295).

One of the implications of such separation, if effective⁵⁰, is that it may reduce the scope for discriminatory pricing between Telstra's downstream arms and other

⁵⁰ Some other participants were sceptical. For example, Macquarie Corporate Telecommunications claimed: '... we've heard the same story for the last three and four years' (trans., p. 144) while Cable & Wireless Optus argued '... every year there seems to be — or maybe even every six months — a reorganisation of the Telstra wholesale division, and suddenly it's going to be more

access seekers. Accounting separation per se may not *necessarily* dampen incentives for discriminatory treatment if it could go undetected. But business unit separation *may* change the culture of differential treatment, which would be another factor in considering whether Part XIB should remain in a future review (chapter 5). However, in August 2001, Telstra announced that its wholesale operations would be shifted from its infrastructure group to its legal office (Lacy 2001d), which provides an ambiguous signal about the likelihood of such a cultural change.

customer focused, more transparent, and we're all going to be happy and Nirvana will be reached; and every year that's not the case' (trans., p. 87).

11 Access pricing

Box 11.1 Key messages

Access pricing affects the extent to which investment in, or the use of, telecommunications facilities is efficient.

Currently, there are no pricing principles in Part XIC, although the ACCC has published some non-binding principles. The Commission sees value in legislating pricing principles to provide better guidance to parties and a framework for more detailed pricing methodologies.

The proposed pricing principles constrain excessively high prices, allow more flexible pricing options for access, support an adequate return to investment in bottleneck facilities, and place bounds on discriminatory treatment of access seekers by vertically integrated providers.

Excessively high access prices discourage service-based competition — and lead to inefficiently high retail prices, less product variety and the potential for inefficient duplication of facilities.

Excessively low access pricing reduces investment in bottleneck facilities. If uncorrected, this can lead to even more costly outcomes than higher prices because the infrastructure on which consumers depend may be sub-standard, delayed or not constructed at all. It may also lead to too much downstream investment.

The Commission considers that there are some problems in the ACCC's methodology for calculating TSLRIC prices for PSTN services, but that these are offset — in the *short run* — by the effects of downstream market power by the incumbent.

For the core PSTN, the risks of adverse investment effects from the ACCC's regulated access prices are currently not likely to be significant, although they may become more pronounced over the medium run as competition further develops in downstream markets. For prospective new facilities the risk of future declaration and regulated pricing is likely to be a barrier to investment.

Given the uncertainty over the cost estimates underlying regulated access prices it is important that the ACCC monitor closely the PSTN for any reduction in investment or service quality and revise the 'efficient' TSLRIC price upward if such reductions are detected so as to minimise the potential losses associated with too low estimates.

There are a number of different pricing approaches — such as TSLRIC and retail-minus — that have been used in telecommunications. All these methods have imperfections, but none can be ruled out in principle. The Commission generally agrees with the use of TSLRIC for well developed services unencumbered by other regulations. It considers some services — such as mobile — should not be subject to price regulation at all.

Public disclosure by the ACCC of methodologies and its justification has not always been adequate and should be improved. Expert groups, international cooperation, peer review and other methods might help resolve enduring disputes over the details of costing methodologies.

Social regulations imposed on Telstra lead to line rental charges that are insufficient to cover the full costs of line provision — the 'access deficit'. This is funded through local call charges and a margin on the access fees paid by access seekers connecting to Telstra's local loop, with adverse impacts on efficiency. It also discourages facilities competition. The ACCC has recommended the removal of the social regulations that lead to the access deficit and the Commission agrees.

11.1 Introduction

Access pricing is the cornerstone of an access regime. High access prices will entrench the incumbent, frustrate investment in downstream facilities, encourage inefficient bypass and raise consumer prices. Low access prices will bias the build-buy decisions of competitors, encourage too much downstream investment and frustrate investment in the core infrastructure — with long term quality and congestion problems for consumers, and adverse efficiency effects that may be even greater than that of unfettered monopoly (NECG sub. DR108, p. 19). A poor structure of access pricing militates against the efficient recovery of the vast fixed costs of modern telecommunications infrastructure.

The major function of this chapter is to investigate access pricing, and in particular to:

- assess the need for pricing principles (section 11.2);
- describe current practices (section 11.3);
- suggest some possible pricing principles that could be included in legislation (sections 11.4);
- assess whether regulated access prices have been too low or high and their associated impacts on investment in telecommunications facilities (section 11.5);
- evaluate the existing pricing approaches (section 11.6);
- examine some more detailed practical guidelines when implementing regulated access pricing (section 11.7); and
- consider the interaction of social regulations in their current form and efficient access pricing (section 11.8).

A more detailed assessment of some of the specific features of the pricing models is in appendix D.

11.2 Are pricing principles useful?

A set of appropriate pricing principles may guide the regulator in establishing economically efficient terms and conditions and reduce uncertainty for access seekers and providers (Telstra sub. 38, p. 3) — a point also made by the NCC (2001, p. 48) and the Productivity Commission (2001c) in respect of the general access regime (Part IIIA). The ACCC (1997b, p. 11ff) has developed a set of pricing principles, and while these are not statutorily binding, they have been helpful as a broad framework in developing pricing approaches to various services (section 11.3).

The potential value of pricing principles stems from a number of sources.

First, they may provide useful ex ante information to access providers and seekers about the access price setting behaviour of the regulator. For example, an access pricing principle that requires that an incumbent's costs be met may allay concern about the risk of 'regulatory taking' in the form of reduced returns for sunk capital. This will have an effect on both ex ante incentives for future investment and on the degree of resistance from access providers to declaration.

Second, by avoiding very particular pricing models, pricing principles provide a conceptual framework that the regulator can use to develop the method most suited to the pricing problem they encounter. For example, any particular pricing approach (such as TSLRIC, CPI-x or ECPR) would have to be justified on the grounds of the principles, rather than past use. To some degree, principles of this general kind increase one aspect of uncertainty (operational uncertainty — knowledge about *which* instrument the regulator will use), while decreasing another aspect (criterion uncertainty — knowledge about the criteria that the regulator uses to make regulatory judgments).

Third, pricing principles may also provide imperatives for the regulator to consider options that have often been avoided, such as price discrimination and multi-part tariffs.

Fourth, they provide a basis for the ex post evaluation of the effectiveness of access pricing decisions that have been made by the regulator.

Finally, pricing principles, if coordinated across regimes, can promote a greater degree of consistency between regimes. This may also facilitate greater cooperation by regulatory authorities in trying to overcome some of the persistent problems associated with access pricing (for example, appropriate depreciation and cost of capital methodologies).

For these reasons the Commission considers that pricing principles can serve as a useful framework for determining more detailed pricing methodologies — and implicitly, the ACCC itself has found its existing non-binding principles to be useful.

Should the principles be statutorily binding?

A key issue is whether any pricing principles should be statutorily binding, as the Commission recommended in the draft report. The advantage of binding principles is that failure by a regulator to consider each of them carefully might be a basis for a legal challenge — thus disciplining regulatory practice.

While the Commission found almost overwhelming endorsement of legislated pricing principles in its Part IIIA inquiry (Productivity Commission 2001c), curiously participants in this inquiry had polarised views about the merit of such principles.¹ For example:

News submits that the discretion of the ACCC over pricing is too wide and should be restricted by the introduction of pricing principles in the TPA. In addition, the ACCC should not be given any residual discretion to reject an undertaking which meets both the pricing principles under the TPA and its guidelines (News Ltd sub. DR105, p. 3).

ATUG is opposed to the inclusion of pricing principles in legislation. Pricing principles need to be capable of being varied over time to meet changing situations. ATUG see no value in creating inflexibility which would lead to long delays in amending the legislation to meet new circumstances (ATUG sub. DR69, p. 12).

Concerns about legislated pricing principles largely stemmed from perceived pragmatic weaknesses.

Vodafone noted that legislated pricing principles that are insufficiently flexible may unintentionally result in overly intrusive regulation.

The pricing principles suggested by the PC have a heavy focus on cost based approaches. The ACCC has demonstrated a willingness to consider non-cost based approaches in recent declaration reviews (e.g. GSM Termination and Non-dominant PSTNs). We consider that retail minus and benchmarking approaches may be preferable to cost based approaches in some instances. The risk of legislating a set of pricing principles is that it will restrict the ACCC from adopting a more flexible pricing approach for some services (sub. DR70, p. 21).

The ACCC has employed a non-cost based pricing rule for GSM services, which was much less intrusive than a cost-based pricing rule. The Commission's draft pricing principles required that prices at least cover costs, but not by an inefficient margin. However, while the principles refer to costs, they do not require that the ACCC set access prices equal to some measure of cost, such as total service long run incremental cost (TSLRIC). In fact, the retail benchmarking approach adopted by the ACCC would probably have met the draft report pricing principles, with the caveat that the ACCC's approach may not have taken full account of the potential desirability of setting higher termination charges on Ramsey efficiency grounds (the price discrimination principle). To that extent, the implementation of the Commission's proposed pricing principles may well have led to laissez faire GSM

¹ Telstra (sub. DR71, p. 4), NECTG (sub. DR108, p. 4ff), News Ltd (sub. DR105, p. 3), SPAN (sub. DR78, p. 3), the AIAA (sub. DR104, p. 2) and the Consumers' Telecommunications Network (sub. DR76, p. 6) supported such principles. But many others (such as ATUG sub. DR69, p. 12; the ACCC sub. DR98, p. 3; Vodafone sub. DR70, p. 21; AAPT sub. DR100, pp. 31–32; Cable & Wireless Optus sub. DR72, p. 31 and PowerTel sub. DR102, p. 9) saw difficulties associated with binding pricing principles.

access prices as the most appropriate pricing rule (reflecting the questionable declaration of these services).

Cable & Wireless Optus also argued that it is hard to incorporate into legislated pricing principles sufficient flexibility to cater with exceptions that require a deviation from normally agreed first-best approaches. It indicated that an incumbent may make a loss on a service at the retail level because of retail price controls — as occurs for local call rentals. This implies that an access price that was set at a level above costs would provide disincentives for efficient entry by competitors, since they could not compete with the price-controlled incumbent.

Optus' overall response to the Commission's suggestions about access prices is that some of the suggestions would have merit on the assumption that all of the Commission's recommendations were implemented as a package of reforms. For example, the Commission's suggestion to legislate access pricing principles may have merit if retail price controls on Telstra have been lifted, and if the Commission's suggestions about narrowing the scope of declaration were implemented ... For example, where retail controls hold the price of services below cost, a legislated access pricing rule that requires access prices to recover costs necessarily worsens equilibrium outcomes because it prevents downstream competitive entry and is inconsistent with Efficient Component Pricing (Cable & Wireless Optus sub. DR72, pp. 30–31).

The Commission recommends the abandonment of the retail price controls that lead to this problem and a less distorting way of recovering the access deficit if the price controls persist (section 11.8). However, if the Government does not implement either of these recommendations, then it still does not necessarily mean that a pricing rule that requires access prices to recover costs has the effect suggested by Cable & Wireless Optus, so long as costs are recovered across the bundle of services produced by the access provider, rather than on a service-by-service basis.²

AAPT (sub. DR100, p. 31) and ATUG (above) argued that legislated pricing principles would not be useful because the principles would need to adapt over time with changing circumstances. The Commission agrees that were the pricing principles highly specific to the current telecommunications environment this would be a limitation. However, the proposed principles are at a high level of generality and should have enduring relevance. AAPT and the ACCC, however, argued that principles that are so general as to apply over time and different services would provide very little guidance:

Should legislated pricing principles be attempted, the ACCC believes they would need to provide a sufficient degree of flexibility and generality such that they can be applied to a broad range of services using different interconnection arrangements. In this case, and if their intention is to generate greater certainty to industry with regard to their

² Telstra (sub. DR101, p. 72) outlines a method of cost allocation that avoids the problem cited by Cable & Wireless Optus, as does appendix D.

specific application, the question arises as to the merit of having such general pricing principles at all (ACCC sub. DR98, p. 36).

The ACCC has developed pricing principles to guide it in its pricing decisions (section 11.3) without subjecting its own principles to this criticism. Moreover, s. 152AH in Part XIC already sets out some very broad guidelines for the ACCC to consider when judging the reasonableness of terms and conditions. It is hard to see these criteria changing with time or across services, but they still retain value because they constitute a checklist that provides guidance to the regulator and others.

While pricing principles can provide some guidance, the Commission agrees that the gains from them should not be exaggerated. Inevitably, there will be tradeoffs between achieving some principles and others, which leaves appropriate room for regulatory judgment. Moreover, the existence of principles will not prevent disputes over whether any particular arbitrated access prices do or do not accord with the principles. Thus, parties may agree that incentives to investment should not be reduced by access prices, but disagree about whether a particular set of prices has that effect or not. Arguably, most of the disputes over pricing that surfaced in this inquiry over PSTN services or in the successive evaluations by the ACCC of Telstra's PSTN undertakings, were about the detail of the TSLRIC approach, rather than matters of broad principle. This suggests that pricing principles may need to be augmented by some more detailed guidelines (section 11.7).

Overall, the Commission considers that most arguments against legislated pricing principles (a separate issue to the content of the rules themselves) are weak. However, Cable & Wireless Optus' point that in a world of second-best, first-best pricing principles may not hold, suggests some caution in having an iron-clad statutory requirement to meet the pricing principles. However, this would not exclude their inclusion in Part XIC — but that the principles be matters to which the ACCC must have regard when setting prices, with the proviso that the objects clause of Part XIC has precedence over any particular principle.

That leads to the question of the *content* of any access pricing principles. Since the ACCC has developed a number of pricing principles, these form a useful starting point.

11.3 Current pricing principles and practices

While Part XIC is largely silent on the principles that should govern access pricing for telecommunications,³ at the broadest level, it does provide some guidance. The ACCC may accept an undertaking by an access provider if the terms and conditions are ‘reasonable’ (s. 152BV). As noted above, the criteria by which to gauge reasonableness are set out in s. 152AH. These include the:

- long-term interests of end-users of carriage services;
- legitimate interests of the access provider and the provider’s investment in facilities used to provide access;
- direct costs of providing access to the declared service; and
- economically efficient operation of a carriage service or telecommunications facility.

These same criteria (with one addition⁴) are also applied when the ACCC makes a final determination under arbitration (s. 152CR). The wording and scope of s. 152AH/CR are similar to those in the declaration criteria (s. 152AB),⁵ but are somewhat more vague.

The Explanatory Memorandum to the Bill also provides some guidance. In particular, as observed by AAPT, it appears to rule out the efficient component pricing rule (ECPR) as an appropriate approach when it leaves intact any excess profits for the incumbent in the downstream market:

AAPT notes and endorses the intended restriction on pricing principles included in the legislation, which is that pricing approaches based on efficient component pricing rules (‘ECPR’) are generally not appropriate. The Explanatory Memorandum to the Bill suggested that ‘consequential’ lost profits in downstream or upstream markets should not be recoverable through access prices (sub. 7, p. 35).

As noted in appendix D, the ACCC implicitly (and arguably correctly) applies something akin to ECPR to local call resale (as do a number of other countries).⁶

³ As noted by the Productivity Commission 2001c, this is also true for the general access regime under Part IIIA of the TPA.

⁴ S. 152CR adds ‘the value to a party of extensions, or enhancement of capability, whose cost is borne by someone else’.

⁵ They are also similar to the criteria applied under Part IIIA (s. 44X), with the exception that the long-term interests of end-users is replaced by a public benefit criterion in Part IIIA.

⁶ Telstra (sub. 38, p. 18) contends that the pricing methodology falls short of full ECPR because it ignores the ‘indirect revenues associated with the changed likelihood of supplying preselected services’.

However, it does so in a context where it does not preserve monopoly gains in the retail market — and so is consistent with the Memorandum.

While access seekers and providers find, therefore, little specific guidance in Part XIC (or the Explanatory Memorandum) about the likely pricing outcome of undertakings or arbitrations, the ACCC has produced papers outlining its approach to pricing telecommunications access both for general (1997b) and for specific services (1999g,k,n, 2000c,g,i,t,u, 2001b,n). It has also commissioned papers on specific access pricing matters (Gans 1999; Gans and King 2000a). While they are not binding on the ACCC, these pricing papers were intended to serve as a signalling device for access seekers and providers about the pricing approaches used in undertakings and determinations:

The primary purpose of these guides is to provide parties with some assistance in developing undertakings. They may also be used by the Commission to assist in determining prices in arbitrations. Compliance with these guides will not guarantee that a price will be approved by the Commission, nor will departure from them imply a price will not be approved. Rather, departure from these guides provides a signal that a price may be inconsistent with the pricing principles and will need to be examined carefully (ACCC 1997b, pp. 1–2).

The 1997 guidelines (ACCC 1997b, p. 11ff) set out the ACCC's conceptual framework for access pricing through four pricing principles.

- Access prices should be cost based. They should be based on the minimum costs that efficient firms will incur in the long run in providing the service.
- Access prices should not discriminate in a way that reduces efficient competition. This does not rule out differential pricing per se — due to volume discounts or different risk-sharing arrangements. It is mainly intended to preclude collusive and predatory pricing of access. The implication is that where the circumstances are the same, access offers should not discriminate between seekers, including the access provider's downstream division.
- Access prices should not be inflated to reduce competition in dependent markets.
- Access prices should not be predatory.

The ACCC's access pricing rules provide a useful conceptual framework and some guidance to participants. But they may also create some confusion, because of inconsistencies and, to a lesser extent, redundancies. The first and the second principles are inconsistent given that some forms of price discrimination may be efficient (and not hurt competition), yet price discrimination must imply individual access prices that are not cost related. The third principle is redundant if access prices are cost-based.

An original purpose of the 1997 pricing guidelines in encouraging undertakings, rather than bilateral arbitrations, has not materialised. Nor have the prices in the few undertakings submitted to date matched closely the prices judged by the ACCC to be appropriate (ACCC 1999g,1, 2000c,s). This probably reflects the observation made by AAPT and the ACCC that general pricing principles do not, by themselves, resolve uncertainties over the detail of access prices. The ACCC retains significant discretion in determining the appropriate pricing approach for different declared services under Part XIC, especially as it may vary the detailed cost components that feed into its recommended prices.

Thus, based on these broad principles, the ACCC has not ruled out any particular pricing model altogether, but favours a TSLRIC approach when estimating the cost-based access prices for an established service. The ACCC applied TSLRIC to originating and terminating PSTN services and to unconditioned local loop services (2000c,i). The ACCC argues that TSLRIC is appropriate only in certain circumstances (1997b, p. 10):

- when telecommunications services are well developed in a market and have established demand characteristics;
- where the forces of competition or the threat of competition work poorly in constraining prices to efficient levels; and
- when the services are necessary for competition in dependent markets.

The ACCC argued that none of these three characteristics applied sufficiently to mobile services (2000g, pp. 46–48; 2001n, pp. 55ff). It therefore deviated from TSLRIC as the preferred access pricing approach. In this case, it has recommended the use of a retail benchmarking approach (appendix D). In the case of local carriage services,⁷ the ACCC recommended the use of a retail-minus methodology (2000t, pp. 10ff) because of the effects of social regulations on local call prices. Another methodology has been suggested for non-dominant PSTN termination (ACCC sub. DR98, p. 35). The ACCC is not unique in applying different pricing rules in differing contexts. In the US, the FCC applies a measure akin to TSLRIC for unbundling and interconnection access charges, but uses a retail-minus approach for the resale market.

Despite their limitations, the ACCC's general pricing guidelines may have had some value in guiding the regulator and informing access seekers and providers about how the regulator approaches access pricing problems — in particular, when a cost-based approach is likely to be used. Adaptations of the ACCC's pricing

⁷ This is a service for the carriage of telephone calls from customer equipment at an end-user's premises to separately located customer equipment of an end-user in the same standard zone — so-called local call resale.

principles can provide further guidance and structure — the subject of the next section.

11.4 An access pricing framework

The objectives of access pricing

There is considerable debate about which aspects of economic efficiency should be the target of access pricing, depending on views about other economic instruments that may also be brought to bear (Laffont and Tirole 2000, p. 124; Baumol and Sidak 1994; Economides 1997; Valletti and Estache 1998). Access pricing has a range of potential efficiency impacts:

- It affects the *efficient use* (allocative efficiency) of existing telecommunications infrastructure. This raises three issues:
 - First, market power tends to raise prices and reduce output. This has efficiency consequences because the services that consumers give up are valued at more than their economic cost. Access prices are intended to attract entry by competitors to erode any excess returns by the incumbent.
 - A second issue is how low should access prices be in order to encourage efficient use. It is sometimes suggested that the efficient price is one that is equal to the ex post marginal cost of supplying telecommunications services. This is feasible in the short run because — given that a substantial portion of costs in the telecommunications sector is made up of irreversible fixed costs — lowering access prices to marginal costs would still allow telecommunications services to be supplied for the economic life of the investment. However, such a price is well below the level that would allow an investor to recover these fixed costs and would ‘condemn the firm with scale economies to insolvency’ (Baumol and Sidak 1994, p. 5). Accordingly, ex post marginal cost access pricing that is anticipated ex ante by investors will lead to zero future investment and the loss of substantial consumer benefits.
 - In the face of the problems associated with across-the-board marginal cost pricing, the final issue is how access prices should be structured so as to meet the budget constraint of the incumbent while encouraging efficient use.⁸

⁸ A typical way in which efficiency in investment and use are jointly achieved is by requiring that the incumbent’s expected net profits are greater than or equal to zero (a budget constraint) and that access and final market prices be set in a way that maximises the sum of the consumer and producer surplus. In the absence of two-part tariffs, final market prices will usually have margins

While ex post marginal cost pricing is not feasible or efficient when applied to *all* access seekers,⁹ it may be efficient to grant access to some customers at marginal cost where price discrimination is possible.

- Access pricing affects *efficient investment in bottleneck telecommunications infrastructure*. Ex ante, an investment will not proceed unless the expected returns are sufficient to meet all the costs of the investment. Access prices have to be set at a level that elicits the efficient level of investment and that encourages cost minimisation by the bottleneck owner.
- Access pricing also affects *efficient investment in related markets* that draw on the services of the bottleneck facility. This point recognises that access prices should only encourage entry that is efficient — so that network extensions are not wastefully duplicated and entrants have efficient operating costs relative to the incumbent's downstream division.

Most telecommunications regulators, including the ACCC, affirm all three of the above ambitions for access pricing. Thus, the ACCC (1997b, pp. 5–7) maintains that the central goals of access pricing are to encourage the economically efficient use of telecommunications infrastructure (an allocative efficiency concern) and efficient investment in telecommunications infrastructure (covering both bottleneck and other telecommunications facilities). Access pricing as applied by the ACCC and other telecommunications regulators worldwide may only be able to incompletely satisfy all these objectives. There may be grounds for applying auxiliary instruments (such as taxes or rules against predatory forms of discriminatory behaviour), encouraging access prices to take a multi-part form¹⁰ or specifying in greater detail the tradeoffs that may be needed between instruments.

In contrast to the conventional access pricing approach, the ECPR has objectives that are more narrow than other access pricing rules. Advocates of the ECPR focus on the role of the access regime in promoting efficient entry and appropriate

over (ex post) marginal costs of supply, required to meet the common costs, but these margins will be set in a way that most efficiently recovers the costs. Laffont and Tirole (2000, pp. 102–3; 1994, pp. 1676–9) and Armstrong, Doyle and Vickers (1995), set out this framework for access pricing.

⁹ Sometimes capacity-based marginal cost pricing is raised as an efficient recovery mechanism. In this instance, access is charged at marginal cost while there is no congestion, and recovery of investment is made as demand growth or depreciation creates a gap between demand and supply. Prices follow a saw-toothed pattern — of being very low for most of the time, then rising abruptly, before falling in the next investment cycle. In some (theoretical) circumstances, this form of marginal (opportunity) cost pricing can efficiently ration demand and fund the investment. However, once consumer preferences for stable prices are included, its efficiency properties are questionable. Few regard it as a practical pricing mechanism (Productivity Commission 2001c).

¹⁰ This effectively makes access pricing into more than one instrument.

investment incentives — the second two of the above objectives — with the presumption that the monopoly price levels that would otherwise cause allocative inefficiencies have been eliminated through final market price measures. Thus advocates of the ECPR still agree with the pertinence of efficiency of use, but assign an instrument other than access pricing — a retail price cap — to deal with it.

Distribution

As noted in chapter 2, unabated market power has distributional as well as efficiency effects. Access pricing is likely to have significant distributional benefits because it facilitates downstream competition, lowering prices to consumers. Such competition may allow for more innovative pricing (and product differentiation) for consumers, including lower income groups — as evidenced by the low cost plans for mobile phones. These lower costs are associated with improvements in the efficiency of use, so that an efficiency goal will also largely meet distributional goals.

Even so, there may be some cases where increased competition stemming from an access regime might lower prices for consumers as a group, but introduce higher prices for some consumers. In this respect, access pricing is a blunt instrument for dealing with any undesired distributional effects of this sort and may often raise other distributional issues.

The sub-sections that follow examine the principle goals of access pricing in more detail to derive some pricing principles. The role of incentives as a means of encouraging the achievement of these objectives is also explored.

Reducing inefficient monopoly prices

The main and uncontroversial motive for competition policy in telecommunications is that in its absence prices would be set inefficiently high in those segments of the industry where significant market power is wielded. Accordingly, the overarching ambition of competition regulation in telecommunications is to reduce prices below their unregulated levels to improve efficiency. In most cases, this is achieved through regulated access prices.¹¹

PRINCIPLE: The access regime should reduce inefficiently high access prices.

¹¹ Although, sometimes it could also be achieved through price caps on retail prices, in which case, access prices have a narrower role.

In framing pricing principles, the Commission has recognised this as the primary goal of the access regime, with the remaining principles providing guidance about the appropriate structure of and floor on access prices.¹²

However, regulated prices will need to recognise that:

- some monopoly rents may not have adverse efficiency effects; and
- that the regulator needs to distinguish entrepreneurial rents that stimulate innovation and risk taking (with dynamic efficiency gains) from genuine rents.

Covering efficient costs

However, while curbing the adverse efficiency effects associated with monopoly pricing, it is critical to ensure that access prices are high enough to cover the full efficient costs associated with the network (including its sunk costs). These costs must be recovered in order that investment incentives and, therefore, *long term* efficiency of use, are maintained. In telecommunications networks, most of the costs are in investment in long-lived assets, rather than operating costs — and it is the maintenance of this financial capital that must be a major imperative of an effective regulator. As noted by NECG:

No regulatory arrangement can be sustainable if investors in regulated assets cannot reasonably expect that funds prudently invested in regulated assets will be recouped (sub. DR108, p. 6).

Since an access pricing model should provide incentives for the access provider to provide services efficiently, the benchmark for costing is that of an efficient firm, not necessarily the actual costs of the provider.

If a forward looking approach to costing is used (as in PSTN services), where access prices for existing infrastructure are determined by the best-in-use technology available each year (rather than at the time of the investment), then this exposes the investor to large risks associated with technological change:

... computing at each point in time an access price corresponding to the most efficient equipment to date would be confiscatory when equipment is long-lived (Laffont and Tirole 2000, p. 151).

¹² The principle espoused in the draft report was that access prices should ‘not be so far above costs as to detract significantly from efficient use of services and investment in related markets’. In its response to the Part IIIA inquiry, the ACCC (2001o, p. 28) has indicated that this principle is ‘so loosely worded as to be almost meaningless’. Cable & Wireless Optus (sub. DR95, p. 39) argued that it was ‘vague and ambiguous as presently worded’. The Commission accordingly has re-worded the principle to make clearer the desirability of limiting the inefficient use of market power.

To avoid ‘regulatory taking’ (Laffont and Tirole 2000, p. 159), expected technological progress that reduced future access prices would have to be recognised in a risk premium. Other forms of regulatory risk should also be incorporated explicitly into the cost of capital:

... an important element of the cost of capital that is consistently overlooked by the ACCC ... is regulatory risk (Telstra sub. DR101, p. 74).

The goal of setting access prices so as to discourage cost-padding by the access provider must nevertheless take account of the fact that some ostensibly inefficient cost choices by the incumbent are externally imposed. Accordingly, the Commission agrees with Telstra (sub. DR101, p. 75) that the costs of an incumbent should reflect any social obligations, such as customer service guarantees, that are set by government.

Another key issue is at what aggregation of services, recovery of costs is required. If the approach is to align service-by-service access prices to service-by-service costs then the regulator must make (arbitrary) allocations of common fixed costs to each service — reducing the scope for more efficient ways of recovering those fixed costs. An alternative is to aggregate as many regulated services as possible into the cost base so as to allow some pricing flexibility. However, the existence of unregulated services produced by the incumbent that also depend on inputs from the bottleneck further complicates assessment of the appropriate way of recovering common costs. Cable & Wireless Optus argued that it was important that such unregulated services make a contribution to common costs (which it claimed was not achieved by the Commission’s draft pricing principle).

... Telstra’s customer access network (CAN) supplies a range of unregulated services such as ISDN, Faxstream, Pay Television and data services. These contribute over \$3 billion per annum to Telstra’s revenues and should also be required to contribute to the economic cost recovery of the CAN under any regulatory cost allocation/ price setting determinations (sub. DR95, p. 40).

Otherwise it saw a risk that regulated services would bear all of these costs.¹³ This leaves the issue of how the contribution to common costs have to be determined.

The regulator could calculate the contributions to common costs from the varying services. A typical rule-of-thumb in such contexts is to allocate common costs to regulated services based on the share of total minutes, thus implicitly assuming that the deficit can be made up from contributions by unregulated services. If the unregulated services are price elastic then this assumption may be wrong, and the unregulated segment will (inefficiently) contract until the rule-of-thumb requirement is met. In theory, a price cap across *all* services may free the regulator

¹³ Which some analysts have advocated as appropriate (Kahn 1996b).

from using such arbitrary allocation methods (Laffont and Tirole 2000, p. 89), leaving the firm to make its own allocation decisions, but this can have its own limitations.

The best method for recovering common costs will be contextual, and to that extent, the Commission does not favour pre-specifying the method. But by ensuring that access prices must cover the ‘*efficient long-run costs of providing access to regulated services*’ it is presumed that regulated services make an efficient contribution to the common costs of the facility. In general, this contribution will only be partial, so that unregulated services would also be required to make a contribution. In clarifying the interpretation of the draft report’s pricing principle, Cable & Wireless Optus’ concerns should be met.

PRINCIPLE: Access prices should be set so as to generate expected revenue across a facility’s regulated services that is at least sufficient to meet the efficient long-run costs of providing access to these services;

- including a return on investment commensurate with the regulatory and commercial risks involved;*
- reflecting any uncompensated costs associated with imposed community service obligations.*

However, it may not always be practical to allow the full flexibility in pricing implied by a pure ‘global cost’ approach. A global cost model requires that there be a cap on the total access revenue of the wholesale arm of the bottleneck owner, including access revenue obtained from its downstream division (with the cap exceeding the ex ante efficient costs of providing the relevant access quantities). To implement such an approach requires accounting separation and monitoring of attempts to transfer prices, and this may not always be practicable. The ACCC has noted the difficulty in implementing such a global cost approach (sub. DR98, p. 23).

The Commission’s costing principle would not rule out the use of service-by-service costing for access in these cases (which is the current approach of the ACCC) — but allows scope for other approaches for bundles of services where the practical difficulties are overcome.

A potential concern with the Commission’s principle is that it does not prohibit cross-subsidies (as distinct from differential Ramsey markups) between services, particularly those that might arise between regulated and unregulated services — a point raised by the ACCC (2001o, p. 29) in respect of the Part IIIA inquiry. The Commission proposes a principle that would deal with this:

PRINCIPLE: Revenue from each service should at least cover the directly attributable costs of providing the service.

Where a cost-based approach is employed for access pricing — such as forward looking TSLRIC — the incentives for cost minimisation and productivity growth are sustained because the benchmark for costs is that of an efficient operator. However, in non-TSLRIC approaches, such as benchmarking and price caps, it is also important to highlight such incentives. As discussed in chapter 2, some price capping approaches have design faults that weaken incentives for cost minimisation. The Commission emphasises the general desirability of maintaining incentives for cost reduction and productivity improvement.

PRINCIPLE: Access pricing should include incentives to reduce cost and improve productivity.

Setting the right structure for prices

The problem facing regulators is how to set prices that encourage efficient use, while also meeting the large fixed costs of the network so that the incentives for future investment are maintained. Multi-part tariffs (of which two-part tariffs are an example) and price discrimination (Ramsey pricing) provide a possible mechanism for the more efficient recovery of fixed costs. The pricing structures usually incorporate a range of options to reduce the risk that a single high fixed fee deters customers from taking up the service. A typical example is pricing for mobile phones, which includes a monthly access fee, a call flagfall charge and several peak and off-peak per minute charges. A large number of pricing menus is available that enable consumers to select plans based on their likely usage rates. Thus low fixed rental fees are associated with high per minute charges and are suited to low frequency users.

Moreover, with such pricing, no longer do access prices for particular services have to be equivalent to costs. Purely cost-based access prices determined service-by-service are not efficient because they fail to recognise that differential access charge markups are required for the efficient recovery of fixed costs. Laffont and Tirole (2000, pp. xv, 107), for example, argue that a general lesson from the examination of telecommunications regulatory regimes is:

Because wholesale prices (access charges) guide retail prices, it is not surprising that the desirability of price discrimination at the retail level translates into a need for price discrimination for wholesale prices ... we show that undifferentiated access prices may substantially distort competition and reduce welfare ... Ramsey pricing is but the transposition of standard marketing techniques to the regulated firm, and once it is understood that wholesale services belong to the incumbent's overall product line, it

should come as no surprise that efficient access pricing follows the standard marketing principles.

Unlike European Union and US telecommunications regulators (Laffont and Tirole 2000, p. 107), the ACCC has accepted price discrimination *in principle*. The ACCC (2000b, p. 34) explicitly endorsed Ramsey pricing in *retail* markets:

One implication of Ramsey pricing is that it may be efficient for firms to set prices for some of its services well above their costs of production because they have a low own-price elasticity of demand ... It can be argued, therefore, that if there are a number of services that the government decides should be subject to a price cap, then those services should be included in a broad price cap if they share common costs. Under this approach, the firm would still be required to reduce the price of the basket of services as a whole, but will have the freedom to restructure its prices so that it raises prices proportionately more where demand is least sensitive.

It also recognised that using Ramsey access pricing allows for efficient recovery of common costs (sub. 40, attachment 3, p. 9). However, there are three obstacles to realising efficiently structured access price options — although as later noted, these may be at least partially surmountable.

First, regulators themselves have a limited capacity to set such efficient prices. This is because Ramsey and efficient multi-part tariffs require detailed knowledge of demand conditions and an ability to fine tune prices as either information asymmetries are overcome or as market demand changes. Regulators face large informational barriers in structuring prices. For example, the ACCC, in referring to the informational burden of Ramsey access pricing, argued:

... getting it wrong could be worse than using equi-proportional mark-ups (sub. 40, attachment 3, p. 9).

An alternative to the regulator setting specific prices is a more general price guide — such as a price cap, with (relatively well-informed) bottleneck owners setting specific prices.

However, a second obstacle emerges if the regulator tries to elicit efficient pricing by informed bottleneck facility owners. A vertically integrated carrier subject to an access regime may not have the right incentives to price access in a non-predatory way. As noted by AAPT (sub. 7, p. 17):

... where services are provided by vertically integrated suppliers which possess market power it will be difficult for regulators to distinguish efficient discriminatory pricing and strategic or monopolistic discrimination.

For example, suppose the incumbent's wholesale division was subject to a price cap on access services for the local loop — including sales to its own downstream division. Suppose, also, that any menu that the incumbent offered to itself must also

be offered to any other party. Even under these conditions, the incumbent could use multi-part tariffs and price discrimination as a mask for predatory pricing in the final market. Thus, it could offer exaggerated discounts for risk sharing and excessive volume discounts, knowing that only its own downstream division would have a sufficiently large subscriber base to accept the access arrangement. Rivals would pay more per subscriber (or per call) for access, decreasing their competitiveness in the downstream market and allowing a premium to be extracted by the incumbent's retail division. It might not be very easy to differentiate such predatory pricing from customary (competitive) commercial practice. Accordingly, while Part IV (and XIB) of the TPA is intended to deal with such anti-competitive action, it might not be effective in doing so in circumstances which 'give the appearance of non-discrimination' (Laffont and Tirole 2000, p. 135).

The combination of a wholesale price cap and vertical separation could solve this problem, because it overcomes the incentive to shift extraction of excess profits between the upstream and downstream arms of the vertically integrated entity. However, there are other concerns with vertical separation (chapter 2). In any case, the Government has specified that the review not encompass the structural separation of Telstra (chapter 1).

A third obstacle to multi-part and discriminatory pricing can be posed by social regulations that apply to the incumbent's prices (ACCC 2000b, 2001q). The Government currently applies retail price regulations that limit efficient pricing. For example, price regulations applying to rentals for local telephone services in Australia mean that residential fees do not adequately recover the costs of services used. This means that the unfunded residual — the so-called 'access deficit' — has to be funded by other services, even if it were to be more efficiently recovered as a basic access charge. Retail price sub-caps were recently reviewed by the ACCC, which recommended their elimination (ACCC 2001q, pp. viii–ix).

This trilogy of problems may explain why access pricing for telecommunications services often takes the form of relatively simple and prescriptive uniform pricing. Thus despite its in-principle agreement with more flexible pricing, the ACCC indicated (sub. 40, attachment 3, p. 2) that:

In principle both cost recovery and marginal cost pricing can be achieved simultaneously by the use of two-part pricing (with a component unrelated to use and use charged at 'marginal cost'), but in practice it is difficult to conceive of two-part pricing being used for access pricing.¹⁴

¹⁴ Others, for example, Newbery 1994, have also argued that multi-part tariffs are efficient, but difficult to achieve in a regulatory setting.

Typically, the ACCC estimates the total costs of a telecommunications service and then divides by call minutes to estimate a simple per minute charge for interconnection charges.

The Commission considers that these problems need not rule out more complex interconnect pricing. For example:

- optional multi-part tariffs could be used. These allow the carrier to offer non-linear prices, but subject to the condition that the uniform regulated price is also always available (Armstrong, Cowan and Vickers 1995);
- access charges might vary for peak versus non-peak time;¹⁵
- efficient access charges could reflect the fact that when making long distance calls, the conveyance costs and access deficit contribution¹⁶ associated with PSTN originating and terminating access charges are largely fixed costs. Thus the facility owner might charge a fixed monthly charge associated with any customer (of any carrier or CSP, including itself, that connected with the bottleneck) that used long distance call services in that period, and then charge lower flagfall and per minute charges (for example, as advocated by Ergas 1998b, p. 13); and
- the bottleneck owner could devise a set of access pricing menus that is based on the characteristics of retail subscribers rather than those of access seekers.¹⁷ Factors, such as the volume of purchases, time of purchase and residential versus business status, could be used as a basis for different access pricing offers. All access seekers would be offered the same set of subscriber-based access prices, thus realising efficient price discrimination in the downstream markets without compromising non-discrimination at the access seeker level. For example, the PSTN access price charged by Telstra Wholesale to the retail arm of Telstra or to any other access seeker wishing to contract with a firm that made an expected 10 million domestic long distance calls a year with an average duration of six minutes might be \$900 000 and 0.55 cents per call end minute, rather than a

¹⁵ Telstra (sub. 24, p. 47) indicated that ‘experience to date in attempting to implement an efficient peak load pricing structure of access prices has been unsuccessful’, due to differences with the ACCC about how this could be implemented. The ACCC discusses its reasoning in ACCC (1999g, pp. 92–7).

¹⁶ Associated with sub-caps applying to local call services.

¹⁷ Such a subscriber-based approach encapsulates some well recognised forms of efficient price discrimination. For example, Laffont and Tirole (2000, p. 106) show that it is efficient for an access provider to levy lower (higher) markups on rivals operating in elastic (inelastic) markets relative to other rivals or the incumbent. Under a subscriber-based approach, this outcome would be realised because an access seeker with a higher proportion of customers in elastic markets would have a lower access price than an access seeker with a lower proportion.

flat 1.3 cents per call end minute.¹⁸ Any access seeker would be able to secure this price, and thus be able to compete with Telstra in the retail market for such customers. This would also reduce the problems associated with bypass by big customers (discussed in more detail later), since under two-part tariffs they would obtain calls at very low marginal cost (Laffont and Tirole 2000, p. 128);

- it might be efficient to allow discounts for access seekers that sign long term contracts (and price penalties for seekers buying in the spot market). This recognises that stipulating the same pricing for access seekers whose access contract durations are very different from each other has consequences for efficient risk-bearing and exposure to asset stranding. In this context, the ACCC has recognised that menu offers should reflect the underlying cost of access. Thus, if one access seeker commits only to short-term contracts then this implies that the risks associated with asset stranding are principally borne by the access provider — and these costs should be reflected in any access price offers.

Regardless of the feasibility of these particular cases, the issue is the degree to which the regulator can provide some limits on abuse of access pricing by a bottleneck owner and otherwise decentralise access pricing decisions. The biggest risk is that the regulator may set access prices in a way that closes off superior options for contracting between parties.

It should also be noted that even where multi-part access prices are feasible and permitted, errors in setting the overall pricing levels can still affect efficiency of use in final markets:

- excessively high regulated prices will deter some consumers from taking up the service or from making more, or longer calls, though it is efficient for them to do so; and
- excessively low prices may mean that for some services the supply costs are greater than the benefits to the consumers — a problem that is complicated to assess if the cost recovery problem for the firm is at an aggregate, rather than a service-by-service level (Laffont and Tirole 2000, pp. 76ff).

However, while multi-part tariffs and discriminatory pricing do not eliminate the risks for inefficient use from incorrectly set access price levels, they are likely to encourage more efficient downstream pricing. This would be consistent both with

¹⁸ This is a hypothetical tariff based on the notion that most of the costs are fixed and non-traffic sensitive, so that most costs might reasonably be included in a fixed access charge. A more reasonable set of tariffs might probably include a flagfall charge as well as a fixed annual charge. It would also include allowance for peak and non-peak periods. Call end minutes are half the total duration of a call and are the conventional basis on which the ACCC describes access prices.

more efficient use (because network capacity would be better used), and with recovery of investment (because fixed costs could be recovered).

Most participants did not comment on the Commission's draft recommendation in favour of multi-part tariffs and price discrimination. Telstra (sub. DR101, p. 77) was in favour, endorsing the 'recognition that multi-part and discriminatory tariffing could be used to increase economic efficiency'. However, the ACCC was generally opposed to the proposal:

- It claimed that 'the calculation of an 'efficient' two-part price is extremely difficult both in principle and in practice' (sub. DR98, p. 22). The Commission agrees such pricing is not easy, but notes that it has been used by other regulators and that there are methods (outlined above) that appear to overcome the risk of strategic behaviour by the incumbent. Much of Australia's telecommunications infrastructure faces no capacity constraints — especially in off-peak periods, so that it can take more traffic at very little additional cost. If multi-part tariffs and price discrimination can increase the use of existing capacity, this can increase the returns to access seekers and providers as well as benefit customers. This would seem to warrant ongoing regulatory effort in trying to discover feasible ways of pricing more flexibly. In this context, the ACCC's dismissal of the principle seems premature.
- The ACCC (sub. DR98, p. 22) characterises the Productivity Commission's pricing approach as one of short-run marginal cost (SRMC). In doing so, the ACCC seems to misunderstand the Commission's position. The Commission agrees with the ACCC that SRMC by itself does not allow for re-investment in capacity¹⁹ and that it can lead to sudden dramatic price increases as capacity is reached — which is precisely why the Commission does **not** endorse SRMC as a pricing methodology.²⁰

The Commission reiterates its view that the *option* for multi-part pricing and price discrimination increases the potential for the more efficient collection of revenue to meet the high fixed costs necessary to induce new investment, while allowing prices for marginal use to reflect marginal cost. It might not be possible to realise this principle in all cases, but it encourages more efficient outcomes in circumstances where it is feasible.

Accordingly, the Commission proposes the following pricing principle:

¹⁹ This is the Commission's interpretation of the ACCC's comment that SRMC 'makes no allowance for what is given up in "keeping the productive capacity alive"'.

²⁰ See, for example, p. 10.7 in Productivity Commission 2001e.

PRINCIPLE: Access prices should allow multi-part tariffs and price discrimination when it aids efficiency.

A vertically integrated bottleneck owner has an incentive to raise access prices to rivals, while lowering access prices to its own downstream division — thus capturing profits in the downstream market.

While the subscriber-based approach largely avoids this problem, other approaches to price discrimination, which apply to access seekers rather than retail subscribers, may be open to gaming. If these approaches are also permitted then the ACCC could limit the risk of anti-competitive behaviour by not allowing the vertically integrated access provider to explicitly or implicitly charge less to their own downstream operations than they charge to other operators (for the same class of services), unless the access provider can demonstrate that the cost of providing access is higher for such other operators. This allows for different access deals with different seekers, but each deal would bilaterally pass the non-discrimination rule.

Accordingly, the Commission advocates the following pricing principle:

PRINCIPLE: Access prices should not allow a vertically integrated access provider to set terms and conditions that discriminate in favour of its downstream operations, unless the cost of providing access to other operators is higher.

Encouraging efficient investment in bottleneck facilities

Incorrectly setting access prices poses five risks for efficient investment in bottleneck facilities:

First, excessively low access prices, by reducing the ex ante risk-adjusted rate of return on investment, are likely to deter or delay investment in the bottleneck facility by the incumbent — a point emphasised by Ordoover (sub. 43, p. 31).

Second, it is sometimes claimed that low access prices might preclude entrants from building bottleneck facilities that substitute for the incumbent's when this is efficient. For example, Telstra contended that investment by rivals in such facilities was 'desperately lacking' (sub. 24, p. 2) due to low access prices. However, this argument is a weak basis for raising access prices. As Access Economics (2000, p. 16) notes, it is not certain that high access prices will engender facilities competition in the bottleneck areas:

While the high cost of access to existing facilities will increase the desirability of operating a lower cost network of their own, entrants must eventually connect to the incumbent network and the prospect of losing any cost advantages of their own

networks in establishing interconnection will deter investment. It is not clear therefore that high access and interconnection prices will automatically lead to the development of alternative facilities-based competitors. Without interconnection rights, entrants would have to reproduce the whole of the incumbent network to obtain comparable coverage, and even then would not be guaranteed to attract customers without an arrangement that avoided duplication of equipment in the customers' premises.

In any case, the premise of market power in unregulated telecommunications bottlenecks relies on the difficulty for competitors in viably duplicating the local loop. Of course, by symmetry, it is unlikely that the cost of excessively high access prices will be substantial wasteful duplication of the bottleneck facility.

Third, a more likely risk is that high access prices will lead to a more limited degree of duplication — so-called 'bypass'. This occurs when a rival lays down an alternative to the incumbent's bottleneck facilities for certain high usage telecommunications customers (Alleman 1997, p. 6; Laffont and Tirole 2000, pp. 118, 127–8). Such bypass will be inefficient when the access charge is set high enough to encourage new facilities, but the existing facilities are not congested.

Fourth, access prices for one bottleneck service might be inconsistent with that of another, distorting the pattern of investment, to the extent that the services are substitutes (or complements). For example, Telstra argued:

... the regime now covers many services that are relatively close substitutes in supply and/or demand: examples include DDAS and ISDN; the PSTN and ISDN; and PSTN, LCS and ULL. As a result, an error in the pricing of even one of these services spills-over to distort consumption and investment decisions more broadly (sub. 38, p. 15).

Appendix D examines possible interactions of access pricing approaches for the ULL, PSTN originating and terminating access and local call resale.²¹

Finally, the use of actual, rather than efficient, investment costs would encourage wasteful investment. This is because the firm would have weak incentives to control the costs of the investment efficiently since for every dollar of extra expenditure, it is compensated fully.

These risks are managed through the principles developed above. These ensure an adequate, but not excessive, return on investment, while reducing the risk of bypass by allowing quantity discounts.

²¹ Though not a bottleneck facility, GSM services have been deemed while CDMA services have not — also creating the capacity for distortion (Vodafone sub. 15, pp. 33–4).

Encouraging efficient investment in related markets

Bottleneck facilities in telecommunications — primarily the local loop — are used for direct provision of services to customers (local calls) and for originating and terminating calls from other non-bottleneck facilities, such as long distance and mobile facilities.

Excessively low access prices levied by a vertically integrated incumbent may generate two problems for entry into downstream markets:

- they can result in the entry of rivals that have higher operating costs than the incumbent's own downstream division (box 11.2); and
- they can encourage inefficient investment by rivals in network extensions — such as trunk lines — even by rivals with efficient operating costs. The inefficiency arises because of the wasteful duplication of investment in the network extensions.

There is some controversy over the pricing rules that overcome this inefficiency. Baumol and Sidak (1994) and Sidak and Spulber (1998, pp. 283ff) among others, have advocated the ECPR as the appropriate pricing rule for these cases.

The efficient component pricing rule (ECPR)

The ECPR specifies that the access charge paid by an entrant should be equal to the monopoly provider's opportunity costs of providing access, including any resulting revenue loss by the monopoly provider. In other words, the ECPR compensates the monopolist for any reduction in profit caused by entry.

The rule is intended to discourage competition by inefficient entrants and cream skimming in retail markets where price discrimination is efficient. It is only aimed at efficient entry.

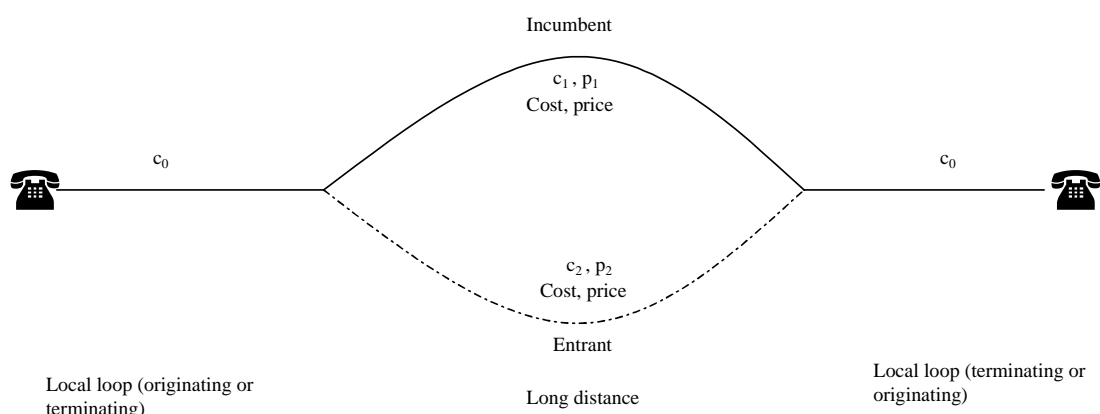
For example, suppose that a new entrant diverts one minute of a long distance telephone call from the incumbent. If the incumbent had provided the call itself, it would have faced incremental costs of $2c_0 + c_1$ and receipts of p_1 (using the terminology of box 11.2). If the new entrant provides the call, the incumbent bears incremental costs of $2c_0$ and earns an access charge of a . The access charge that makes an incumbent indifferent to whether it or the new entrant carries the long distance call is therefore equal to the forgone markup $p_1 - (2c_0 + c_1)$, plus the marginal cost of providing interconnection to the local loop ($2c_0$), which equals $p_1 - c_1$.

Box 11.2 Incentives for higher cost entrants with marginal cost access pricing

Suppose that the marginal cost of providing local loop originating and terminating calls are c_0 (per minute). Suppose that the incumbent can offer long-distance services at marginal costs of c_1 (per minute) and the entrant at c_2 . Also suppose that there are large fixed costs associated with the local loop, but (for simplicity) no fixed costs associated with the long-distance market. For long distance calls the price that the incumbent must charge to break even must be $p_1 = 2c_0 + c_1 + d$ where d is a contribution to the fixed costs of the network.

However, the entrant, if charged the ostensibly first-best efficient access charges of $2c_0$ (the marginal costs of the provision of access) and setting prices of $p_2 = p_1$, gets a profit of $p_1 - 2c_0 - c_2 = c_1 + d - c_2$. This will be a supernormal profit so long as $c_2 - c_1 < d$ (in other words, so long as any cost inefficiency by the entrant is less than the contribution to the fixed costs the incumbent's customers are asked to bear).

If there is entry by others with the same costs as the first entrant (or entry is contestable), then the entrants set prices of $p_2 = 2c_0 + c_2$, which will be lower than the incumbent's by $d - (c_2 - c_1)$. So, because entrants are not bearing the burden of the fixed costs, there is scope for relatively inefficient entrants to undercut the prices of the incumbent and gain market share. This, in turn, can have other adverse welfare effects, if the incumbent is forced to match the entrants' prices and force the access deficit on to a narrower range of services that are less efficiently able to carry its burden (eg services with more elastic demand). Even if entrants are as efficient as the incumbent, the failure of the access charge to reflect fixed costs, inevitably forces the fixed costs to be recovered in less efficient ways.



Source: Laffont and Tirole (2000, pp. 101–5).

In fact, as noted by many critics,²² the circumstances in which the ECPR is efficient are rather limited. Alleman (1997, p. 13), for example, argues

²² See, for example, Economides 1995, p. 12; Laffont and Tirole 2000 and King 2000.

... the ECPR pricing approach has a simplicity that belies the omissions or difficulties of implementing the proposal in the industry.

ECPR in its simple form holds as a form of efficient pricing when the marginal costs of providing access to the incumbent and others are the same, entrants behave competitively, the demand functions facing the incumbent and new entrants are the same (for example, no brand loyalty or differentiation), and the marginal costs on the competitive segment are the same for the incumbent and the new entrant (Laffont and Tirole 2000, p. 122). If any of these assumptions does not hold, then efficient prices should be above or below the ECPR.

For example, suppose that some customers value the incumbent's brand name, so that demand for these services is more inelastic than for entrants, but that otherwise the marginal costs of operating in the downstream market are the same for the incumbent and the entrant. Using the Ramsey pricing principle, the incumbent should levy higher prices than the entrant on this section of the market (that is, $p_1 > p_2$, where subscript 1 denotes the incumbent and 2 the entrant). But the access price, $a = p_2 - c_2 = p_2 - c_1$ (since $c_1 = c_2$) must be below the incumbent's opportunity cost ($p_1 - c_1$), violating the ECPR.

The advocates of ECPR have made it clear that other instruments (such as price caps) are to be applied to eliminate monopoly profits. However, if there is no feasible instrument for containing monopoly prices in final markets, then ECPR reduces the incentives for entry in downstream markets that might reduce these prices.

Thus, in the absence of auxiliary instruments, it would not address the allocative inefficiencies that provide the main motivation for access regimes in the first place. Cable & Wireless Optus (sub. 8, pp. 79–83) have argued that the ECPR applied to PSTN interconnection prices would increase the price to around seven cents per minute compared to the ACCC's estimate of under two cents per minute. This would have adverse impacts on the pricing and quantity of long distance and fixed to mobile calls — with accompanying efficiency losses and distributional outcomes.²³

Nor is ECPR necessarily that easy to implement. It still requires cost information:

It turns out that both the ECPR and Ramsey pricing have been proposed and sometimes used as tools aimed at obtaining in the telecommunications sector an efficient allocation of resources, efficient entry and efficient production of the right goods for consumers. Both of them are informationally very demanding. They are very complex in realistic cases and they are open to manipulation, to regulatory capture and to

²³ Cable & Wireless Optus has also argued that Telstra's commercial prices for access to the ULL are so high as to even exceed the ECPR (sub. 63, p. 11).

predatory behaviour because of this complexity and because of the fact that there is so much uncertainty or imprecision in the estimates of the basic parameters or basic variables you have to obtain and know to apply them, and because the fact that generically, the information structure on costs and demands is incomplete (Boyer 1997, p. 13).

It also requires the identification of the appropriate counterpart market in which a downstream rival is operating. This can be difficult for differentiated final products and complex final price menus, a point noted by the ACCC (2000g, p. 48) when considering retail-minus rules for mobile termination access charging.

ECPR overcomes some, but not all, of its inherent difficulties when applied with other instruments, such as global price caps. It has already been effectively applied in the local call resale market, where its use stems from the impact of social regulations on retail prices. Its wider use depends on the feasibility of a global price cap and the imposition of measures to control possible foreclosure incentives. Laffont and Tirole (2000, pp. 174–8) have described one possible mechanism, but acknowledge that further analysis is required.

Encouraging bottleneck facility owners to provide access

A problem with all access regimes that do not use ECPR is that they provide strong incentives for access providers to frustrate access. Thus, the facility owner may tie up capacity, seek to reduce access quality, insist on bundling, and delay access (for example, by requiring substantial notice for exchange modification and porting). This requires costly monitoring by the regulator of the quality of access.

Such foreclosure incentives are higher the lower are regulated access prices, which, may suggest a bias towards higher access prices in the face of uncertainty over recovery of fixed costs.

Moreover, foreclosure incentives arise from the desire to protect rents from market power that are transferred to the downstream division (or through collusive arrangements with a few access seekers). The use of a retail price cap reduces any such downstream rents — and may constitute an argument for the preservation of some type of aggregate CPI-x cap similar to that currently applying to Telstra (but does not provide a rationale for the sub-caps that lead to the access deficit).

Thus, instruments other than access pricing are likely to be important in enabling efficient entry, with its beneficial impacts on downstream prices. These will include some provisions for monitoring access quality — as exemplified in the standard access conditions under Part XIC, a potential role for a retail CPI-x rule and Part

XIB. However, neither of these is an access pricing principle per se — and so are not raised as such.

Foreclosure is the major motivation for the regulatory open access compact discussed in chapter 9. This allows pricing freedom by the access provider, contingent on the absence of foreclosure. For eligible investments, such a pricing approach provides strong incentives for provision of non-discriminatory access.

Summary and implications of pricing principles

The above discussion about pricing objectives and principles, and their effective implementation has a number of policy implications.

First, it suggests that the *level* of access prices, while important, is only one of several criteria by which to judge a given approach to access pricing. The *structure* of access pricing is also likely to be an important determinant of efficiency.

Second, the multiple goals of interconnection charges and the limited number of instruments implies that access pricing becomes a ‘jack of all trades and master of none’ (Laffont and Tirole 2000, p. 125). The ACCC (sub. 40, attachment 3, p. 22) has reflected that ‘a single access price cannot do all of the jobs required by the legislation’. This, with the complexity and offsetting nature of the effects of regulated access prices, suggests that access pricing approaches will often involve a tradeoff between complex designs — with demanding informational and administrative requirements — and more simple approaches.

Even at the time that access regimes were posited as a solution to the better management of bottleneck facilities, the difficulties of developing a single best access pricing approach were recognised:

Neither the application of economic theory nor general notions of fairness provide a clear answer as to the appropriate access fee in all circumstances. Policy judgments are involved as to where to strike the balance between the owners ... and ... users interest[s] ... [Relevant factors include] ... the extent of capacity utilisation, planned utilisation, and the extent to which the capital costs of producing the facility have been recovered ... the impact of prices on the incentives to produce and maintain facilities and the important signalling effect of higher returns in encouraging technical innovation ... (Hilmer 1993, p. 253).

Finally, enunciating some principles for access pricing may reduce uncertainty and regulatory error, as well as providing a clear framework for the future evaluation of the telecommunications access regime.

The Commission recommends that a new section be included in Part XIC of the TPA.

1. The ACCC in seeking to reduce access prices that are inefficiently high, must also have regard to the following principles:

(a) that regulated access prices should:

- (i) be set so as to generate expected revenue across a facility's regulated services that is at least sufficient to meet the efficient long-run costs of providing access to these services;*
- (ii) include a return on investment commensurate with the regulatory and commercial risks involved;*
- (iii) generate revenue from each service that at least covers the directly attributable, or incremental, costs of providing the service; and*
- (iv) reflect any uncompensated costs associated with imposed community service obligations.*

(b) that the access price structures should:

- (i) allow multi-part tariffs and price discrimination when it aids efficiency; and*
- (ii) not allow a vertically integrated access provider to set terms and conditions that discriminate in favour of its downstream operations, except to the extent that the cost of providing access to other operators is higher.*

(c) that access pricing should provide incentives to reduce costs or otherwise improve productivity.

2. Where there is a conflict between any pricing principle and the objects clause, (s. 152AB(1)), the objects clause has precedence.

The principles adopted are similar to those proposed by the Commission in its inquiry into Part IIIA of the TPA (Productivity Commission 2001c), with the exception of 1(a)(iv) and 2, which reflect the interplay of social and competition regulations in telecommunications.

There are also grounds for some practical implementation guidelines — possibly as a memorandum to the TPA — that suggest some of the practicalities of applying the principles. For example, the guidelines may describe how regulators should deal

with the informational requirements of certain pricing approaches or with the uncertainty of cost estimates. They could also specify more detailed pricing guidance, which the Commission considers in section 11.7 following consideration of the effects of the practical application of regulated access pricing in sections 11.5 and 11.6.

11.5 Are regulated access prices too low or too high?

The Commission considers that a bottleneck owner has incentives to set high (and inefficient) *unregulated* access prices. Many access seekers also argued that unregulated access prices would be set at inappropriately high levels (box 11.3). This is the rationale for an access regime, but it leaves open the critical policy question of whether observed *regulated* access prices are set at the most efficient levels. This is difficult to resolve, since it presupposes knowledge about the ‘true’ efficient costs of the network, amongst many other factors.

Telstra (sub. 24, sub. 38, sub. DR101) and to a lesser extent the IPA (sub. 29) claimed that current access pricing approaches under-remunerated access providers, discouraging the efficient supply of telecommunications services (box 11.3). Access seekers, on the other hand, did not express dissatisfaction with the regulated prices generated by the access regime.

Even so, there are some considerations that may suggest whether there is a risk of error.

International comparisons

As part of its assessment of Telstra’s PSTN undertakings, the ACCC commissioned a study of international PSTN conveyance charges. In its final report on Telstra’s first PSTN undertaking (ACCC 1999g, p. 79–84), the ACCC concluded that the charges in the undertaking were ‘above comparable charges in other countries’ and that the ‘lowest overseas charges are about 50 per cent below the charges in the undertaking’. While indicating the limitations of benchmarking data, the ACCC argued that it still provided some guidance about whether Telstra’s undertaking offer was too high.

In its final report into Telstra’s second PSTN undertaking, the ACCC (2000c, pp. 56–8) recommended conveyance charges for Telstra that were the lowest among the benchmarked countries and 35 per cent less than those proposed by Telstra (figure 11.1 and ACCC 2000c,v). This is notwithstanding evidence that the

geographic dispersion of facilities in Australia would tend to increase costs compared to many other countries (Cribbitt 2000).²⁴

Box 11.3 Views about the level of access prices

It is clear that in much of its network, Telstra is pricing above long-run marginal cost. This means that the current access regime must be more rigorously applied if it is to achieve its objectives (Queensland Government sub. 39, pp. 9–10).

... there is price obfuscation by owners of services that have been declared. The pricing of access often bears no relationship to the actual cost of providing such access (Tasmanian Government sub. 36, p. 6).

By maintaining high prices for PSTN interconnection Telstra can maintain high retail prices for long-distance calling because other carriers (carrying a higher cost base) will be less price competitive. It can be shown that, absent regulation, Telstra's commercial incentives are to negotiate interconnection prices approximating the [ECPR]. Thereby, competitors equally as efficient as Telstra could, at best, match Telstra's retail prices and gain no market share or exert any competitive discipline on the incumbent. Telstra's observed commercial behaviour since telecommunications liberalisation and the move to open competition in 1997 is consistent with Telstra attempting to institute an ECPR price (Cable & Wireless Optus sub. 8, p. 77).

Regarding price, Telstra proposed charges for Unconditioned Local Loop Services (ULLS) are 160 per cent higher than benchmark European and US prices. Telstra has also proposed service assurance charges that are over 5 times higher than Cable & Wireless Optus' estimated efficient charges. In terms of non-price terms and conditions, Telstra has sought to implement processes, which result in nonequivalent outcomes for its competitors, putting them at a competitive disadvantage (Cable & Wireless Optus sub. 63, p. 3).

After nearly 3 years of TSLRIC modelling, the ACCC has produced interconnect charges that are unreasonably low by any standard (Telstra sub. 24, p. 39).

At present, the ACCC's pricing principles do not require that access prices be set in a way that ensures that access providers can recover efficiently incurred costs ... the ACCC has used its broad discretion with respect to access pricing to determine charges that are inconsistent with the elementary requirements of economic efficiency. (Telstra sub. 38, p. 3, p. 15).

The ACCC does not believe that its procedures result in pricing below long-run cost of supply in either PSTN origination and termination or local call resale (sub. DR98, p. 23).

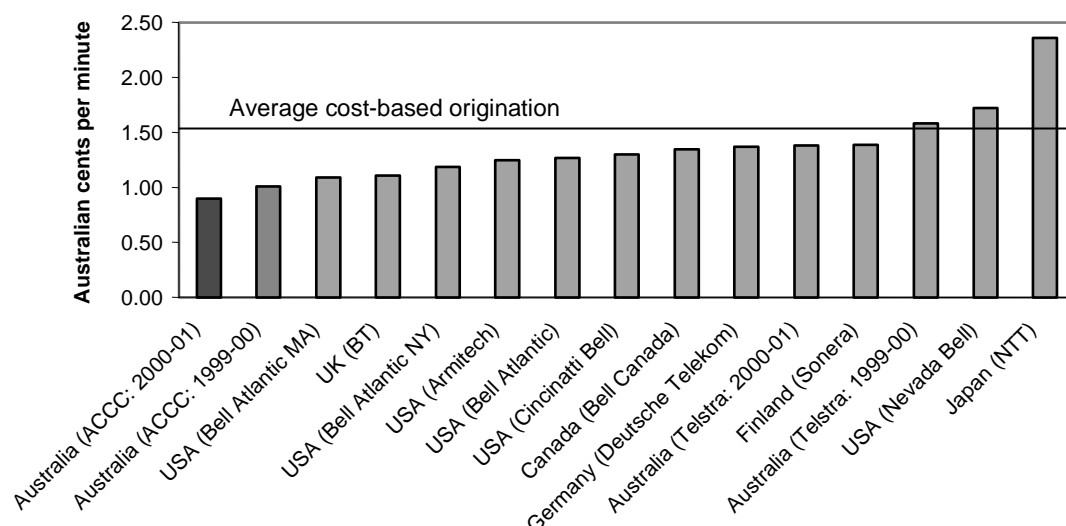
If the high international ranking of Telstra's undertaking price is in any way a guide that Telstra's undertaking prices are too high, then the low international ranking of

²⁴ Note, however, that the USO separately funds the areas of highest cost due to low geographic density.

the ACCC's recommended regulated prices would — on the grounds of consistency — suggest the possibility of a regulated price that was too low.

Figure 11.1 International comparisons of net origination charges

5.96 minute call duration^a



^a Net origination charges exclude any contribution to the access deficit. The data provided by Cable & Wireless Optus showed relatively high interconnect charges for Australia (sub. 8, p. 81). However, its Australian data incorporated an access deficit contribution, when other countries do not have to recover such a deficit from interconnect prices. In this context, net charges are a better measure. Other than when otherwise specified, the data relate to 1999-00.

Data sources: Telstra (sub. 42, p. 7) and ACCC (2000c, p. 56).

However, international comparisons of access charges for particular segments of a telecommunications service are difficult to interpret:

- some prices may be low because of overly tough regulation, while some may be too high because of overly weak regulation in that jurisdiction;
- different methodologies are used for calculating costs;²⁵ and
- results depend on the mix of countries that are used.²⁶

²⁵ The Commission's own benchmarking analysis of telecommunications services and prices takes account of factors such as usage, technological change, taxes, input prices and geography when making judgments about the relevance of international data (Productivity Commission 1999ab). However, the Commission's analysis was of retail prices. Rankings based on retail prices by service provide little evidence about access prices. For example, social regulations — such as the 'Kiwi share' and USOs may make some retail charges below cost. As well, low access prices introduced by competition regulation may take some time to be reflected in retail prices, because over the medium term incumbents find it profitable to maintain high retail prices rather than match rivals' retail prices. Consequently, by itself, the Commission's retail price benchmarking analysis cannot resolve the empirical debate about international comparisons of access prices.

The Commission's view is that the benchmarking data cited by the ACCC do not allow inferences to be drawn about the appropriateness or otherwise of Telstra's regulated prices, because the data do not control for other factors that may explain high or low estimates. *Accordingly, the Commission considers that the international benchmark data provide thin evidence about the appropriate levels of regulated access prices.*

How certain are the results of the ACCC's costing model?

The TSLRIC++ method used by the ACCC is based on a complex model of costs calibrated using information provided by access providers and seekers (NERA 1999). There are many uncertainties about the methods and data underlying the model (appendix D). As the ACCC acknowledges, TSLRIC is 'difficult ... and subject to error' (1997b, p. 26).

Yet in any given determination associated with arbitration, the ACCC chooses a *single* headline price. Similarly, the ACCC's practice in the assessment of Telstra's undertakings was to use a midpoint from a range as the appropriate access price. Given uncertainty, there must be a reasonable risk that the single regulated price selected by the ACCC is subject to error (that is, it is above or below the true long-run cost of provision). The only way of significantly reducing the risk that the price is too low (high) is to deliberately make it higher (lower) than the *expected* optimum price. Whether a regulator should make such an adjustment to manage either risk depends on:

- the costs associated with under-remuneration compared with over-remuneration (section 11.7); and
- whether there are excess returns from other activities that also use the inputs into access services (which is explored next)

Thus where there is uncertainty in the TSLRIC estimates, there is a risk of regulatory error.²⁷ In fact, as AAPT noted: 'the only thing that anyone can guarantee is that all prices are "wrong"' (sub. DR73, p. 14).

²⁶ For example, this even affects the ACCC's analysis. The five countries with access prices higher than Telstra (The Netherlands, Spain, Belgium, France and Austria) in the first benchmark study were removed from the sample used for the second comparison — which was only partly offset by the inclusion of the high cost Japan. Other lower cost jurisdictions were added to the sample. Thus, some of the appearance that Telstra's second undertaking offer was still high by international comparison is a product of the sample selection used in the benchmarking analysis. It appears that had the first sample been used, Telstra's second undertaking price would have been close to the median of that sample.

²⁷ The ACCC contests the Commission's use of a question mark over whether regulated TSLRIC prices are above the long-run cost of provision (sub. 98, p. 23).

Market power in downstream markets

The ACCC, in common with other telecommunications regulators, uses methods for allocating costs in a TSLRIC framework that (generally) abstract from downstream market power. The discussion by Telstra (sub. DR101) and NECG (sub. DR108) of the adverse consequences of any downward errors in the ACCC's TSLRIC pricing is also rooted in a world in which there is no downstream market power.

However, the presence of incumbency market power in downstream markets alters the efficient contribution by access services to the fixed costs of the network (including the access deficit) and therefore on the optimal form of access pricing. In the transition from statutory monopoly to fully fledged competition, the incumbent typically exercises downstream market power. For example, switching costs, entry barriers for rivals in the downstream market, the scope for bundling, differentiated services and brand power may all confer downstream market power. These factors suggest that the demand curve faced by the incumbent is less elastic than that faced by entrants (Laffont and Tirole 2000, p. 123).

An access price that is 'right' in the context of no market power will be too high in the presence of incumbent's downstream market power. This is because if the incumbent earns monopoly profits across the regulated service stemming from its downstream market power, there is an efficiency gain from using these rents to reduce the contribution to fixed costs made by access charges. This reflects the Ramsey pricing principle that the more elastic demands for entrants' services should make a lesser contribution to fixed costs than the less elastic demands for the incumbent's services. For example, in a hypothetical case shown in appendix D (table D.2), the contribution to fixed costs by entrants falls by nearly 70 per cent if demand conditions move from symmetric demand to more elastic demand for entrants' services.

To the extent that the incumbent can still earn monopoly rents on the regulated services — through its downstream market power — this suggests that the regulated TSLRIC access price is not too low (in the sense of distorting the incumbent's investment incentives in the bottleneck facilities). Telstra (2000a, p. 80) notes that fixed line telephony has been more profitable than its non-telephony services. The ACCC (2001q, p. 38) says that:

... there is good reason to believe that for many of the price controlled services, the difference between price and TSLRIC+ is greater than the [access deficit contribution].

The ACCC has estimated a large surplus associated with PSTN services after all costs, including an apparently full contribution to capital returns, had been met (box 11.4). Of course, the size of this estimated surplus is dependent on the ACCC's cost estimates, which may be subject to error, and on the assumption that the

surplus is enduring over time.²⁸ But a significant error — of more than 30 per cent — would be required for the measured surplus to vanish.²⁹

Box 11.4 Profitability of the PSTN

The ACCC's claim that (based on data for 1999-00, mainly from Telstra's 1999-00 *Annual Report* and the ACCC's n/e/r/a model) the PSTN is 'highly profitable' and that 'even though there is a deficit on line rentals (basic access), the rest of the PSTN more than makes up for this'.

The ACCC notes that Telstra's PSTN earns total attributable revenues of about \$8480m, comprising basic access (\$2020m), local calls (\$2650m), national long-distance (STD and FTM) (\$2626m), international calls (in, out, transit, etc.) (\$987m) and inter-carrier revenue (approximately \$200m of the \$819m total inter-carrier revenue can be attributed to the PSTN).

The ACCC estimates that total attributable costs of the PSTN are approximately \$5700m, comprising the costs of the customer access and inter-exchange networks as estimated in the ACCC's n/e/r/a model (\$3794m), retail and wholesaling costs (approximately \$1000m) and the costs of terminating calls from the PSTN in other networks outside and inside Telstra (about \$900m). The n/e/r/a model attributes nearly \$970m to Telstra's indirect costs (costs lying totally outside the PSTN that are unattributable to any specific network service area). The ACCC indicated that the above costs include the return to capital, so that the net surplus of \$1800 million is a 'pure' profit (or 'rent').³⁰

However, clearly the above results are dependent on the TSLRIC model itself to generate cost estimates. If the attributable costs of the PSTN were 32 per cent higher, then the pure profit would be zero. Even so, the figures suggest that sizeable downward errors in TSLRIC pricing would be required for these apparently pure profits to vanish.

Source: ACCC sub. DR98, p. 29.

The fundamental point is that access pricing is only one factor that shapes the returns to the investments made by access providers in telecommunications infrastructure. As the ACCC observe:

The incentive to maintain and improve the PSTN is likely to depend on the aggregate returns from it, not the returns from any single component (sub. DR98, p. 27).

²⁸ If returns were volatile, then good years make up for the bad. Taxing the apparent rents in good years is then an example of the regulatory truncation error discussed in chapter 9. However, Telstra's financial performance has not been volatile in this sense.

²⁹ NECG (sub. DR119) make some broader points about the pitfalls of identifying and taxing monopoly profits.

³⁰ The figures include full acquittal of the access deficit.

Once there is imperfect competition downstream, this provides a buffer for the effects of access pricing on investment incentives. Of course, the aspiration of the telecommunications competition regime is to create more efficient competition in the retail market. The access regime, number portability, pre-selection, amended churning processes, competition from other platforms, and the general price cap all play a part in reducing downstream market power. To the extent that this outcome is achieved, then a TSLRIC methodology that has no current distorting effects on investment may do so in the future.

Moreover, in arguing that the presence of downstream market power mitigates the investment effects of the ACCC's regulated prices for the PSTN, the Commission is not suggesting that it is necessarily feasible or desirable to *enumerate* a new TSLRIC estimate that explicitly incorporates these effects. This would require careful measurement of monopoly profits downstream and the resolution of many difficult conceptual problems (NECG sub. DR119).

Are some cost elements underestimated or overestimated?

As noted above, the existing TSLRIC++ method does not explicitly take account of downstream market power, which may mean that the fixed cost contribution by access prices may be overestimated. However, as any downstream market power subsides that problem will also subside. It then becomes increasingly important to ensure that the methodology for calculating TSLRIC++ in the future fully recoups the long run costs of the network.

The Commission is concerned that, in this long run context, some cost components of the TSLRIC for the domestic PSTN may be underestimated — such as those associated with trenching, provisioning and depreciation (appendix D).

There may, of course, be other omitted cost factors that offset these. For example, the ACCC's approach takes as given much of the existing configuration of the network (a scorched node approach), rather than optimising the full network (so-called scorched earth approach). A scorched node approach generates higher access prices than the alternative.

However, while, all other things being equal, a scorched earth approach would lead to lower access prices than a scorched node approach, a proper implementation of a scorched earth approach would also require risk premiums to rise significantly, with questionable overall effects on access prices.

The ACCC also pointed out that:

... the approach incorporates a number of parameters based on actual costs (as provided by Telstra), rather than 'efficient' values and so is likely to overstate the associated costs (sub. DR98, p. 23).³¹

Estimates of forward looking trench and cable lengths were largely based on Telstra's estimates, while the retail costs for calculation of the access deficit contribution made by PSTN access services were based on Telstra's actual costs.

However, it is not clear that such costs will overstate efficient costs by a great margin. This is especially so given that the ACCC (appropriately) puts emphasis on measuring efficient costs in areas where it considered actual costs varied from efficient ones by a significant margin (for example, provisioning).

Accordingly, the Commission is sceptical that the factors that, *in the long run*, are likely to lead to underestimated cost elements described in appendix D are offset by overestimated cost elements.

Is there evidence that regulated access pricing has harmed investment?

The above analysis suggests indirectly that investment in the PSTN has probably not — to date — been adversely affected by regulated access pricing. However, it is also worth considering:

- more direct evidence on whether the incumbent's PSTN investment has been affected, including the views of participants and the actual record of investment;
- international evidence on associations between investment and regulatory policy;
- whether any impacts on investment are inefficient or not;
- the size of any investment effects on rivals; and
- whether investment effects for the incumbent's PSTN are different from those that may affect new facilities, such as digitisation of the HFC networks and new generation mobile.

Telstra has claimed that the access regime reduced its incentives to invest in the PSTN telecommunications network:

By consistently enforcing access prices for declared services that are significantly below cost, the ACCC reduces the incentives that Telstra has to continue to invest in its

³¹ Cable & Wireless Optus (sub. DR72, pp. 37–8) also pointed out some areas where it considered costs were overestimated. For example, it argued for forward-looking trench sharing, which would have deemed that Telstra's trenches were shared with three or four other utilities. However, whether in fact such sharing would have been efficient or feasible depends on coordinating the disparate rollouts of different utilities. To the extent that such sharing may not actually occur because of coordination or other problems, a risk premium would be required.

network and that Telstra's competitors have to invest in alternative network infrastructure (sub. 24, p. 46).

Telstra also specifically cites the concern that the returns from digitisation of its HFC network might be reduced sufficiently by subsequent declaration and regulated access prices that the investment would not be worthwhile — although Telstra also acknowledges other factors, such as demand and technological risk are also elements that have so far held back such an investment (trans., pp. 300ff). In contrast, Cable & Wireless Optus argued that access regulation was not a significant impediment to digitisation of its HFC network:

However, given that our principle is we expect to be doing deals with people that have content that we want to carry or services that we want to carry, a regulatory outcome that got to the same position, namely, we charged people for carrying their services on our network, is not something that causes us to whiten as it evidently does our competitors (trans., p. 355).

Others, such as Davnet Telecommunications, also argued that the terms of access had not adversely affected investment:

Another myth is that declaration or the threat of it has a dampening effect on access provider investment. This simply has not occurred, as incumbents and new access providers continue to make significant post-1997 network investments in declared markets like in various access and transmission markets. Indeed, the post-1997 environment, if anything, has been characterised by over-investment in telecommunications infrastructure (sub. 13, supplement, p. 3).

Certainly, investment has been very substantial in the last few years.³² The nominal value of network components associated with the PSTN have in aggregate grown by a trend rate of 6.4 per cent per annum from 1994-95 to 1999-00, though one component — switching — has had zero growth. Overall, growth in the PSTN components compare favourably with the mobile network. On the basis of these data the ACCC (sub. DR98, p. 28) argued that investment has 'clearly not been' damaged by access pricing.

The problem with such a diagnosis is that it fails to address the critical issue of what would have happened to investment had access prices been somewhat higher (or lower). For example, suppose that investment would have increased overall by 7 per cent per annum if regulated prices had been just a little higher. In that case, investment has been damaged by 0.6 per cent per annum, even though 6.4 per cent still represents apparently buoyant growth. Consequently, by itself, the type of empirical data cited by the ACCC only indicates that catastrophic investment effects have been avoided, but it does not otherwise measure the size of any (positive or negative) effect of access regulation. It is asking too much of the data for it to

³² See chapters 3 and 16, ACCC sub. 40, attachment 4; ACCC sub. DR98, pp. 27–8 and Access Economics 2000, p. i.

answer the question of what would have happened under the counterfactual of somewhat different access prices.

Woroch (1998, p. 19), in reviewing international studies on the investment effects of telecommunications liberalisation has also concluded that the evidence is ambivalent. Ros (1998) examined the effects of privatisation and liberalised entry policies on investment and line penetration from 1986 to 1995. Those countries that had opened telecommunications to competition had significantly higher line penetration and significantly lower rates of investment — suggestive that competition enhanced services, while (efficiently) reducing total investment requirements.

Some analysts (Access Economics 2000, p. i and Marsden Jacobs Associates 1998, p. 22) suggested that as access prices fall, then retail prices fall, expanding the market and creating a greater need for ongoing investment.³³ For example, Access Economics argued that:

An access regime with efficient prices will, in principle, weaken the market power of an incumbent monopolist, leading to lower retail prices, expanded network capacity and higher ongoing investment.

However, these investment effects are not likely to be large for the incumbent:

- the costs of bottleneck facilities are, by definition, mainly fixed, with few traffic sensitive components. Accordingly, the incumbent can accommodate increases in demand associated with lower prices without necessarily making large additional investments;
- much of traditional telephony has inelastic demand, suggesting that lower prices for these segments do not have sizeable demand effects; and
- as noted previously, sophisticated pricing by a monopolist means that output will be closer to efficient levels than naïve models of pricing suggest.

That said, it would be expected that in a shift from monopoly to more competitive markets, there would be an expansion in the long-run capital stock of the incumbent's bottleneck facility (due to greater demand at lower overall prices). Other factors, such as increased incentives for innovation stemming from intensified competition, might also reduce the effective life of investments, requiring a higher level of annual investment.

But commenting on the effect on investment of a transition from monopoly to competitive environments is largely irrelevant. The question being posed is not whether it is desirable to have an access regime that leads to a more competitive

³³ Access Economics also argued that in the transition to a new competitive regime, uncertainty might have some short-term adverse effects on investment.

telecommunications market, but whether having approached a more competitive state, the existing access prices are being set in a way that is inimical or not to efficient investment in bottleneck facilities. If, for example, access prices were to fall below the 'efficient' level, then adverse impacts on investment could be expected.

Overall, the empirical evidence on investment by the incumbent in the PSTN is not sufficient, by itself, to diagnose whether access prices have been too low or high. However, other considerations suggest that concern about an imminent crisis in PSTN investment is misplaced.

First, interconnection revenue makes only a small overall contribution to PSTN revenue — less than two per cent of revenue in 1999-00 (ACCC sub. DR98, p. 27). That fact,³⁴ combined with imperfect downstream competition, suggest that small proportionate changes in the amount of interconnection revenue would not substantially affect the overall revenue and profitability of the PSTN (box D.6). Thus, even were TSLRIC prices to be below the level consistent with the additive markup method (box D.6), this is unlikely to affect investment adversely.

Second, the PSTN is best seen as a complex set of interconnecting investments — of varying vintages and technologies. To maintain service quality, the incumbent must make continuous investments. This suggests that were access prices set too low to justify incremental investments, service quality would begin to deteriorate and that innovative new features of the network apparent in other countries would not be apparent in Australia. These features of the network are observable and provide early warnings to the regulators that reduce the risk of persistent underpricing mistakes. The ACA (2001d) already monitors quality levels — and these are generally high. Evidence from the ACA and the Productivity Commission (1999b, pp. 151ff) suggests that in areas that are dependent on the network quality (such as call faults), Telstra's performance levels have improved over time and are high by world standards. While the Besley inquiry (2000, pp. 69ff) found evidence of service problems in rural and remote areas, it also found that Telstra's performance was improving. Access seekers also have an interest in monitoring the quality of the PSTN because it is an input to their own services — and at some point have an incentive to support higher access price if it prevents quality deterioration.

³⁴ However, by itself, the share of interconnection revenue is irrelevant. For example, if downstream markets were perfectly competitive, and access prices had been set at a level insufficient to recover the fixed costs of the network, then the incumbent would be forced to set its own internal access prices to the low regulated access price in order to compete in final markets. In this case, the incumbent might have a large market share in the final market and low interconnection revenue — but future investment would definitely be in jeopardy.

The effects of access pricing on investment by entrants (and potential entrants) is also very important. Investment has been substantial in recent years (chapters 3 and 16). The relationship between this investment and access prices to the bottleneck assume two forms.

First, low access prices may stimulate over-investment in network elements that are connected to the bottleneck. But it is hard to explain the pattern of investments in network extensions — such as multiple inter-city trunk lines — in terms of too low interconnection prices to the originating and terminating PSTN. Low access prices to the originating and terminating network do not explain why, in such an apparently contestable market segment as transmission capacity, so many have installed transmission capacity. It is likely that strategic game playing, high future expected demand, errors and other factors play a role in the observed pattern of investment. Once these other factors are at work it becomes difficult to regard the investment duplication as a symptom of low access prices to the bottleneck facilities or even necessarily inefficient for that matter.

Second, as noted previously, higher access prices may not encourage entrants to build bottleneck facilities that substitute for the existing facilities. Consequently, the absence of significant facilities competition in the local loop is not evidence that access prices are too low, nor as the ACCC noted (sub. 40, p. 33), is it evidence of an inefficient outcome.

On the other hand, in some specific markets, high access prices may have influenced build-buy decisions by rivals. In areas where costs are relatively low relative to revenues — such as CBD areas — there has been significant facilities investment that bypasses Telstra's network (chapter 3). This does not necessarily reflect the inefficiency of Telstra's CBD network. The existence of retail price controls on Telstra's local call charges and rentals has meant that Telstra has had to incorporate an access deficit into per minute call access charges — and this may have encouraged bypass. As the ACCC (2000b, p. 77) has recently noted:

... charges for call services provided to consumers in central business district locations may be expected to include an access deficit contribution, even though line revenue is likely to exceed line costs in those areas. Such charges are likely to be above the cost of serving those customers, providing Telstra's competitors with incentives to build their own networks in those areas in order to avoid paying the access deficit contribution. This may result in a level of investment greater than would be economically efficient — economic efficiency may be better served by competitors using Telstra's network rather than building out their own.

Notably, the high access price in this instance is not a symptom of market power but of social regulation. In its report on retail price controls, the ACCC (2000b, 2001q)

has recommended the removal of the regulations that give rise to this problem. The Commission supports the ACCC's recommendation (section 11.8).

A final issue is the effect of regulated access pricing on new investments. The Commission emphasises that uncertainty over regulated access pricing is likely to be a barrier to investment for such services — which is the basis for the proposals that limit the scope for regulated pricing for some investments raised in chapter 9.

Conclusion

In the draft report, the Commission expressed concern that the ACCC might sometimes set access prices at levels that are not sufficient to ensure efficient long run investment in essential telecommunications facilities. The Commission reiterates the fact that access pricing is inherently an uncertain process, with risks of regulatory error. However, for the core PSTN, the risks of adverse investment effects from the ACCC's regulated access prices are not likely to be currently significant, although they may become more pronounced over the medium run as competition further develops in downstream markets. For prospective new facilities — such as a new generation mobile network — the risk of future declaration and regulated pricing is likely to be a barrier to investment.

11.6 How do existing approaches to telecommunications pricing fare?

The ACCC has used three different access pricing approaches in telecommunications. These are described and their limitations reviewed in detail in appendix D. However, some general themes and implications emerge from the analysis for each of the three pricing methodologies.

Evaluated against the key pricing principles derived in section 11.4, the ACCC's suggested delta approach for mobile phone terminating prices is a relatively light-handed approach that allows the flexible pricing of mobile services. Even if the initial terminating price is incorrectly set, it does not threaten the overall recovery of costs since it leaves originating prices unregulated. Competition reduces the prospect of anti-competitive discrimination. Incentives for cost-minimisation and productivity remain intact.

The Commission is concerned that the details of the benchmarking approach adopted by the ACCC (2001n), may in some circumstances threaten rather than enhance efficient price competition in mobile markets (appendix D). Were the ACCC to maintain price controls over GSM termination, the Commission considers

that the benchmark should be the change in the average industry retail price, rather than each individual operator's average retail price.

However, the Commission considers that the grounds for declaration of mobile services is weak given low entry barriers to the industry and the existence of workable competition — and therefore the application of pricing principles to such services is redundant. It is notable that many other OECD countries do not regulate mobile interconnection at all.³⁵

RECOMMENDATION 11.2

The Commission recommends that the ACCC commence a revocation inquiry for GSM services once the Commission's new declaration criteria are in place. The declaration of CDMA services should be postponed until the completion of the GSM revocation inquiry.

The retail-minus approach for the local call service does not ensure that this service makes an efficient contribution to fixed costs, but that reflects social regulations, rather than the access price methodology itself. A TSLRIC costing methodology applied to LCS would generate worse inefficiencies.

The TSLRIC++ methodology applied to the PSTN, could, in principle, meet all the criteria. However, its application appears to have led to uniform access prices — and there is concern that the access price level might not be sufficient to meet properly defined costs (appendix D), with potentially adverse effects on investment as downstream market power subsidies.

Table 11.1 How the application of existing pricing methods rates against the pricing principles

	<i>TSLRIC</i>	<i>Retail-minus</i>	<i>Delta approach</i>
<i>More flexible pricing options</i>	x	✓	✓
<i>At least meet long run costs</i>	?	?	✓ ^a
<i>Prices not too high</i>	✓	✓	?
<i>Non-discrimination</i>	✓	✓	na

^a Often likely to, but does depend on how the base is set.

na not applicable.

³⁵ Boylaud and Nicoletti (2000, p. 31) find that 8 of 19 countries apply no regulation to mobile interconnection (compared to 5 of 24 for the fixed network).

11.7 More detailed pricing guidance

While general pricing principles help define the framework used for determining detailed pricing principles, access providers require more detailed information from the regulator to reduce uncertainty significantly:

AAPT is strongly of the view that, in the absence of guidance on the detail of the principles, [the principles] are unlikely to resolve existing differences between access seekers and access providers on key concepts. The devil is in the detail (AAPT sub. DR100, p. 31).

In Telstra's view, a practical implementation guide would provide a substantial improvement if it set out a fairly prescriptive approach to pricing access and the regulator was required to adhere to this approach when determining access prices. Importantly, Telstra proposes that such guidelines would only be applied to declared services that are well established and essential for the development of competition (sub. DR101, p. 76).

A number of participants favoured notification of detailed pricing principles, if not exact prices, at the time of declaration. For example, SPAN (sub. 9, p. 2) suggested that the ACCC publish pricing principles for the service at the time of declaration and require that, as a default, the access provider guarantee access to seekers on terms and conditions consistent with the pricing principles by a set date. Vodafone (2001b) and Telstra (2001d) also endorsed early notification of pricing principles.³⁶

The Commission agrees that some early notification of the pricing method to be used will be helpful to parties. This suggests that as part of declaration the ACCC should develop the basic methodology for pricing access (if not all the details). This would:

- enable the ACCC to make a more rigorous assessment of whether unregulated prices are too high, so reducing the risk of inappropriate declaration;
- provide guidance to access providers and seekers about the pricing models and outcomes of declaration. For example, had the ACCC determined that it would not use a cost-based model for GSM as an outcome of a declaration inquiry,³⁷ it would probably have deterred parties from seeking arbitration; and
- extend the time taken for declaration, but reduce that needed in the arbitration phase.

³⁶ This is a proposed feature of the Government's Trade Practices Amendment (Telecommunications) Bill 2001.

³⁷ The ACCC could not have done this in this case because the service was deemed.

The Commission recommends that in its inquiry report into declaration the ACCC indicate the broad pricing method that will apply to a service.

This still leaves open the guidance that should be given to the ACCC in developing these pricing approaches. Telstra (sub. DR101, pp. 79–80) has suggested a series of detailed practical implementation guidelines for declared services that are well established and essential for the development of competition (such as PSTN services), while adopting more flexible and lighter-handed approaches for other services (such as GSM) if these are declared. This accords with the ACCC's (1997b, p. 9) view that cost-based pricing principles should only be applied to a service that 'is well-developed in the market and have established demand characteristics'.

The Commission considered these and other views in trying to develop more detailed practical guidelines for well developed services that might be included in an explanatory memorandum to Part XIC or in other guidelines. The main relevant issues are:

- what pricing method;
- how to deal with uncertainty;
- the method for updating determinations;
- resolving technical disputes; and
- two-way pricing issues.

The appropriate pricing method

Long run incremental cost (plus a markup for fixed costs) is the dominant paradigm worldwide for calculating costs of well developed core telecommunications services — such as PSTN and ULL services. There are continuing debates about consideration of how to measure some costs, such as provisioning or trenching (appendix D), concerns about how common costs should be allocated to services, and the computation of rates of return that properly account for risk. But it is hard to consider any method for pricing a bottleneck service that does not at some point have to tackle these issues:

- CPI-x price caps have to set x, which is based on measuring expected attainable TFP in telecommunications compared to other sectors (ACCC 2000b, 2001q) or in building block approaches requires something akin to TSLRIC cost estimates. TFP calculations require accurate estimation of all inputs, including capital

stocks — the difficult feature of costing approaches. Moreover, even if guesstimates are subsequently used for x , the regulator must initially estimate costs to set an efficient base price.

- ECPR still requires the avoidable cost of servicing the downstream market to be calculated, and in any case, presumes that retail price controls have reduced excess profits — which in turn requires some form of costing exercise.

The main advantage of TSLRIC is that the model is largely developed, well understood and accepted by key participants, including the incumbent.³⁸ Appeal processes and iteration by the regulator will probably resolve the key remaining conceptual problems:

Substantial progress has been made in the development of TSLRIC for access pricing purposes and the ACT will determine a solution on the outstanding diverging views. In contrast, starting the access pricing process again using a replacement cost approach would require substantial new regulatory analysis which could further increase uncertainty over future access prices (Telstra sub. DR101, p. 79).

The Commission considers that the TSLRIC framework is appropriate for telecommunications services where the ACCC is developing a cost-based approach for well developed services, with the exception that a retail-minus method may be required for services where retail prices are affected by social regulations.

Appropriate elements in cost-based pricing

Literally interpreted, total service long-run incremental cost does not meet the requirement for capital maintenance because it does not recover common indirect costs or any access deficit contribution that may be needed. The ACCC have generally (though not always) recognised this, by including allowances for both these additional costs (hence TSLRIC+ and TSLRIC++).

However, it is also important to ensure that the ACCC take account of regulatory truncation error (chapter 9), in which the regulator taxes apparent monopoly profits but does not make up for losses if these occur. The possibility of such regulatory error needs to be recognised as a premium on the conventional TSLRIC++, for example, through an increased weighted average cost of capital.

Moreover, as argued by NECG (sub. DR108, p. 9) and Ergas et al. (2001) it is typical that profits fall at an increasing rate as price is reduced.³⁹ This implies that

³⁸ AAPT (sub. 41, p. 14) and PowerTel (sub. DR74, p. 2) have also argued for the retention of TSLRIC pricing.

³⁹ Technically, this is the concavity of the profit function (illustrated in appendix D).

symmetric errors in the regulator's decision-making must generate asymmetric consequences for the firm's earnings, also requiring a premium. As argued in appendix D, there is potentially a further asymmetry stemming from the adverse effects that large downward errors have on investment and on future social surplus. However, the appendix shows that there may be no need for an additional premium associated with this effect.

Finally, downstream market power by the incumbent would theoretically warrant a *reduction* in the resultant access price. It is hard to quantify the adjustment that might be made for this. In the long run, effective competition policy would have eroded such market power, so that no adjustment would be required.

Dealing with uncertainty

The cost estimates underlying TSLRIC are imprecise (appendix D). Using a point estimate of an access price derived from modelling disguises this imprecision. It would only be preferred to use the point estimate as the regulated access price if there are symmetric costs of errors around the estimate. This is debatable.

To deal with regulatory uncertainty, Telstra proposed another approach. It suggests that the ACCC calculate a reasonable range of access prices based on the TSLRIC approach:

The full range of reasonable TSLRIC-based access prices should be estimated by using two sets of input values and methodologies. Each set would need to be considered reasonable and the values within each set would need to be consistent. One set would include all of the parameter values that result in a lower TSLRIC estimate and hence when combined would provide the lower bound of the reasonable range of TSLRIC estimates. The other set would include all of the parameter values that result in a higher TSLRIC estimate and would provide the upper bound of the reasonable range of TSLRIC estimates (sub. DR101, p. 80).

However, the bounds generated by such an approach will probably be too wide. This is because it is unlikely that all of a group of unrelated cost elements would be at the low or high end simultaneously. While Telstra advocated a process of sanity checking that might narrow the range somewhat (such as international comparisons), the experience with such international data do not suggest that it will help contract the range by much.

Telstra then suggested that the ACCC must accept any undertaking by Telstra that is within the price range determined by its proposed method. Clearly, the outcome would be that the highest price would be selected. This would largely protect the incumbent's investments from the risk of regulatory expropriation, but given the wide range, the insurance premium being paid would almost certainly be too great.

If Telstra's general approach was to be implemented, one way of narrowing the range would be that the ACCC would consult with participants to try to gauge the likely reasonable range for each uncertain variable and to characterise its probability distribution. For example, it might be that efficient line provisioning might be a normal distribution, centred on 1.65 lines, but with a 10 per cent chance that efficient provisioning was 2 or more lines and a 10 per cent chance that it was 1.3 lines or less. Where variables were interdependent, their joint distribution would be characterised. Then the standard TSLRIC model would be simulated, and a probability distribution would be generated for the access price. The regulator could then choose some probability range around the mean as the range in which negotiations could occur. Even were the mean to be used for determinations, the advantage of explicitly incorporating uncertainty into the modelling of costs is that it makes it harder for the regulator to choose a regulated price that is lower than the mean.

The way in which the regulator makes sequential access pricing decisions also affects the impacts of regulatory errors. If determinations have a long life — with a simple method for updating each year, then there is less scope to correct a regulatory error. If determinations have a shorter life (such as their current typically three year life) and the regulator is able to observe some reliable indicators of regulatory error (for example, flagging investment or significant bypass) then the sequence of access pricing decisions will tend to converge on the 'correct' access price. However, if determinations have too short a life, then transaction costs are higher (because of the costs associated with a new sequence of arbitrations and possible appeals) and the access provider has an incentive to strategically manipulate investment and maintenance expenditure to obtain a higher access price in the subsequent round of determinations. Thus, the cost of locking in an incorrect access price over a long period has to be balanced against such strategic behaviour in deciding the appropriate length of determinations.

The investment effects of regulatory error are not isolated to the bottleneck facility, but are also relevant to entrants that connect their facilities to the bottleneck. For them the impacts of high access prices is the opposite of that for an access provider. However, if the entrants do not make their investments, consumers still obtain telecommunications services — though the incumbent's downstream arm — whereas if investment in bottleneck facilities are frustrated, all downstream services are affected.

The method for updating pricing determinations

In the draft report, the Commission raised the possibility of setting an initial base using TSLRIC methods and then applying a glidepath based on total factor

productivity growth. While a number of participants supported this approach,⁴⁰ it is probably easier to adapt an agreed set of key variables within the existing TSLRIC model on a year by year basis — principally traffic volumes — to determine updated determination prices. It is notable that Telstra recently used the ACCC's PSTN costing methodology as the basis for a conditional offer to access seekers of a headline rate of 1.3 cents per minute PSTN access in 2001-02 (ACCC 2001p), which the ACCC viewed as reasonable. The relevant TSLRIC model should be made public so that any carrier or CSP can make its own forecasts — to reduce uncertainty over future access prices.

Better methods for resolving technical disputes

Many technical disputes have arisen in evaluating Telstra's two undertakings. The ACCC or its consultants have published a number of detailed papers on these undertakings that provide guidance to participants (NERA 1999; Ovum 1998, 2000b; ACCC 1999g,l, 2000c,s).

However, while the ACCC has made decisions on all of these disputed points, the full justification for its decisions has not been always clear. For example, in responding to Telstra's two undertakings, the ACCC made four evolving responses to the issue of trench sharing, without clearly indicating why, from an economic perspective, its position had changed (appendix D).

Moreover, decisions on technical disputes arising out of arbitrations have been often opaque, because of the bilateral and confidential nature of the arrangements.⁴¹ However, confidentiality need not rule out the publication of detailed methodology papers associated with arbitrations that allow participants and outsiders to comment on parties' approaches to costing.

RECOMMENDATION 11.4

The Commission recommends that there be public disclosure by the ACCC of the costing methodologies on which arbitrations are based and the justification for the approach adopted. This need not include publication of the prices associated with particular arbitrations or of particular commercial-in-confidence cost parameters.

⁴⁰ Macquarie Corporate Telecommunications (sub. DR97, p. 6), Cable & Wireless Optus (sub. DR72, p. 40) and PowerTel (sub. DR102, p. 16).

⁴¹ The assumption is that the ACCC's papers on undertakings give a good guide to the methodologies used for arbitrations. But Telstra has advised that it plans no future undertakings, in which case an alternative vehicle for transparency in methodologies is required.

Equally as important is the question of the appropriate processes for resolving technical issues on access pricing in a way that can accelerate progress. The ACCC already engages external experts on technical matters — such as NERA (1999) and Ovum (1998, 2000b). There may be grounds for extending the scope for external expert advice by:

- establishing an independent expert group — possibly on a cooperative basis with other international regulators — to reach conclusions about the best methodologies for some of the specific vexed questions; and
- letting out contracts to eminent experts for specialised research into particularly difficult issues, with full peer review of the published research.

Their views would be advisory only and not binding on the ACCC (as emphasised by PowerTel sub. DR102, p. 17). However, such analysis should be made public.

Two way pricing issues

To date most of the important access pricing decisions have related to access to an incumbent's bottleneck facilities. However, once the telecommunications network is seen as a 'network of networks' with diversified ownership, then wider interconnection issues arise. This is especially the case if social or other regulations weaken the capacity of parties to bargain on an equal footing. As noted in chapter 9, small non-dominant PSTN networks may have the market power to raise terminating access prices for large rivals (Telstra sub. 38, p. 24; Gans and King 1999a, 2000b; ACCC 2000n,u, 2001b).

The Commission has suggested that the sub-caps that accentuate terminating market power be removed, and that where a non-dominant network sets an 'unreasonable' terminating charge, the provider of a declared service can charge a fee to the terminating party for terminating on that party's network, with that fee subject to arbitration by the ACCC (chapter 9). This otherwise could allow non-dominant carriers to lie outside the access regime.

However, in the event that all providers of declared services are subject to the access regime then there may also be a need for rules about two-way access pricing. The ACCC considered that the TSLRIC price set for Telstra's services constituted a ceiling on the efficient terminating price (2001b). In this way, pricing outcomes would be more consistent and produce like-for-like tariffs for owners of dominant and non-dominant PSTN networks. The FCC has also proposed non-discriminatory cost-based access charges at the originating and terminating ends on a similar basis, with reciprocal charges if there is no evidence that costs are asymmetric (Laffont and Tirole 2000, p. 181).

More generally, some have advocated that reciprocal terminating charges may be universally appropriate (Economides 1995; Economides et al. 1996). For example, PowerTel (sub. 14, p. 8) suggested that terminating charges for access for like services be set at the same rate for all carriers. In some cases, a particularly simple way of effecting reciprocity is through a 'bill and keep' arrangement, in which carriers do not pay any access charges to each other. This is only appropriate where traffic flows and termination costs are reasonably symmetric. The pricing *guideline* provided by the ACCC will deal with residual concerns and avoids prescriptive two-way pricing rules.

11.8 The impact of social regulations on efficient access pricing

Under sub caps, line rentals do not cover the costs of line provision. Moreover, they must be the same across different geographical areas despite the fact that network costs are different between these areas. Access charges should, in theory, have the scope to be geographically 'de-averaged',⁴² but this requires 'de-averaging' at the retail end too.

Telstra (sub. 43, pp. 31ff) and the ACCC (2000b, 2001q) have argued that retail price controls at the service level, particularly those that constrain local call rental charges, have adverse outcomes for access pricing (and therefore the relative prices of local calls versus other call types) and overall efficiency.⁴³

As noted by Cable & Wireless Optus (sub. DR72, pp. 32ff) and the ACCC, pricing controls are also likely to constrain facilities competition in areas where the sub-cap generates prices below actual line costs:

Many of the finer methodological issues around costing approaches are insignificant when compared to the important issue of retail price controls. Retail price controls are the biggest barrier to competition in the telecommunications industry. This is because the retail controls hold the price of core infrastructure \$1 billion per annum below costs, according to ACCC modeling (Cable & Wireless Optus sub. DR72, p. 32).

If ... the local call parity requirement leads to the price of local calls being set below their cost in rural and regional areas, this will deter investors in these areas as they will be unable both to recover their costs and compete with Telstra's prices in these areas.

⁴² Some regulations require averaging, so that the idea of moving to the actual costs applying in a given area is referred to as geographical 'de-averaging'.

⁴³ The Commonwealth Government introduced new retail price controls from July 1999 that allowed much greater scope for rebalancing local call prices associated with rental versus usage. Even so, a significant degree of price control still applies (ACCC 1999m). The price controls have been reviewed by the ACCC (2001g). It recommended the removal of sub-caps.

Whilst this may provide a short-term benefit to rural consumers in the form of lower local call prices, it could potentially lead to longer-term losses as it may deter the development of competition, efficient investment and consumer choice in rural areas (ACCC 2001q, p. xi).

In particular, the sub-cap on local call rentals may adversely affect the rollout of new generation infrastructure, such as mobile networks and fibre optic high bandwidth services — which may have provided both new services (such as high speed internet and pay TV) and facilities competition for local telephony. Such new facilities would be relatively more attractive to consumers were the true costs associated with the alternative — the legacy copper wire network — to be reflected in monthly rentals.

The sub-cap will also encourage cream-skimming in CBD areas where line rentals are significantly above cost (ACCC 2001q, p. 70).

The fact that line rentals for the CAN are not sufficient to meet the fixed costs of the network creates an access deficit that must be recovered from non-local services. The ACCC, for example, includes a contribution to the access deficit in PSTN charges for long distance calls, with that contribution inefficiently reflected in per call charges. The ACCC (2000b, p. 65) noted that:

In the case of line rentals, the access deficit is recovered both from above-cost retail charges for other Telstra call services, and through the inclusion of an access deficit contribution in the interconnection charge for PSTN services. These arrangements dissociate prices from costs, distort consumption and investment signals and, depending on their magnitude, may distort final consumption and investment decisions.

The effect of the access deficit on interconnection prices is substantial. For example, in 2000-01, the ACCC (2000c, p. 27) estimated that the appropriate TSLRIC++ price was 1.53 cents per minute, of which 0.69 cents per minute (or 45 per cent) represented the access deficit contribution. Some other methods for allocating the access deficit (appendix D) would increase the share of the access deficit in interconnection costs.

The first-best approach to dealing with the access deficit is to amend retail price controls and permit re-balancing of line rentals versus call charges (Albon et al. 1997). This produces other economic welfare benefits, as well as making access pricing easier, and is the approach recommended by the ACCC, as well as most participants.⁴⁴

⁴⁴ For example, AAPT (sub. DR100, p. 33), PowerTel (sub. DR102, p. 13), Ericsson (sub. DR86, p. 3), Vodafone (sub. DR70, p. 24), IPA (sub. DR68, p. 6) and SPAN (sub. DR78, p. 1).

However, the Consumers' Telecommunications Network (sub. DR76, p. 6) disagreed strongly with the recommendation, arguing that the access deficit was illusory because of externalities and past funding of the network. The externality argument is a reason for subsidising low income households that might otherwise not have a telephone, but it does not eliminate the deficit that the telecommunications carrier must recover — with the problems that this occasions. The Australian Consumers' Association also expressed concern about the impacts that rebalancing would have on universal service (sub. DR89, p. 3). The Commission understands the social concerns that motivate the sub-cap, but points out that the existing measure is a blunt and inefficient instrument.

RECOMMENDATION 11.5

While recognising the need to address any consequent social issues, the Commission recommends that the telephone line rental sub-cap that leads to the access deficit be removed.

Alternative mechanisms for financing the access deficit

However, if the sub-cap is left intact, there are still a number of possible options that could finance the access deficit more efficiently.

First, there may be scope for services that use PSTN interconnection services to include a fixed per subscriber charge as a way of raising the access deficit for the local loop. Access charges for interconnection would then take the form of a two-part tariff. This appears to be the case in the US, where part of the access deficit is recovered through flat rate charges paid by long distance carriers for access to the local loop (FCC 2000). This charge is the pre-subscribed inter-exchange carrier charge and is capped at US\$1.04 per month for primary residential lines and single-line businesses. The line charge for non-primary residential lines is a maximum of US\$2.53 per month and for multi-line businesses is US\$4.31 per month.

Second, the access deficit could be raised in a similar way to the USO (as raised by AAPT to the ACCC (2000c, p. 31)). This would involve an industry levy, with each carrier and CSP bearing a share of the access deficit that is equivalent to its revenue share.⁴⁵ The advantage of this approach is that it would allow access fees to be

45 Thus the access deficit contribution (AD_i) of the i th access seeker (including the downstream division of the incumbent) would be:

charged at marginal cost, with each carrier or CSP recovering its share of the access deficit through whatever means it thought most efficient. The issue is examined in more detail in appendix D.

In theory, the idea could be extended from the access deficit, to the total pool of efficient common costs. The approach might also have the merit of eliminating some of the incentives for inefficient bypass (Laffont and Tirole 1994, p. 1691 and 2000, pp. 118–9), since a bypassing network would not be exempt from its access deficit contribution. But as noted by Laffont and Tirole, and more generally by Ergas (1998a, p. 12), there are practical barriers to its implementation.

$$AD_i = R_i / \sum R_i \times AD = t \times R_i$$

where R_i is the retail revenue of the i th party and AD is the total access deficit. This formulation can also be seen as an implicit tax on revenues, with t as the tax rate.

12 Carrier licence conditions

Box 12.1 Key messages

Industry development plans

One of the conditions of obtaining a carrier licence is that the applicant must have a current Industry Development Plan (IDP) that has been approved by the Minister for Communications, Information Technology and the Arts.

The IDP arrangements aim to benefit industries that supply products and services to the carriers. Carriers' plans must cover strategic commercial relationships; research and development activities; export development plans; and employment opportunities and training. However, as specified in the legislation, a carrier is only required to comply with its IDP in relation to its research and development activities.

The Commission considers there are no compelling arguments for continuing with the operation of IDPs. Initially, there may have been some benefits from information about local suppliers' capabilities and alliance formation. Such information is now in the marketplace. IDPs bring costs in terms of preparation, approval and reporting as well as the administrative cost to government.

Facilities access

In addition to the telecommunications-specific access regime in Part XIC of the TPA, the Telecommunications Act contains two telecommunications-specific access regimes. These additional regimes are contained in carrier licensing conditions, and focus on facilitating access to carrier facilities, rather than services.

To date, facilities access has been negotiated privately without resort to regulatory intervention.

There is potential for inconsistency and overlap between the three regimes. While this may be addressed by consolidating the facilities access regime into Part XIC the costs of doing so may exceed the benefits. Hence, the Commission recommends that the provisions for facilities access remain under the Telecommunications Act.

Network information

To combat information asymmetries, and to facilitate the provision of interconnection, there is a need to mandate essential network information.

Currently, the requirement to provide information differs depending on the information involved. The rationale for these differences is unclear. Given the potential for these variations to cause confusion and increase compliance costs needlessly, the Commission recommends aligning network information requirements.

This chapter deals with the four carrier licence conditions under reference — industry development plans (section 12.1), access to supplementary facilities and access to towers and underground facilities (covered together in section 12.2) and mandatory network information (section 12.3).

12.1 Industry development plans

One of the conditions of obtaining a carrier licence from the Australian Communications Authority (ACA) under the *Telecommunications Act 1997* is that the applicant must have a current Industry Development Plan (IDP) that has been approved by the Minister for Communications, Information Technology and the Arts.

The main features of the IDP arrangements are as follows (appendix F gives more details):

- every carrier must have an approved IDP;
- each carrier must make a summary of its IDP publicly available;
- their goal is ‘to assist the development of the Australian telecommunications industry by encouraging carriers to undertake activities which contribute to the growth of the industry, while recognising that the carriers’ actions must remain fundamentally strategic and commercial in nature’ (DCITA 1999a);
- ‘obligations’ in plans need to relate to strategic commercial relationships, research and development activities, export development, and employment and training;
- all commitments, others than those in respect of R&D, are, in a formal sense, voluntary;
- each carrier must report annually on their IDP achievements to the Minister and make available a public summary; and
- the Minister must table annual reports in Parliament on IDP achievements.

Assessment of IDPs

The reports from the Telecommunications Industry Development Authority (TIDA) and the Communications Minister (appendix F) outlined what they perceived to be the achievements of carriers. However, central questions that need to be addressed in assessing the effectiveness of IDPs in encouraging local industry development are the extent of *additional* activity that carriers have undertaken (over and above

activity that they would have done anyway), the benefits of this, and the economic costs of encouraging that additional activity.

TIDA (1997) argued that the IDP arrangements were beneficial because they increased demand for local content in the telecommunications equipment industries. It stated that ‘the mere fact that the ... carrier industry plans exist gives that essential signal to industry participants that Australia wants them to develop the industry, to generate exports, [and] to expand R&D’ (p. 4).

However, in the absence of market failures (such as spillovers and information gaps), the idea of stimulating additional activity in the local telecommunications equipment industries means that resources devoted to IDP processes may be diverted from other business activities — which may actually result in a decline in overall economic welfare. These economic costs were not factored into the TIDA analysis.

Industry Commission report into telecommunications equipment, systems and services

As part of a 1998 inquiry, the Industry Commission undertook an assessment of IDPs. It considered the economic rationale for IDPs; discussing the broad types of firm and market failures that might justify government intervention in the telecommunications equipment industries. It also sought carriers’ views on IDPs by means of a survey and conducted a cost/benefit analysis of the program.

The Industry Commission’s survey evidence on carriers’ behaviour together with its cost/benefit analysis suggested that IDPs were not particularly effective mechanisms for eliciting additional R&D and addressing any associated spillovers. However, it recognised that in the short term IDPs could produce sufficient other benefits from information about local suppliers’ capabilities and alliance formation to be worthwhile. These benefits were likely to taper off in the ensuing years. The Industry Commission felt that in the future it was likely that IDPs would generate net costs — due to administrative and compliance burdens — and suggested that the arrangements should be temporary. It therefore recommended that IDPs should be voluntary for small new carriers. Further, IDPs should ultimately be made voluntary for all carriers. (One option was to do this by 30 June 2002, when all current plans would have lapsed.)

The Government did not accept the recommendation that IDPs should be voluntary for small new carriers. It did, however, update and enhance the guidelines for the program. It also indicated that, as the Minister was to conduct a full review of

telecommunications regulation by 30 June 2002, the effectiveness of the IDP arrangements would be included as part of this general review process.

Participants' comments

Participants generally made few comments about the effectiveness of IDPs. AAPT expressed the view that it 'has not found the IDP requirement to have any impact on investment other than the direct cost of having to develop the plan' (sub. 7, p. 39). Cable & Wireless Optus said:

the requirement to submit Industry Development Plans ... does not ensure that carriers source from local industry (the Plan's original intention) ... we source from manufacturers on the strength of their quality and prices and voluntarily spend 72% of our capital expenditure on Australian content (sub. 8, p. 162).

Austar said:

... as Austar operates in Australia all technology no matter where it is sourced will need to be implemented locally and customized to Australian conditions and requirements, so there is an unavoidable exchange of knowledge and technology to Australians, and investment in Australia ... the requirement for an industry development Plan is artificial, and ... there should not be an obligation to have a Plan (sub. 19, p. 4).

However, Austar also stated that if there is a requirement for a Plan then there is no need for changes to the current requirements.

The Institute of Public Affairs (IPA) indicated that:

It [IDP] is likely to distort decisions and impose extra costs both in devising the plan and in complying with the wishes of officials in respect of encouraging local suppliers. Insofar as the plan prescribes equality of treatment to Australian suppliers the plan is redundant (sub. 20, p. 6).

Accordingly, the IPA recommended that the requirement for industry plans be repealed.

The Queensland Government indicated that it 'is supportive of an active approach that assists the development of local industry on a competitive basis. The requirement for industry plans is consistent with that view' (sub. 39, p. 13). However, it was mindful of the differing requirements being made on companies by governments. For example, the Queensland Government requires the IT&T industry to submit industry development proposals as part of large tenders. In order to reduce the burden on the industry it recommended that the:

Commonwealth Department of Science, Industry and Resources work with State Governments to reduce the impact on industry of preparing multiple plans or submissions (sub. 39, p. 13).

AAPT made the point that:

The IDP process unfortunately emphasises upstream industry development, particularly in software or equipment manufacture. It fails to recognise that the activities of competing carriers are themselves a form of industry development. More significantly the developments undertaken within companies that create a competitive marketplace have potentially greater economic impact than encouragement of software or manufacturing industries would have (sub. 7, p. 39).

On the other hand, iiNet claimed there were benefits arising from the IDPs:

The requirement to establish an Industry Development plan is a barrier to entry, but in our submission an appropriate one, given the importance of promoting a rational economic basis for infrastructure investment. As the telecommunications industry changes as a response to new technologies, new services and greater competition, the public resource of public IDPs allows an industry-wide understanding of investment and product development across the industry, and provides an insight into the extent to which the aspirations of the public and the Government are being addressed from year to year (sub. 5, p. 3).

However, the benefits that iiNet attributes to the IDPs of providing information on industry-wide investment and product development is not the stated objective of the program. There are other ways of obtaining such information without the need for setting up the infrastructure required by the IDPs and the additional costs to carriers.

The Commission's draft report recommendation was to repeal the requirements for IDPs. Vodafone, Cable & Wireless Optus, PowerTel, Primus, AAPT and the AIIA were in support of this and the Consumers' Telecommunications Network had no objection to it. The Service Providers Industry Association was not opposed to encouragement of industry development through 'appropriate government policies', but noted some problems in administration (sub. DR78, p. 2).

Ericsson noted a 'proliferation of industry development measures applying to the broad ICT sector' including the Partnership for Development Program, endorsed supplier arrangements, IDPs, etc. (sub. DR86, p. 4). It 'strongly believes that there needs to be some consolidation of these various programs which are confusing, administratively complex and expensive and at times conflicting (sub. DR86, p. 4). Ericsson supported the dropping of IDPs and considered that instead carriers of 'a certain size' should fall within the general provisions of the Partnership program (sub. DR86, p. 4).

Both the ACA and Macquarie Corporate Telecommunications noted that the requirement for IDPs affected the speed of issuing carrier licences — in Macquarie's case the process took four months. Macquarie supported the removal of the IDP requirements as 'the value of the IDP as a means to promote useful telecommunications investment is questionable' (sub. DR97, p. 8).

Economic rationale for IDPs

The broad types of firm and market failure that might lead to possible arguments for government intervention (discussed more fully in Industry Commission 1998) are:

- spillovers;
- dealing with deficiencies in local firms;
- correcting an information gap; and
- buying practices of carriers/multinational enterprises.

Validity of these arguments

The Industry Commission considered that the strongest in-principle case for intervention related to spillovers and information exchanges that enhanced learning by local firms. However, it only provided a possible justification for targeting those business activities or actions that were likely to generate such knowledge flows and that related to additional R&D and alliances.

It found that the nature of IDPs made it difficult to assess the extent to which such leverage programs genuinely had an impact on R&D levels or alliance formation. Where the impact on a carrier's behaviour is small or nil, then the transaction costs of negotiating IDPs and any dynamic impacts on carrier entry may generate net costs (rather than benefits).

As mentioned, the survey of carriers conducted by the Industry Commission and its cost/benefit analysis suggested that IDPs were not particularly effective mechanisms for eliciting additional R&D and any associated spillovers.

Questions arise as to whether the IDP is the most appropriate vehicle to overcome any information deficiencies and whether it is appropriate over the longer term. Voluntary arrangements in which government facilitates reliable sources of information on local capabilities (through databases, exhibitions, seminars and introductions) can be more appropriate. ISONET, a public company funded by the Commonwealth Government, and the network of state-based Industrial Supplies Offices, provide information and encourage potential importers to consider local

sources of supply that are world competitive. In addition, it could be expected that the benefits of IDPs would decline over time as carriers become more aware of local capabilities.

Conclusion

The Commission finds no compelling argument for continuing with the operation of IDPs. The carriers that have been operating for some years, such as Telstra, Cable & Wireless Optus and AAPT, have had sufficient time to familiarise themselves with local industry capabilities. These established carriers have had industry plans in operation for many years. Therefore any possible market failures would have been substantially overcome. The IDPs of a limited number of new carriers that essentially are resellers or serving a regional or limited telecommunications market are likely to have very little impact on the local equipment industry overall.

As mentioned, there are some costs to carriers of preparing, obtaining approval and reporting annually on the progress of IDPs. There is also a small administrative cost to government. There may be minor adverse impacts on competition through possible delays in establishing and having plans approved.

In any case, with the exception of commitments in relation to R&D, other commitments by carriers made in the IDP are in a formal sense, voluntary. As Cable & Wireless Optus further noted:

[IDPs] are an unnecessary cost burden on the telecommunications industry; and ... there are good cost and efficiency reasons why carriers will continue to make substantial purchases in Australia (sub. DR72, p. 51).

RECOMMENDATION 12.1

The Commission recommends that the legislative requirement for Industry Development Plans should be repealed. Existing plans should cease.

The Commission considers that, if this recommendation is not adopted, the suggestion from Macquarie Corporate Telecommunications to ‘unshackle’ IDP requirements from licence criteria should be taken up (sub. DR97, p. 8).

12.2 Facilities access

The *Telecommunications Act 1997* (TA) contains two telecommunications-specific access regimes (Parts 3 and 5 of Schedule 1) as part of carrier licensing conditions. Unlike Part XIC of the TPA, these regimes focus on providing access to facilities, rather than services.

This section describes the additional access regimes under the TA and highlights some of the key differences between them and the regime in Part XIC. The use of the additional access regimes is summarised and the desirability of consolidating the various telecommunications-specific access regimes is considered.

What are the facilities access requirements and how do they differ from Part XIC?

Access to Supplementary facilities - Part 3 of Schedule 1 of the Telecommunications Act

Although ‘facility’ is defined broadly under the TA — as including any part of a telecommunications network — the facilities covered by Part 3 are limited to:

- all customer cabling or equipment; and
- other facilities installed before 30 June 1991 or, if they were obtained after that date, were obtained (at least in part) by means other than commercial negotiation. This focuses the regime on facilities that have been installed or obtained because of special powers and immunities given to carriers.¹ (In order to establish Australia’s initial telecommunications infrastructure, prior to July 1997, carriers were given broad land access powers and a wide range of immunities from State and Territory planning and environment laws.)

Part 3 contains a ‘mini-declaration’ test by requiring that the ACCC only grant access where it is ‘reasonable’, judged against the long-term interests of end-users. However, unlike Part XIC, there are no standard access obligations in Part 3.

The process for determining access terms and conditions under Part 3 appears to be based on Part XIC, but with a few key differences. Where agreement cannot be reached, terms and conditions may be determined by an arbitrator appointed by the parties (there are no undertaking or registration provisions). If the parties cannot agree on an arbitrator, the ACCC must arbitrate. The Telecommunications (Arbitration) Regulations 1997 govern the procedures for ACCC arbitration, and are based largely on the arbitration provisions in Part XIC. Other arbitrators are not governed by these procedures.

Similarly to Part XIC (s. 152CH), Part 3 contains a binding Ministerial pricing power, under which the Minister may determine access pricing principles.

Part 3 is primarily administered by the ACCC.

¹ Explanatory Memorandum to the Telecommunications Bill 1996, vol. 3, p. 5.

Access to telecommunications transmission towers and to underground facilities - Part 5 of Schedule 1 of the Telecommunications Act

Part 5 originated from concerns about the effectiveness of the 1991 arrangements in avoiding environmental degradation and achieving co-location of facilities:

- community concerns about environmental amenity followed intensive infrastructure rollouts, and particularly those involving overhead cable (as in the case of the Optus Vision network that commenced in 1996) and mobile phone towers (by all mobile carriers).
- while the 1991 regime provided for facilities access, Cable & Wireless Optus and Vodafone considered that the requirements were insufficient to enable them to acquire access to Telstra's facilities (Waters, Simpson and McDonough 1998). In December 1995, AUSTEL (1995, p. 104) reported that while Optus and Vodafone shared 104 sites, Telstra shared less than 50 sites with the other two carriers.

In an effort to reduce these concerns, under the 1997 regime the Government scaled back many of the immunities carriers previously enjoyed in relation to planning and environment laws. Part 5 of Schedule 1 imposed a more stringent obligation on carriers to share mobile and underground facilities.

Unlike Part 3, there is no requirement for the *request* for access to be reasonable, only that the access seeking carrier give reasonable *notice* that it requires access and that access is technically feasible (if not, the ACA must certify this is the case). In effect, this means that mobile towers and underground facilities are automatically available, subject to some procedural requirements. The implications of this for carriers seeking to reserve capacity on their own facilities are discussed in a later section.

As with Part XIC of the TPA, the ACCC can make an access code under Part 5. In October 1999, the ACCC released the Facilities Access Code (box 12.2) which is designed 'to encourage the co-location of facilities, where reasonable and practicable, and promote competition by facilitating the entry of new mobile and fixed line operators' (ACCC 1999p, p. 1).

Apart from the provisions specified in the code, the process for determining terms and conditions under Part 5 is the same as under Part 3 (described above). There is no Ministerial pricing power under Part 5.

Part 5 is primarily administered by the ACA, while the code making power is vested in the ACCC.

Box 12.2 **The Facilities Access Code**

In 1997, the Minister for Communications, Information Technology and the Arts requested that the ACCC consider whether a facilities access code should be developed under Part 5. A concern was to facilitate entry by new mobile providers and to provide certainty of rights before spectrum was auctioned in 1998 (ACCC 1997d).

The ACCC released a draft code before the spectrum auction, and finalised the code in 1999. Its 'core' mandatory conditions relate to the protection of confidential information, non-discriminatory access, queuing and dispute resolution. These mandatory conditions cannot be varied by a bilateral agreement between the parties.² Voluntary conditions include consultation, interference, maintenance and emergency work, and the negotiation of a master access agreement (this is a 'blueprint' for future access negotiations). Parties may override the voluntary conditions through bilateral agreement.

The role of the code developed by the ACCC is to provide *timely* access:

The Code seeks to affirm and complement statutory rights of facilities access by providing, in terms of administrative and operational procedures, standards of practice that will allow access to be as timely as possible. Absent a code, access could be unnecessarily delayed or protracted by onerous administrative requirements and disputes ...

The Code may therefore be characterised as providing a safety net for carriers who, in the absence of a code, would not be able to negotiate timely access to the facilities of others (ACCC 1999o, p. 3).

Key differences between facilities access and Part XIC

In summary, there are a number of procedural differences between the facilities access regimes contained in Parts 3 and 5 of Schedule 1 of the TA and the regime in Part XIC of the TPA (chapter 7). More significantly, the source of the 'bottleneck' that the access regimes in Parts 3 and 5 seek to address appears to differ to that of Part XIC.

The change of policy direction by government, from one which promoted the rollout of telecommunications infrastructure (and hence the granting of special immunities and rights to carriers), to one of controlling the proliferation of overhead cables, mobile towers and other telecommunications infrastructure, disadvantages new entrants relative to incumbents. Parts 3 and 5 seek to address this imbalance. As noted by AAPT (sub. 41, annexure A):

² As a result, the 'core' requirements of the facilities access code — which flesh out the mandatory access obligations under Part 5 — are similar to the standard access obligations under Part XIC of the TPA, which describe the mandatory access obligations under Part XIC.

In recent times restrictions on locating and constructing mobile network facilities have become more onerous. This increases the cost of new mobile network providers of constructing and establishing mobile networks ... As these restrictions have only recently been tightened, some of these costs were not incurred by the existing mobile network providers (p. 56).

To the extent environmental regulations and the use of less appropriate sites create a barrier to entry and competition, the requirement for facilities access reduces that barrier (p. 58).

The use of the facilities access regimes

In contrast to the use of Part XIC, facilities access has operated mainly without the involvement of regulators. Private facilities access agreements have been agreed between parties seeking and offering access (partly facilitated by the code under Part 5). In particular, the regulators have not been required to determine the scope of the regimes or to arbitrate on terms and conditions of access.

Several factors explain this (relative) lack of regulatory involvement.

Firstly, the structure of the mobile tower industry has changed since the introduction of the regime — becoming more concentrated in the hands of specialist owners rather than vertically integrated firms. In particular, Vodafone and Cable & Wireless Optus have sold their towers to Crown Castle Australia — the Australian affiliate of an international firm specialising in mobile tower ownership and management. The greater incentives for specialist firms to facilitate co-location are discussed in a following section.

Second, the high costs of regulatory delay and the ability for carriers to use alternatives to existing towers³ mean that where a carrier encounters an access problem it has an incentive to circumvent it by (potentially inefficiently) building its own facility, rather than seeking a regulatory solution. The high cost of delay stems from the fact that the efficient functioning of the entire network depends on ensuring that there are no facility ‘gaps’ in the network. A number of carriers pointed to regulatory delay as being a problem under Part 5.⁴ For example, the former One.Tel observed:

One.Tel has faced and continues to face considerable problems in co-locating with the incumbent carriers under the current regime. These problems include processing delays... new entrants are often forced to contract with the incumbent carriers on a “take it or leave it” basis or face a long and protracted arbitration by the ACCC. The

³ Such as situating low impact facilities on existing buildings.

⁴ AAPT (sub. 7, p. 39), Hutchison (sub. 6, p. 7).

consequence is that new carriers are either forced to cut back or delay their network rollout plans or seek alternative solutions. Typically these alternatives involve the installation of separate towers or low-impact facilities on rooftops (sub. 18, pp. 13–14).

Is there scope to improve the facilities access regimes?

This section explores the extent of inconsistency and overlap between the facilities access regimes provided for under the TA and the services access regime in Part XIC. The desirability of incorporating the facilities access regimes into Part XIC is then examined.

Overlap between the regimes

The distinction between facilities and services is the most obvious difference between the facilities access regimes under the TA and the services access regime under Part XIC of the TPA.

Declaration of a ‘facility’ rather than a ‘service’ affects the scope of the regime. Where a facility provides more than one service, all the services fall within the scope of the regime. Where a service can be provided by more than one type of facility, not all these facilities may fall within the scope of the regime.

Although legislation defines ‘facilities’ and ‘services’ separately (box 12.3), the boundaries between the terms can be blurred. This is because a service can include ‘the use of a facility’. The declaration of the unconditioned local loop service (ULLS) under Part XIC provides an example of where ‘facility access’ of the type provided by the TA can be accommodated under Part XIC of the TPA.

Although the services access regime in Part XIC has been used to declare (the use of) facilities, the facilities access regime has not been used to obtain access to services. No carrier has attempted to use Parts 3 and 5 to obtain access to services before they were declared under Part XIC.⁵ Further it is not clear the use of Parts 3 and 5 to secure access to services (such as the unconditioned local loop) would ensure access to ancillary services such as billing information (currently provided for under the standard access obligations of Part XIC).

⁵ One interpretation of Part 3 would allow this to occur. Under Part 3, an access providing carrier is obliged to offer access in order to enable the provision of carriage services. One interpretation of this obligation would have allowed an access seeking carrier to interconnect with the unconditioned local loop (much of which was built before 1991) and to use that facility in order to enable the provision of xDSL services. However, this did not occur.

Box 12.3 **‘Facilities’ and ‘services’**

Legislative definitions of ‘facilities’ and ‘services’ are provided below.

Facilities

Under the TA, ‘facility’ means:

- (a) any part of the infrastructure of a telecommunications network; or
- (b) any line, equipment, apparatus, tower, mast, antenna, tunnel, duct, hole, pit, pole or other structure or thing used, or for use, in or in connection with a telecommunications network.

(Parts 3 and 5 of Schedule 1 of the TA are limited to certain types of facilities.)

Services

Under Part XIC of the TPA, declaration is limited to ‘eligible services’. An eligible service is a listed carriage service or a service that facilitates the supply of a listed carriage service. A listed carriage service is a service for carrying communications by means of guided and/or unguided electromagnetic energy between two or more points, at least one of which is in Australia.

Under Part IIIA of the TPA, ‘service’ means a service provided by means of a facility and includes:

- the use of an infrastructure facility such as a road or railway line;
- handling or transporting things such as goods or people;
- a communications service or similar service;

but does not include:

- the supply of goods; or
- the use of intellectual property; or
- the use of a production process;

except to the extent that it is an integral but subsidiary part of the service.

Source: TPA and TA.

Another point of overlap between the regimes arises from the standard access obligations under Part XIC. Although declaration under Part XIC is to a *service*, some of the standard access obligations are specified in terms of *the facility that supplies that service*. In particular, if an access seeker requests interconnection with the facilities of an access provider in order to be supplied with the declared service, an access provider must permit that interconnection. Accordingly, there is some reference to ‘facilities access’ under Part XIC.

The absence of standard access obligations under Parts 3 and 5

Whereas the standard access obligations under Part XIC accord priority to the reasonably anticipated needs of facilities owners and existing access seekers, there is no similar obligation under Parts 3 and 5. This was a deliberate policy choice to address concerns at the time the legislation was drafted about the excessive use of claimed ‘future needs’ to avoid co-location (DCITA 2000b).

Providers have expressed concerns that Part 5 especially does not give facility owners sufficient certainty in relation to their own facilities. Telstra listed several hypothetical examples illustrating this issue. For example:

A carrier plans to install an antenna on one of its own towers. It may have obtained planning permission, ordered the equipment, and arranged for contractors to do the installation work. Just before the antenna is physically installed, the carrier receives an access request from an access seeker.

According to [Part 5], the access seeker immediately has an absolute right of access to the tower. If both requirements cannot be satisfied, then the request of the access seeker takes priority over the first carrier’s own requirements (sub. 43, pp. 27–8).

Uncertainty about future access to carriers’ own infrastructure may reduce investment incentives.

The ACCC sought to address the issue of future requirements in early drafts of the Facilities Access Code. However Telstra noted (sub. 43, p. 27):

The ACCC has prepared a Code which does not recognise any right to refuse access on the bases that the second carrier has not provided reasonable notice (having regard for the first carrier’s planned uses of that facility). Telstra understands that this has been done on the basis of advice from the Australian Government Solicitor ... that the ACCC does not have the power under the Act to allow a first carrier to refuse access on that basis.

In 2000, the Department of Communications, Information Technology and the Arts released a consultation paper seeking views on this issue. No changes to policy or legislation have been announced arising from this consultation.

One means of addressing the problem is to remove the obligation for access where it prevents the access provider from meeting its own future anticipated requirements (akin to the principle in s 154 AR(4) of Part XIC). However, this option is susceptible to gaming since the ‘anticipated requirements’ of the provider are often not directly verifiable. However, the pricing principles for facilities access articulated by the ACCC appear to address gaming incentives, while reducing disincentives for investment:

In the event that a First Carrier was unable to refuse an access request and where there was a capacity constraint on or in a facility, then that request could have the effect of displacing a First Carrier's Currently Planned Requirements. In these circumstances, the ACCC considers that, in determining an access price, it is relevant to consider the cost, to the First Carrier, of foregoing or delaying its current plans (Explanatory Statement, Code of Access to Telecommunications Transmission Towers, sites of towers and Underground Facilities, p. 39).

Part 3 requires that each request be reasonable

If access requests under Part 3 need to be assessed on a case by case basis against the reasonableness criterion, this may delay access unduly. It also has the potential to create inconsistency in the application of the regime.

However, it appears that these problems could be addressed within the scope of the current facilities access regimes. For example, the legislation does not appear to prevent access seekers from seeking declaration for a *range* of like facilities (as opposed to several declarations for individual facilities). Additionally, the ACCC could develop a framework to inform its decisions as to whether to declare facilities.

Parts 3 and 5 as facilitating co-location

It is appropriate to take into account community concerns over aesthetic and environmental degradation and governments have put in place a variety of environmental and planning regulations to do this. By facilitating co-location, Parts 3 and 5 are designed, in part, to address the barriers to entry that these regulations may pose for new entrants.

The declaration criteria under Part XIC (and Part IIIA) are primarily aimed at entry barriers such as natural monopoly. While they might also take into account entry barriers resulting from environmental and planning regulations, the outcome of a declaration inquiry based on this barrier might be somewhat uncertain.⁶ In any case, Part IIIA processes would hardly meet the speed test required for the efficient rollout of mobile networks.

⁶ In the case of Part IIIA such facilities might also fail the national significance test, especially if declaration was on a location by location basis.

Parts 3 and 5 as licence conditions

The facilities access regime is a carrier licence condition. If a facility owner is not a carrier, it is not subject to the regime.

As towers are not, by themselves, defined as a ‘network unit’, specialist tower owners are not required to be licensed carriers. Paradoxically, although mobile towers are specifically referred to in Part 5, the only way a firm can be required to comply with Part 5 is if it owns other parts of a telecommunications network. If so, then its mobile towers fall under the requirements of Part 5.

Where the incidence of regulations differs depending on ownership structures, this has implications for competitive neutrality and can distort ownership arrangements and corporate structures. Hence the ‘first best’ option is for declaration to apply equally to all providers of a service, unless they have secured an exemption.

However in this case, the distinction between integrated carriers and specialist tower owners has proven both pragmatic and effective. Parts 3 and 5 are mainly oriented at foreclosure by vertically integrated incumbents. As specialist tower owners have no presence in downstream markets, they have an incentive to maximise use of their facility rather than restrict access:

Independent and specialist operators like Crown Castle are best able to leverage the value of the towers and ensure maximum co-location opportunities, which is a significant benefit to the community in reducing the number of towers (Yahoo! Australia and NZ News 2000).

[Crown Castle’s] profits are derived directly from converting under-utilised assets into fully utilised assets and passing on the consequential savings to its customers. The costs of establishing and maintaining an infrastructure site ... are high. However, these costs are largely fixed and do not vary significantly with the number of devices attached to that site. It is therefore critical to [Crown Castle’s] business that it maximises the number of customers on its sites to recover its costs, boost revenue and hence drive profits (Crown Castle Australia, sub. DR88, p. 2).

On the other hand, the economic characteristics of towers (the high fixed costs of tower construction and planning regulations) that make an access regime desirable for an incumbent’s towers, may also create market power for a specialised tower provider in some specific tower locations. However, the cost of alternatives, such as low impact facilities,⁷ is likely to be small enough to produce a threat of bypass if prices are raised significantly above long run costs (Crown Castle, sub. DR88, p. 3). This dampens any markups that could apply.

⁷ Low impact facilities are generally exempt from State and Territory planning laws.

Dual regulators

The regulatory responsibility for access to telecommunications facilities is split between the ACA and the ACCC. Part 3 is primarily administered by the ACCC while the ACA has primary responsibility for Part 5.

Given the experience of the ACCC in access matters, the Commission's general position is that primary responsibility for all access matters be transferred to the ACCC (regulatory institutions are discussed in more detail in chapter 9).

However, in the case of Part 5, where access to facilities is automatic subject to procedural requirements and technical feasibility, and a code making power already resides with the ACCC, the Commission considers that the current division of powers is appropriate.

Conclusion

There is some overlap and inconsistency between the facilities access regimes under the TA and the services access regime under Part XIC. Regulatory consolidation, as recommended in the Commission's draft report, has the advantage that it would apply consistent processes and principles to what are fundamentally common problems. It would permit revocation where appropriate. The ACA saw no substantial problems in such consolidation (ACA sub. DR99, p. 2).

Existing facilities could be deemed declared. This would overcome the immediate problems inherent in a lengthy declaration process and in the uncertainty about whether Part XIC could address the entry barriers posed by environmental and planning regulation. Since Part XIC only applies to carriers and carriage service providers, Part XIC would not (like Parts 3 and 5) apply to non-integrated tower providers. The Commission considers this appropriate.

However, on reconsideration of the issues, the Commission considers that the costs of regulatory consolidation may exceed the benefits:

- the requirement to take account of an incumbent's future capacity needs under Part XIC is a two-edged sword, because it is hard to differentiate genuine capacity needs from gamed ones;
- any revocation inquiry would be based on the declaration criteria in Part XIC. Thus, the uncertainty over the ability of Part XIC to deal with the entry barriers created by planning regulations would re-emerge during a revocation inquiry;
- few participants have complained about overlap and inconsistency between the two (services and facilities) regimes; and

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- it is not clear that any delay in achieving access under the facilities access regimes would be more speedily resolved under part XIC.

Accordingly, the Commission considers that the facilities access regimes under the TA continue on pragmatic grounds.

Non-integrated specialist facility providers are becoming increasingly important and may soon reduce the economic importance of denial of access to certain facilities (such as towers) by integrated incumbents. Just as the Commission has recommended a sunset provision for declared services under Part XIC, the facilities access regimes should also be re-tested in the next few years to see if they should have the same scope.

RECOMMENDATION 12.2

While there are some inconsistencies between access to facilities under the Telecommunications Act 1997 and Part XIC in the Trade Practices Act, the Commission recommends the continuation of Parts 3 and 5 of the Telecommunications Act on pragmatic grounds, subject to a re-assessment of their need and scope in 2005.

Other matters raised by participants

Levies on facilities by local government

In addition to planning regulations that govern the location of telecommunications facilities, local authorities have also sought to influence the positioning of telecommunications facilities through the imposition of levies. As noted by Cable & Wireless Optus (sub. DR95, p. 42):

A number of local councils in New South Wales have made claims against Optus based on section 611 of the Local Government Act, which the councils argue authorises local councils to levy 'an annual charge on ... all cable laid, erected, suspended, constructed, or placed on, under or over a public place'. To date, more than 30 local councils have threatened claims. As of January 2001, about 27 local councils had made claims totalling approximately A\$12.9 million. Additionally, four local councils in Victoria and two in South Australia have made similar claims totalling about A\$1.2 million.

SaskTel also raised the issue of council charges (sub. DR65):

... new entrants are faced with the prospect of paying a charge to local councils for the space that cables occupy. Negotiating fees and charges that these agencies levy also contributes to delaying the introduction of competition. It is not without reason that no private company has been able to start a competitive alternate access business since the

advent of the new regulatory regime. The lack of carriers' rights amounts to a prohibitive disadvantage to new entrants (p. 4).

Clearly, government policy needs to take into consideration community concerns over aesthetic and environmental degradation and to ensure that facility providers take these costs into account when rolling out infrastructure. However, there are several risks in the application of levies by local councils to address environmental impacts.

First, councils may use such levies as a revenue-raising measure, inflating levies beyond the point that is appropriate for abating environmental impacts. It is notable that levies have been applied to *existing* infrastructure — where the impacts on incentives are much weaker.

Second, the network characteristics of most telecommunications facilities mean that a network provider must run its networks over most geographic areas and cannot bypass individual councils. This provides individual councils with considerable taxing potential. However, were each council to exploit this power then this may have the unforeseen impact of jeopardising network rollouts and technological choice beyond that required for environmental concerns.

Matters of responsibilities at varying levels of government are complex. The Commission accordingly does not advocate a particular solution to the problem, but suggests that some coordinated and systematic approach is warranted. Options include:

- councils could reach a joint agreement on a common practice when setting levies that constrains what each council might do if it were to act independently;
- councils could be relieved of their powers to set such levies, with higher levels of government undertaking this role, while consulting with councils about the environmental impacts of new telecommunications facilities; and
- the Federal Government could set a ceiling on the magnitude of levies imposed on telecommunications infrastructure. This would be similar to the limits previously established by the State Government for increases in local council rates in NSW.

A further issue is the potential discriminatory treatment by councils of telecommunications utilities over other utilities.

The Councils have discriminatorily targeted Optus' local distribution network, not levying any charges on other utility distribution infrastructure such as electricity, gas and water companies; and

The Councils have targeted Optus distribution network for significantly higher fees per geographic area than the Telstra network (Cable & Wireless Optus sub. DR95, p. 43).

Clearly, the external costs imposed by telecommunications infrastructure vary by type of facility – for example, community preferences may be such that the reduction in environmental amenity from aerial cabling may be greater than for underground cabling – it is appropriate for regulation to take account of these differences.⁸

However, if the object of the levy on telecommunications cabling is to address environmental impacts, there would appear to be little grounds for levying telecommunications but not other utilities providers that have also rolled-out aerial cable on the same poles. Further, it appears that the TA sought to ensure that this did not occur. Schedule 3 of the TA provides that a State and Territory law has no effect to the extent to which it discriminates, or has the effect of discriminating, directly or indirectly against a carrier.⁹ The Explanatory Memorandum to the Bill notes:

The indirect discrimination which this clause is intended to prevent includes laws that impose a burden on facilities of a carrier that is not imposed on similar facilities (for example a tax on ‘street furniture’ which is in effect discriminatory against carriers because other bodies owning such equipment such as electricity authorities would be exempt from paying that tax) (vol. 3, p. 6).

This issue is currently the subject of a Federal Court appeal. This effectiveness of this clause may need to be reviewed in light of the outcome.

Access to poles

SaskTel International indicates that it has faced problems in achieving access, to string its broadband cable to the poles owned by non-telecommunications utilities, at reasonable rates:

SaskTel has found it very difficult to obtain access to infrastructure in a timely manner and on reasonable terms ... power companies have introduced fees and charges that render the business case uneconomic (sub. DR65, p. 13).

Such power utilities have market power since:

- there are very high fixed costs associated with the construction of such poles;
- planning laws would be a major obstacle to the construction of a duplicated facility; and

⁸ And there are many instances where this occurs for example, the TA distinguishes between low impact and high impact facilities.

⁹ Division 8, Clause 42.

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- trenches are very high cost facilities compared to the incremental cost of adding a cable to existing poles.

Accordingly, there appears to be very high barriers to entry that provide scope for utilities to set inefficiently high access charges (and indeed, in recognition of this, such facilities are covered for access by electricity suppliers).

A further concern is that power utilities are not always independent of the provision of telecommunications services, so that they may have weakened incentives to provide access.

Compared with access to conduits and towers, which are covered by the facilities access regime under the TA, the underlying entry barriers appear to be greater. The specification that facility owners must be carriers ignores the potential for non-carriers to sometimes wield power over telecommunications.¹⁰

One avenue for access might be Part IIIA. However, it is not certain that the processes for IIIA would be fast enough in rapidly moving telecommunications markets – a factor which justifies a telecommunications access regime for other facilities. If the problem appears to be a continuing obstacle to the efficient roll out of new networks, there may be grounds for widening the scope of the facilities access regime to such poles, including those owned by non-carriers.¹¹ The Commission considers a monitoring approach is probably sufficient at the moment, given that some network providers (such as Neighborhood Cable) have successfully negotiated access.

RECOMMENDATION 12.3

The Commission recommends that the ACCC monitor whether inefficient access pricing by power utilities to their poles is frustrating the rollout of new broadband networks.

12.3 Network information

Background

This section assesses Part 4 of Schedule 1 of the TA. Part 4 requires carriers to provide, on request, network information to other carriers to ensure efficient

¹⁰ If a facility owner is not a carrier, it is not subject to the facilities access regime, outlined in Parts 3 and 5 of Schedule 1 of the TA.

¹¹ Such an extension need not apply to towers owned by non-carriers, where the potential for market power is much less.

interworking between networks (Explanatory Memorandum to the Telecommunications Bill 1996, vol. 3, p. 6). Carriers also have an obligation to consult with access seeking carriers before modifying their own network where reconfiguration has a bearing on the access seeking carriers' network planning, maintenance or reconfiguration. (However, the access seeking carrier does not have the power to stop any proposed modification.)

Once confidentiality procedures are agreed between the parties (or failing agreement, determined by the ACCC), network information must be provided as soon as practicable after the request is made.

The obligations under Part 4 differ slightly depending on the type of information involved. For example, while a carrier is obliged to provide 'reasonable access' to operations support and traffic flow information, it is obliged to provide 'timely and detailed' network planning information. And for some types of information (such as network planning and quality of service information) the obligation to provide access only applies if the request is 'reasonable'. Reasonableness is defined in relation to the legitimate commercial needs of the operators — and thus differs from the definition under Part 3 of Schedule 1 which refers to the long-term interests of end-users.

The ACCC may make codes setting out conditions for the provision of network information and consultation.

The process for determining the terms and conditions of access under Part 4 is similar to the process under Parts 3 and 5 of Schedule 1. Parties agree on the terms and conditions of access or, failing agreement, may seek arbitrated terms and conditions (either by an agreed arbitrator or the ACCC). A Ministerial pricing power exists under which the Minister for Communications, Information Technology and the Arts can determine principles for pricing the provision of information.¹²

The rationale for Part 4

Mandatory network information requirements are designed to address an information asymmetry. Although access providers know the essential information required to provide a service, access seekers do not. Without this information, access seekers are not able to service a customer. For example, AAPT stated (sub. 7, p. 40):

¹² Carriers incur costs providing network information; these costs are recovered from access seekers.

AAPT knows from experience that it (and other small entrants) would be severely disadvantaged in their ability to supply customers if Telstra or Optus was able to withhold vital network information. For example, AAPT has found it difficult to obtain exchange boundary information from Telstra during commercial negotiations ... a service can only be properly offered when the access seeker understands important technical and other data about the service. Information in databases, such as customer location details, would be essential for access seekers to be able to provide an adequate service to their customers.

And as noted by Cable & Wireless Optus (sub. 8, p. 173):

Without access to the required databases and underlying information on a real-time basis, the quality of the customer service which carriage service providers are able to provide to their customers is largely determined by the incumbent — and the incumbent is free to determine in its total discretion the means (eg: whether electronic or manual), as well as the timeframe and regularity, with which all customer information is made available to carriage service providers.

There appears to be a *prima facie* case for the retention of a mandatory requirement to provide network information to access seekers.

Options for reform

Part 4 has operated without any involvement from regulators. In particular, the ACCC has not been notified of any disputes under this Part (ACCC sub. 16, p. 54), and has not developed any codes. That said, there is scope to improve the current network information provisions.

Lack of clarity

Cable & Wireless Optus stated that the obligations to disclose relevant network information requirements under Part 4 were unclear and had caused problems (sub. 8, p. 169):

- the incumbent is not subject to clear ex ante obligations to disclose relevant network information, including changes in network interfaces and functionality, prior to the implementation of network changes;
- the incumbent is not subject to an explicit requirement to provide access seekers with non-discriminatory notification of network information compared to the notification given to its own downstream retail operations, including the lead time for notification;
- as the incumbent is not subject to these prior notification requirements, industry self regulatory processes often are hampered because the incumbent provides insufficient lead time for the industry to discuss proposed changes, or the incumbent simply proceeds without industry consensus; and

-
- there is insufficient clarity about the types of services and network changes which must be notified because of their impact on interconnected operators and information which represents legitimate competitive advantage of the incumbent.

If such problems continue, and self regulatory forums prove unable to deal with the issues raised, the code making power under Part 4 allows the ACCC to assess whether regulatory action is required.

Alignment of information provision obligations

As discussed previously, the current obligations under this requirement differ slightly depending on the type of information involved. The rationale for, and implications of, these differences is unclear. No explanation for this is provided in the explanatory material to Part 4. There does not appear to be significant difference in the importance or status of any particular type of information that would justify different obligations. In the absence of any evidence to the contrary, a clear option for reform of part 4 is to align these differing obligations. Otherwise, this has the potential to cause confusion and increase compliance costs needlessly.

Participants that responded to the Commission's draft recommendation generally supported the alignment of information requirements:

The ACA supports the draft recommendation, as uniform record keeping requirements and access should facilitate quicker resolution of interconnect arrangements (sub. DR99, p. 2).

AAPT does not see any reason for the discrepancies relating to the type of information required and therefore it agrees with the Commission's recommendation (sub. DR100, p. 35).

RECOMMENDATION 12.4

The Commission recommends that the procedures and obligations under the mandatory network information requirement should be aligned, regardless of the type of information being requested.

Consolidation with record keeping rules

Any duplication between the network information requirements and the record keeping rules (Cable & Wireless Optus subs. 8, p. 169 and DR72, p. 51) should be removed. However, the Commission sees no reason to add the network information requirements to the record keeping rules (as proposed by Cable & Wireless Optus in the same submissions). The record keeping rules have a different purpose — they are intended to provide cost and price information to the ACCC in order to facilitate the enforcement of anti-competitive provisions and Part XIC. In contrast, the

network information requirements are intended to allow technical network information to flow between providers in order to facilitate service delivery, and are best provided upon request (rather than at specified time intervals as for the record keeping rules).

Scope of the regime

In its draft report the Commission recommended placing the requirement for network information within a standard about the interconnection of facilities under Division 5 of Part 21 of the TA since the current arrangements cover some areas that are redundant, while not covering some areas where regulatory supervision may be required:

- Currently, all carriers' services are covered. A standard would limit the requirement for provision of network information to declared services (since the relevant division of the TA is enforceable under Part XIC);
- The current (licence) regime is limited to carriers, although service providers may require similar network information to provide declared services.

This proposal was supported by a number of parties.¹³

However, the Commission considers that the imperative for action is weaker than maintained in the draft. The excessive scope is inconsequential, because in the absence of the licence requirement, carriers would still provide network information in any commercial interconnections. The potential problems associated with network information provision for CSPs have not been the subject of any complaints.

However, if it were considered that possible failure to provide information to CSPs warranted a remedy then the requirement for mandatory network information could be placed under the standard access obligations under Part XIC. This could be done by amending the TPA directly, or by making the network information requirement a technical standard about the interconnection of facilities under Division 5 of Part 21 of the TA.

Finally, the Commission notes that consistent with proposed changes to Part XIC (chapter 9), the Ministerial pricing power under Parts 3 and 4 should be abolished.

RECOMMENDATION 12.5

The Commission recommends that the Ministerial pricing power under Part 3 and Part 4 of the Telecommunications Act 1997 be abolished.

¹³ ACA (sub. DR99, p. 2), AAPT (sub. DR100, p. 35) and PowerTel (sub. DR102, p. 14).

13 Standards and industry codes

Box 13.1 Key messages

Legislation concerning industry standards and codes is designed to encourage industry self-regulation and to limit the involvement of regulatory agencies to cases where self-regulation has serious failings.

Only Division 5 of Part 21 of the Telecommunications Act (TA) is under reference — this relates to the ACA's power to set technical standards about the interconnection of facilities. This Division forms part of the provisions in the TA (Part 6 and Part 21) that empower the ACA to make technical regulations, industry standards and to accredit industry codes.

A key feature of Division 5 of Part 21 is that the ACA may not make an interconnection standard unless directed to do so by the ACCC.

Overall the current arrangements work well despite some delays, low sign-up rates and low compliance with voluntary codes.

In the Commission's view, the current system of industry self-regulation, backed by some regulatory power to intervene when necessary, constitutes a good fundamental mechanism. The involvement of both the ACCC and the ACA in interconnection standards is appropriate.

The broadening of the LTIE test proposed by the Commission in chapter 8 should also apply to the setting of technical interconnection standards under Division 5 of Part 21 of the TA.

13.1 Introduction

The terms of reference ask the Commission to report on the operation of Division 5 of Part 21 of the *Telecommunications Act 1997* (TA). This Division forms part of the provisions in the TA (Part 6 and Part 21) that empower the ACA to make technical regulations, industry standards and to accredit industry codes. All these provisions are designed to encourage industry self-regulation and to restrict ACA intervention to cases where self-regulation has serious failings (Explanatory Memorandum, Telecommunications Bill 1996, vol. 1, p. 64).

A main reason for the emphasis on industry self-regulation springs from the fact that the changing nature of telecommunications technology and its complexity make

it difficult for any government agency to devise appropriate standards. Further, the potential costs to the industry from regulatory error are very high.

However, the interests of industry players are not always aligned with those of the wider public, and provision for a regulatory backstop is an important safeguard. The fact that the Government has not needed to act under Division 5 of Part 21 so far does not mean that it is redundant, but simply that, so far, industry has adequately addressed the issue of interconnection standards in the presence of the regulatory backstop.

The underlying rationale for standards and codes in the realm of telecommunications comprises a multitude of objectives. Standards and codes are there to address health and safety issues, to safeguard consumer interests, to assist industry development and competitiveness, and to facilitate gains from network externalities. These objectives are mirrored in the legislation (box 13.2).

Box 13.2 Standard and code setting legislation in the Telecommunications Act

In general, Part 6 is concerned with the accreditation of ‘industry codes’ and the setting of ‘industry standards’. It covers a range of prescribed matters — primarily about the behaviour of firms toward consumers — including churning, customer information, the quality of standard telephone services, billing practices and complaints handling. Thus, Part 6 primarily aims to safeguard direct consumer interests.

Part 21 deals with technical standards about: customer equipment and customer cabling; special equipment for persons with disabilities; and the interconnection of facilities. In particular:

- Division 3 covers a range of objectives, allowing the ACA to make technical standards about customer equipment and customer cabling to:
 - protect the integrity of a telecommunications network or a facility;
 - protect the health and safety of persons who are reasonably likely to be affected by the operation of a telecommunications network or a facility;
 - ensure that customer equipment can be used to access emergency call services; and
 - ensure the interoperability of customer equipment with a telecommunications network.
- Division 4 gives the ACA the power to make standards relating to customer equipment with the aim of catering for the special needs of persons with disabilities.
- Division 5 empowers the ACA to make technical standards relating to the interconnection of facilities if directed to do so by the ACCC (details in section 13.2).

Source: Telecommunications Act 1997.

As well as under Parts 6 and 21, standards can be formulated as part of carrier licence conditions and take effect through declaration by the Minister.

A feature of Division 5 of Part 21 is that the ACA must not make a standard in relation to the interconnection of facilities unless directed to do so by the ACCC. In the remainder of Part 21, as well as under Part 6, the ACA is required to consult with the ACCC but direction is not required.

The reason for this direct involvement of the ACCC is that technical standards about interconnection may be necessary to ensure that access to services (declared under the TPA) operates effectively. Thus, the ACCC must not give direction unless doing so would (amongst other things) ‘reduce or eliminate the likelihood of hindrance to the provision of access to declared services’ (TA, s. 384). Technical standards (or the lack thereof) relating to the interconnection of facilities can affect competition in the telecommunications market and the ACCC (under Parts XIB and XIC of the TPA) is primarily responsible for promoting and monitoring competition in this industry.

13.2 Current procedures

Industry bodies can set industry codes as they see fit. The ACA can, under circumstances specified in the legislation, accredit industry codes, set industry standards and direct industry members to comply with accredited industry codes. Compliance with industry standards is mandatory.

In general, both Part 6 and Part 21 require the ACA to direct an accredited industry body to develop a standard before it can make a standard itself. The standard setting procedures and industry code accreditation require extensive consultation with interested parties and, in particular, industry, consumer groups and the ACCC. The procedures are designed to encourage industry self-regulation and give the ACA a safety backup role. The predominant industry body involved in developing industry codes is the Australian Communications Industry Forum (ACIF).

The remainder of this section describes the procedures pertinent to Division 5 of Part 21, including the role of the ACCC, as well as the role and operation of the Australian Communications Industry Forum (ACIF).

Division 5 of Part 21

There have been no standards introduced to date under Division 5 of Part 21 of the TA. However, the TA specifies a set of procedures that the ACA has to follow in

developing an interconnection standard should the ACCC direct it to set such a standard. The ACA:

- must, so far as practicable, try to ensure that interested persons have an appropriate opportunity (at least 60 days) to make representation about the proposed standard and that due consideration is given to representations so made;
- may request the Standards Association of Australia or an industry body or association to prepare a draft standard and undertake a process of public consultation on the draft standard;
- must not make a (final) interconnection standard unless it has requested an industry body or association to prepare a standard and that body has not done so within 120 days, or the ACA is not satisfied with the standard prepared by the industry body or association; and
- before rejecting a standard prepared by an industry body or association, the ACA must consult the ACCC and have regard to whether the standard is likely to promote the long-term interests of end-users (LTIE) and whether the standard is likely to facilitate access to declared services.

The ACCC's involvement

A key feature of Division 5 of Part 21 is that the ACA may not make an interconnection standard unless directed to do so by the ACCC. The ACCC can only give such a direction if it is necessary in order to:

- promote the LTIE; or
- reduce or eliminate the likelihood of hindrance to the provision of access to declared services (TA, s. 384 (5)).

For the purposes of this Part, the LTIE is to be determined in the same way as it is under Part XIC of the TPA (TA, s. 394). The TPA lists three objectives that are relevant to determining the LTIE, namely:

- promoting competition in markets for listed services;
- achieving any-to-any connectivity in relation to carriage services; and
- encouraging the economically efficient use of, and the economically efficient investment in, the infrastructure by which listed services are supplied (s. 152AB).

Thus, in contrast to the other telecommunications standards-making powers under the Telecommunications Act, the procedure for making an interconnection standard under Division 5 of Part 21 explicitly includes consideration of competition issues.

The appropriateness of the LTIE test is discussed in chapter 9, including options for broadening the test. The recommendations of the Commission developed in that chapter in regard to the LTIE test should also apply to Division 5 of Part 21 of the TA

In general, given that interconnection compatibility can be used for anti-competitive purposes, the explicit assessment of the impacts on competition by the ACCC (as required in the procedures under Division 5 of Part 21) is appropriate. Furthermore, the involvement of the ACCC alongside the ACA improves regulatory decisions by exploiting the complementarity between the two regulators. In the words of the ACA:

One of the singular features of the Australian regulatory approach is the involvement of both an industry-specific regulator (the ACA) and a general competition regulator (the ACCC) ... In practice, the division of responsibilities generally works well and has been increasingly fine-tuned over the past three years. Furthermore, the joint involvement of the regulators has ensured that a wide range of relevant considerations are taken into account, and helps to ensure the independence of the regulatory arrangements (sub. 10, p. 5).

As stated earlier, a more specific reason for the ACCC's involvement springs from the need to enforce access arrangements that could potentially be thwarted if access providers were able to choose the technologies without the involvement of regulators. AAPT makes this point:

The provision for the ACA to establish technical standards for interconnection is an essential requirement for the ACCC to exercise its powers of arbitration under Part XIC. Were it not possible for the ACA to set these standards then it might be impossible for the ACCC to reach a conclusion in an arbitration (sub. 7, p. 44).

The ACIF's involvement and operation

The ACIF is currently entrusted with the development of industry guidelines, industry codes and voluntary standards in the telecommunications industry and is accredited for that purpose by the Standards Association of Australia. As the ACIF is the body most likely to be requested to prepare any standard under Division 5 of Part 21, it is useful to look at its structure and procedures.

In the ACIF's own words:

ACIF is an industry owned, resourced and operated company established by the telecommunications industry in 1997 to implement and manage communication self-regulation within Australia.

ACIF's role is to develop and administer technical and operating arrangements that promote both the long term interests of end-users and the efficiency and international competitiveness of the Australian communications industry. This primarily involves

- developing Standards and Codes to support competition and protect consumers: driving widespread compliance; and
- facilitating/coordinating the cooperative resolution of strategic and operational industry issues. (ACIF nd)

The development of standards and codes by the ACIF is coordinated by reference panels. Each delegates the development of a standard to a working committee that is formed for the duration.

ACIF's Network Reference Panel has responsibility for developing codes and standards for the interconnection of facilities (ACIF 2000a, Appendix 3). The process involves consultation with affected industry and community sectors and the codes and standards are, where possible, based on international standards. The key outputs of the panel are listed in box 13.3.

13.3 Participants' views and discussion

Justifications for government intervention

Laissez faire versus government involvement in standard setting is a vexed issue and views on the matter can be highly divergent. For example, on the one hand the Institute of Public Affairs (sub. 20, p. 7) commented that:

It is hard to see any justification for any involvement of the ACCC in the setting of technical standards. Beyond this there seems no overriding reason for government involvement at all. The industry can, if it wishes, enlist the services of Standards Australia in devising technical standards though their involvement should not be compulsory. The development of the industry suggests that participants will have a strong competitive interest in efficient standards and it is difficult to envisage what public interest angle would be protected by the presence or veto of government.

On the other hand, the Queensland Government (sub. 39, p. 16) called for 'determinations of standards for the interconnection of facilities [to] be expedited and upgraded'. Its view is that 'industry self-regulation is too slow and unfortunately only a few large players can impact results'.

Box 13.3 Interconnection codes and standards — key outputs of the ACIF's Network Reference Panel

- 1800/13/1300 number portability network plan;
- call charging and billing accuracy industry code;
- end-to-end network performance industry code;
- high capacity local loop (copper) — reference architecture guideline;
- high capacity local loop (copper) industry code;
- hybrid fibre coax (HFC) technical coordination technical standard;
- interconnection model;
- local number portability network plan;
- interconnection implementation plan;
- mobile origin location indicator (MoLI) for 1800/13/1300 services specification;
- mobile origin location indicator (MoLI) for emergency services specification;
- signalling system no. 7 — interconnect ISUP specification;
- Australian network performance plan specification;
- standardised mobile service area register guideline;
- mobile number portability network plan;
- INMS architecture/information exchange guidelines;
- MoLI service description; and
- MoLI signalling implementation.

Source: ACIF presentation June 2000, Ofel Stakeholder Workshop on Industry Self Regulation.

However, many advocate a mix of industry self-regulation and government fiat. On this point, the Telecommunication Bill 1996 Explanatory Memorandum states that:

... the Parliament intends that telecommunications be regulated in a manner that promotes the greatest practicable use of industry self-regulation and does not impose undue financial and administrative burdens on participants in the industry, but does not compromise the effectiveness of regulation in achieving the objects of the legislation (vol. 1, p. 4).

And further:

The fundamental policy approach reflected in the scheme is to rely primarily on industry self-regulation with the regulatory body empowered to intervene only where it is considered necessary for limited purposes relating to ensuring certain safeguards are maintained. It is industry that has the technical expertise and commercial motivation to

devote resources to standards development and ensure that appropriate standards are adopted (vol. 2, p. 37).

The main arguments for industry self-regulation tend to rest on the assumption that firms have a commercial interest in negotiating interconnection standards and that competition generally gives ample incentives to firms to meet customer concerns without the involvement of government agencies. Macquarie Corporate Telecommunications formulated this sentiment as follows:

... as an industry, there is a good reason for us to have common uniform standards, say on fax machines or whatever the case may be, because it helps us as an industry in terms of selling and managing our operational processes, etcetera. There is commercial incentive for us to work together and get to an operational code, where we have uniform processes, uniform protocols where you interconnect with each other, all those sorts of things (trans., p. 148).

Furthermore, a strong argument for self-regulation is that firms have a better understanding of their industry and are able to make codes and standards with lower transactions and compliance costs than standards devised by government agencies.

However, firms may not always have a strong interest in cooperating to draw up industry codes and standards. For example large players may find it profitable to thwart efforts to make interconnection standards and thereby retain market share and shield themselves from competition.

Cooperative industry action is more prone to fail where the commercial interests of industry players diverge. As Macquarie Corporate Telecommunications points out:

Industry self-regulation has been, and continues to be a useful model for development of technical compatibility and interconnection regulation. It has not been effective in areas where there are divergent commercial interests. Whilst the sector is dominated by a vertically integrated provider, issues related to access will invariably give rise to divergent commercial interests ... (sub. 34, p. 22).

ATUG expressed concern about apparent strategic behaviour by some:

... there has been a series of examples of where dominant significant carriers come along to these forums with an apparent expressed desire to delay outcomes ... (trans., p. 165).

PowerTel expressed similar concerns about difficulties of arranging interconnection with Telstra (sub. 35, pp. 28–30).

And the ACA said:

The ACA believes it is still too early for industry to take responsibility, via the Australian Communications Industry Forum (ACIF), for roles currently performed by the ACCC or the ACA. Newer entrants have not yet become full participants in ACIF,

so that handing functions in the area of access and interconnection to ACIF at this stage would most likely have the effect of strengthening the position of the stronger incumbents (sub. 10, p. 5).

Comments on the operation of the ACIF

There are concerns that the development of codes and standards can be slow. For example, FlowCom said:

... multilateral discussions with ACIF and within the TAF forums can sometimes take a long time to occur. As I said, with number portability, the discussions within ACIF, I think, started in about 1995 ... with local number portability those discussions are still ongoing ... (trans., p 210).

Some participants contended that the low levels of sign-up to codes as well as unsatisfactory compliance are a problem. For example, the Consumers' Telecommunications Network said that:

... having got those words agreed to and on a piece of paper, how then do we encourage the industry to then voluntarily comply, which is the essence of the underpinning of the ACIF processes? We do have concerns about the rate of sign-on to codes of practices being very low (trans., p 151).

Or in the ACA's words:

A disturbing element of the self-regulatory codes regime is the extremely low level of voluntary sign-up to codes ... ACIF is considering a number of initiatives to increase the number of signatories to codes and to enhance compliance requirements ... The ACA will be encouraging ACIF in the development of its compliance mechanisms for codes, as the current compliance arrangements are ineffective (ACA 2000b, p. 144).

In general, however, participants were satisfied with the role and procedures of the ACIF. For example, AAPT said:

... the reality is that the ACIF, in writing the codes that it is and writing the standards that it does, is probably doing about as much as industry self-regulation can actually achieve (trans., p. 116).

The Consumers' Telecommunications Network commented that:

The ACIF processes for the making of codes of practice and technical standards are very open and very inclusive, operate on a consensus model and do so very successfully (trans., p. 151).

Telstra, referring to ACIF, said:

... the outstanding success story of access regulation in Australia and its processes are being studied by regulators from the UK to Singapore ... Some huge tasks have been surmounted in the ACIF, including the establishment of processes and procedures to deal with ULL; and these processes have been achieved in Australia very fast by world standards (trans., p. 9).

Some see ACIF's role as the coordinator of self-regulatory activities becoming even more important in the future. Telstra stated (sub. 24, p. 42) that 'ACIF will have an increasingly significant role as time goes on'.

In response to the draft report, the Communications Law Centre made several suggestions aimed at improving the effectiveness of the ACIF, including increased funding and an increased focus on timeliness by the ACIF, the ACA and the ACCC (sub. DR116, p. 9).

It seems reasonable to conclude that, despite the tensions that are inevitable in an organisation as widely representative as the ACIF and despite some shortcomings as discussed above, industry self-regulation is achieving some success. Nevertheless, cooperation with regulatory agencies and the safeguard mechanisms are still required at this stage.

14 Number portability

Box 14.1 Key messages

Although the benefits of portability for some services are more modest than originally estimated, the Commission finds that it is likely that number portability generates net efficiency gains.

Strategic manoeuvring has hampered the implementation of number portability to date.

The Commission considers that the relevant test for deciding whether to introduce number portability for a given service is whether the economy-wide benefits to the community of requiring the service outweigh the economy-wide costs.

The ACCC deals with competition issues and the ACA with technical matters associated with number portability. The Commission considers that there is no compelling case to change this division of responsibility.

In order to ensure that sufficient capacity exists in its network, Telstra requires that a pre-porting study be undertaken before ports for 'large' customers can occur. Since this process necessarily adds to delay, the Commission considers that the ACA should determine the appropriate benchmark for requiring pre-porting studies.

Telstra has announced its intention to implement a 'query on release' solution that should reduce porting timeframes for 'complex' local number ports. The Commission considers that timeframes for complex ports should be revised after the projected implementation date to reflect these potential gains.

In the case of local number portability, there may be weak incentives for some parties — typically those with proportionally larger subscriber bases — to provide a prompt portability service. Consequently, the Commission recommends that carriers regularly provide the ACA with data on the time taken to complete ports.

In order to encourage efficient investment in infrastructure and promote certainty, the Commission considers that the ACCC should inform parties of the pricing principles it is inclined to apply at the same time that it informs parties of their obligation to provide portability for a given service.

The Commission recommends that any future decision to require portability for a given service, and the associated pricing principles, should be subject to merits review by the Australian Competition Tribunal. In order to reduce the costs associated with delay, the Commission proposes that any review have a short binding time limit.

14.1 Introduction

This chapter examines the question of number portability in Australia. Number portability is the ability of a customer to retain a telephone number when changing telecommunications provider, location or service type.

The chapter outlines the various forms of number portability (section 14.2) and the rationale for government involvement in the regulation of number portability (section 14.3). After briefly describing the current regulatory framework and its application (section 14.4), the implementation of number portability is examined in section 14.5. Section 14.6 assesses the costs and benefits stemming from the current regulatory framework. Finally, section 14.7 outlines the pricing principles for local number portability and examines whether they have been effective in encouraging efficient investment in infrastructure by industry and take up of the service by consumers.

14.2 Defining number portability

The various forms of number portability, relating to changes of service, service provider and location, are outlined, with reference to the Australian telecommunications environment, in table 14.1.

For the purposes of the *Telecommunications Act 1997* (the TA), number portability is defined as ‘the ability for a customer of a carriage service provider to change their carriage service provider but retain the same telephone number’ (Explanatory Memorandum to the Telecommunications Bill 1996, p. 72). Hence, this chapter focuses on service provider portability.

14.3 The rationale for regulation – why mandate number portability?

The Government’s objective in mandating service provider portability is to reduce the costs that customers face when changing telecommunications providers and thereby encourage competition in the telecommunications market (Explanatory Memorandum to the Telecommunications Bill, 1996, p. 72).

In the absence of number portability, a change of telecommunications provider would necessitate a change in telephone number. Such changes can be costly (box 14.2).

Table 14.1 Classification of number portability services in Australia

<i>Type of number portability service</i>	<i>Service description</i>
Service provider portability	<p>The ability of customers to retain the same telephone number when changing from one telephone company to another. Service provider portability is further divided into:</p> <ul style="list-style-type: none"> • Local number portability — portability of numbers allocated to provide geographic services (eg, 02 xxxx xxxx, 03 xxxx xxxx, etc); • Global inbound number portability — portability of non-geographic phone numbers. These include freephone (1800 numbers), local rate (13 numbers) and premium rate (1900 numbers) services; • Mobile number portability — portability of mobile phone numbers including portability between GSM providers and between providers using different technologies; and • Universal personal telephone portability — portability of a single personal number (0500 numbers).
Location portability	<p>The ability of customers to retain the same telephone number when changing from one physical location to another without necessarily changing provider.</p>
Service portability	<p>The ability of customers to retain the same telephone number when changing from one type of service to another without necessarily changing provider (eg changing from a fixed to mobile phone service).</p>

Sources: Europe Economics and Arcome 1999; ACCC 1997c.

Box 14.2 Consumer switching costs resulting from a lack of number portability

Customers that change telephone number when changing telecommunications provider incur several costs, including:

- Informing potential callers of the number change;
- Changing stationery and advertising material; and
- Not receiving calls from friends and clients and potential loss of business.

Further, correspondents of these customers incur costs. These may include:

- Changing numbers stored in address books, customer database records and in automatic dialling equipment such as fax machines and PABXs;
- Misdials on the old number; and
- Finding the customer's new number.

Thus, inability to port telephone numbers generally increases the reluctance of customers to change telecommunications providers. As noted by Frontier Economics (sub. 41, annexure A, p. 24):

The costs to consumers of switching between network providers can be a barrier to entry and competition. Even if an alternative network provider can provide a local service at a lower cost, consumers may be unwilling to change their provider. For some consumers, the cost of changing telephone numbers is a significant switching cost.

While incumbent firms can provide customers with number portability, in the absence of regulatory intervention they have little incentive to do so. In response, regulators have intervened to reduce these switching costs.

However, consumers face switching costs in many markets (see chapter 2) yet the Government does not seek to intervene to reduce these costs. What then is peculiar to telecommunications that induces government intervention?

In many markets there is aggressive competition for customers in the early stages of developing ‘brand’ loyalty. For example, banks give students reduced price banking services to induce them to open accounts and computer equipment is offered cheaply to educational institutions (Klemperer 1995).

In contrast, in the case of Australian telecommunications, consumer switching costs need to be seen in the context of the transition from a market dominated by a statutory monopoly to one which is deregulated. They can provide the incumbent with significant advantages in the face of new entry and consequently restrict the competitive impact of deregulation.

AAPT (sub. 7, p. 14) argued:

... regulation should address first-mover advantages obtained by mere incumbency or where a carrier which possesses substantial market power engages in strategic conduct to secure and leverage the advantage, such as by delaying access to essential services or imposing artificial increases in the cost of switching between providers. Examples of such regulation in telecommunications are mandating number portability and pre-selection. This denies the first mover the competitive advantage and reduces the incentives for the first mover to deny these services even if it is efficient to do so. If these services are efficient, regulation has a role to ensure their implementation, enabling rivals to compete based on their relative merits.

Further, even in the absence of incumbency advantages, there may be economic gains from lowering switching costs if there is a technology that allows this at a sufficiently low cost. Number portability may be regarded as a technology that lowers the cost of churning to consumers of telecommunications services. Normally, firms have incentives to introduce such technologies without government intervention. However, in the case of number portability, collective action by

industry is required. Even in a fully competitive market there may be weak incentives for some parties (typically those with proportionally larger subscriber bases) to provide this service. Government action may therefore be warranted.

However, in considering whether number portability is to be mandated, even if only as a temporary mechanism to encourage competition in the transition from monopoly provider, it is important to ensure that the value of portability to customers is greater than its cost (section 14.6.)

Evidence of switching costs to consumers

Australian and international studies have estimated the propensity of customers to change providers with and without number portability. As noted by the ACCC (1997c, p. 5) the main finding, consistent across nearly all studies, is that the absence of number portability substantially increases the reluctance of customers to change service providers. This reluctance is generally higher among business customers.

A study of the consumer benefits of number portability undertaken by STM Consulting (1995) for AUSTEL estimated the percentage of customers that would change their telecommunications provider with and without portability for a range of services. These estimates (table 14.2), based on surveys of a very small number of business and residential customers, were made for different hypothetical reductions in the customer's telephone bill from changing service provider.¹

For fixed phone services STM Consulting estimated, for hypothetical price reductions of between 2.5 and 10 per cent, that between 22 and 26 per cent more business customers would change service providers with number portability (compared to without portability). For residential customers, between 14 and 17 per cent more customers would change service providers with number portability.

As with fixed phone services, there is a greater propensity for consumers to change their local rate and freephone, mobile and universal personal telephone service provider with portability compared to without portability.

¹ STM Consulting assumed that number portability would be made available at no cost to consumers for the purpose of the study.

Table 14.2 Percentage of customers that would change provider with and without portability — by service

	<i>Without number portability</i>				<i>With number portability</i>			
<i>Percentage price reduction</i>	2.5	5	7.5	10	2.5	5	7.5	10
<i>Fixed services</i>								
Business	3	9	14	20	25	32	39	46
Residential	2	7	13	18	19	23	28	32
<i>Freephone and local rate services</i>								
Business	5	9	16	22	11	22	40	57
<i>Digital mobile and UPT services</i>								
Business	13	19	25	31	31	37	43	50
Residential	0	5	20	40	0	40	60	80

Source: STM Consulting 1995 quoted in ACCC 1997c.

There are some questions about the usefulness of the STM Consulting results. For example, average household spending on telecommunications is \$800 per annum (Budde 2000a, p. 152). The STM Consulting estimates imply that 19 per cent of consumers would switch if another fixed service provider offered them the same services for \$780 (with portability). This appears to ignore other switching costs that consumers would incur.²

Further, there have been criticisms of the STM study, particularly in relation to the small sample size.³ However, the results of this survey, at least for fixed telephone services, are broadly consistent with international evidence on the propensity of customers to change provider with and without number portability.

14.4 The current regulatory framework and its application

Industry provision of number portability between CSPs is currently managed under the TA and the Telecommunications Numbering Plan 1997. A brief discussion of the 1991 regime as it relates to number portability is contained in appendix E.

² Such as the costs to consumers of identifying which provider offers the best value for money, contracting with that provider (including filling out forms/providing billing information) and arranging for connection of service. The Commission considers that the STM Consulting study results are likely to be affected by both starting point and hypothetical bias and the model suffers from specification errors.

³ The study was based on a survey of 71 business and 15 residential phone users.

Telecommunications Act 1997

In recognition of the implications for competition, the ACCC has statutory powers under the TA to direct the ACA in regard to the portability of allocated numbers. The TA specifies that the ACA must not make rules in relation to number portability unless directed to by the ACCC. Further, any rules regarding portability included in the Numbering Plan must be consistent with the ACCC's directions.⁴

Telecommunications Numbering Plan

The TA specifies that the ACA must formulate a plan for the numbering of telecommunications services in Australia. Such a plan was made by the ACA in December 1997. It sets out the rules for portability for services 'declared portable' by the ACCC. It also sets out the procedures that CSPs must follow to ensure that number portability is available to customers.⁵ Other matters dealt with in the Numbering Plan include the allocation of numbers to CSPs and the transfer and surrender of numbers.

Application of the framework

The ACA noted, 'Regulation of number portability under the Telecommunications Act provides for a phased approach to be taken towards its planning, mandating, and implementation' (sub. 10, p. 11). The submission goes on further to detail the application of the TA in relation to number portability:

The ACCC, with assistance from the ACA, determines whether portability for a particular telecommunications service is in the long-term interests of end-users. If number portability for a particular telecommunications service is in the LTIE, the ACCC directs the ACA to set the earliest practicable date for its implementation. Industry self-regulation, through ACIF, contributes to this implementation by the development of appropriate codes. This has been a vital stage in the implementation of portability targets, but is dependent on the previous steps. Once implementation of number portability for a telecommunications service has occurred, the ACA then monitors its continued provision and takes responsibility for dealing with applications for exemptions, in consultation with the ACCC.

In accordance with the ACCC's directions of September 1997⁶ and September 1999⁷, local, local rate, freephone and mobile services were declared portable. Of

⁴ A summary of the relevant legislative criteria is contained in appendix E, box E.1.

⁵ The main requirements contained in the Numbering Plan, relating to portability, are outlined in box E.2 (appendix E).

⁶ Directions to the ACA under s. 458(2) of the *Telecommunications Act 1997*, September 1997.

these, portability for local, local rate and freephone services has been implemented. Mobile number portability is scheduled to be implemented on 25 September 2001.

The ACCC is currently considering whether to require portability for national rate (17xx services) and premium rate services (19xx services). In July 2001, the ACCC released its preliminary view on 19xx services (2001r, p. 22):

After considering the objectives set out in section 152AB of the Act, the Commission's preliminary view is that the benefits to end-users of mandating premium rate number portability outweigh the costs of its provision.

The ACCC considers that an assessment of national rate number portability should be deferred until such time as a carriage service provider requests an allocation of 17xx numbers and can identify a business case for them (ACCC 2001r).

Take up rate of portability services

As at June 2001, a total of around 317 000 local service number ports had occurred (the majority comprising customers porting from Telstra to Cable & Wireless Optus) and approximately 6000 local rate and freephone ports.⁸ With respect to the take up rate of local number portability, AAPT submitted:

The volume of porting has not been extensive due to a range of factors, not least of which is simple prudent caution ... It is anticipated that porting volumes will steadily increase but it will be some time before porting becomes a customer expectation (sub. 7, p. 45).

14.5 Evaluation of the implementation of number portability

Slippage in implementing number portability

There have been considerable delays in implementing number portability in Australia. In the case of some services, implementation of portability occurred approximately four years after the original target dates (table 14.3).

⁷ Directions to the ACA under s. 458(2) of the *Telecommunications Act 1997*, September 1999.

⁸ More detail on the number of ports is contained in figures E.1 and E.2, appendix E.

Table 14.3 Slippage in number portability implementation

<i>Number portability service</i>	<i>Implementation date set by AUSTEL in June 1995^a</i>	<i>Implementation date of service</i>
Local PSTN	December 1995	1 May 1998 (limited local number portability) 1 January 2000 (full local number portability) ^b
Freephone	December 1996	16 November 2000
Local rate	December 1996	16 November 2000
Mobile	July 1997	25 September 2001
Personal Communications (universal personal telephone)	Required on commencement of service	No longer required. Not considered to be in the long-term interests of end-users

^a The initial target dates did not necessarily have the support of industry. ^b Local number portability was implemented in two stages.

Sources: AUSTEL (nd.) and Horrocks and Rogerson 1998.

In part, this delay was due to the lack of a clear legislative basis for requiring portability under the 1991 regime. However, some participants have claimed that delay may also reflect strategic game playing by firms that have no commercial incentive to provide portability to their competitors (AAPT sub. DR100, p. 42).

In setting implementation dates the ACA has to consider whether it is technically feasible to provide portability by a given date. However, the time required to implement portability varies according to the inherited network and system capabilities of providers. Gans, King and Woodbridge (2000) consider that incumbent providers are likely to have significantly better knowledge about the time required to implement portability, but have little incentive to reveal this information since it is in their interest to delay the introduction of portability.

As the former One.Tel (trans., p. 212) commented:⁹

There have been significant delays, and where it's in one provider's commercial interest to promote that delay or certainly not move fast, well, we've seen that that has happened.

In contrast, Telstra argued:

... in determining the implementation date for portability requirements, the Australian Communications Authority ... either has not recognised the complexity of portability requirements involved or has taken what appears to be an asymmetric approach to the determination and setting of implementation dates (sub. 42, p. 24).

⁹ See also comments by the ACA (sub. 10, p. 13) and Macquarie Corporate Telecommunications (trans., p. 125).

The division of responsibilities between the ACCC and the ACA

A number of participants have remarked that the processes and division of responsibilities between the ACCC and the ACA under the TA have contributed to the delay in implementing number portability. For example, the Queensland Government noted:

It is apparent that in some instances the ACA is not empowered to act unless directed by the ACCC, such as in relation to number portability requirements. This can impose an additional level of delay ... (sub 39, p. 11.)

In contrast, the ACA perceives the division of responsibility between itself and the ACCC as offering benefits:

Every phase of portability introduction has been time-consuming and difficult, but the relationship between the ACA and the ACCC has been a strength, not a weakness. While there is an opportunity for process improvements, the current legislative arrangements have allowed significant gains for new entrants and consumers ... In practice, the division of responsibilities generally works well and has been increasingly fine-tuned over the past three years. Furthermore, the joint involvement of the regulators has ensured that a wide range of relevant considerations are taken into account, and helps to ensure the independence of the regulatory arrangements (sub. 10, p. 5).

The Commission considers that there is no compelling case to change the current division of responsibilities between the ACA and the ACCC.

Delay in the availability of number portability to particular consumers

Complex ports

Cable & Wireless Optus raised concerns about the delay in the provision of portability and porting processes for customers with call traffic exceeding approximately 20–30 standard telephone lines. In the main, these customers — typically medium to big business and government — generate ‘high’ revenue for carriers and are therefore precisely the type of customers new entrants are likely to target.

Under Telstra’s current portability solution (facility redirect), before such ports can occur, Telstra requires that a pre-porting study be undertaken to determine what, if any, additional infrastructure is required in its network (appendix E).

Cable & Wireless Optus argued that (sub. DR95, p. 32):

... pre-porting processes cause porting delays which are unacceptable to most business customers. When a business customer asks to be ported away from Telstra, the

recipient carrier is currently unable to provide the business customer with the following information:

- when Telstra will complete the PPS [pre-porting study];
- when the actual port will take place;
- accurate timeframes for the completion of the porting process.

In a competitive telecommunications environment, most businesses demand short and certain timeframes for porting.

However, information supplied by Telstra suggests that timeframes have been established for pre-porting studies. Telstra claims that 95 per cent of pre-porting studies are completed within 15 days and 100 per cent within 30 days.¹⁰

Ideally, carriers would be able to provide potential customers with accurate timeframes for completion of the (entire) porting process when fielding an initial inquiry. However, in the case of more complex ports it appears that the length of the process depends on a number of factors.¹¹ Indeed, one function of the pre-porting study is to determine how long the process will take. That said, there is scope to improve upon the current arrangements for ‘complex’ ports.

Telstra’s decision to require pre-porting studies may adversely affect other carriers — since it contributes to delay (of up to 30 days). Further, Cable & Wireless Optus claim that it is required to pay for the cost of the study (\$1000) regardless of whether the feasibility study determines that the port is feasible. Data supplied by Telstra shows that in 98 per cent of cases requiring pre-porting studies no new infrastructure is required. Given this, the Commission considers that the ACA, in consultation with Telstra, should determine the appropriate benchmark for requiring pre-porting studies.

RECOMMENDATION 14.1

The Commission recommends that the ACA should determine the criteria for when a pre-porting study is required.

Cable & Wireless Optus also claimed (sub. 8, p. 175):

If capacity upgrades are required within the Telstra network to support the port, the timeframe for completion of the work may be up to 10 months in respect of each customer.

Data supplied by Telstra suggest that while there has been a case involving significant network build and consequently delay (of up to nine months), new

¹⁰ Information supplied by Telstra.

¹¹ One of the main determinants is the magnitude of the customer’s call traffic.

infrastructure is only required in approximately 2 per cent of cases necessitating a pre-porting study. Further, where new infrastructure is to be installed it is achieved in less than two months in 90 per cent of cases. (The gaining carrier may also have to undertake work at this stage to connect the new customer to its network.)

In the remaining 98 per cent of cases (where no new infrastructure is required) Telstra advises that it complies with the industry agreed code and completes ports within the maximum specified period of 120 days.

While the data supplied by Telstra suggest that delays of up to 10 months are not the norm, delays of smaller duration can affect a customer's decision to port. As noted by the ACA (1998, para 5.34):

It is reasonable to expect that such delays and complexities associated with the porting process may negatively affect a customer's choice of moving to an alternative carriage service provider.

As mentioned, the need for capacity upgrades within the Telstra network stems in part from the porting technology employed by Telstra. The appropriate method of providing portability varies from CSP to CSP and depends on a range of factors including network design and the number of calls to ported numbers (section 14.6).

Telstra has advised the Commission that it will be moving to a 'query on release' solution (figure E.6) which should be finalised in 2002. This will reduce the need for pre-porting studies and scope for delay. Given that:

- Telstra has made a commercial decision to implement a query on release solution by 2002; and
- Optus' claim that Telstra's current solution for providing portability adversely affects gaining carriers;

the Commission considers that binding timeframes for more complex ports should be revised shortly after 2002. Further, the porting timeframes established at that time should be based on efficient timeframes achievable under a 'query on release' solution.

Simple ports

Cable & Wireless Optus has also raised concerns about the time taken to process simple (single line) ports:

Delays have also resulted for residential customers as a result of the inefficient paper-based porting process for line number portability (LNP). It currently takes up to one month to port a residential customer to Optus. Market information suggests that cancellations will increase from 7 per cent to 23 per cent if a customer has to wait one month instead of one week to receive their new service (sub. DR95, p. 32).

Data supplied by Telstra suggest that for the last ten month period it fully met the timeframes embodied in the industry-agreed ACIF LNP code for ‘simple ports’.¹² The code specifies that after receiving electronic advice of ‘cut-over’ the losing carrier activate 80 per cent of ports within 30 minutes and 99 per cent of ports within two hours. (Before a gaining carrier can send an electronic cut-over advice, the code requires that it must first give the losing carriers two days notice that a customer intends to port its number.)

With respect to Optus’ claim that Telstra has implemented an ‘inefficient paper-based porting process’, while some information exchange processes occur via facsimile, it is extremely limited. The Commission found that ‘essential’ information exchange — that is, simple notification advice, electronic cut-over advice and completion advice — occurs through an automated interface between carriers.¹³

However, in the case of local number portability, the Commission recognises that there may be weak incentives for some parties — typically those with proportionally larger subscriber bases — to provide a prompt portability service. Consequently, the Commission recommends that carriers regularly provide the ACA with data on the time to complete ports.

RECOMMENDATION 14.2

The Commission recommends that timeframes for complex ports be revised after 2002 and that carriers regularly provide the ACA with data on the time taken to process ports so that the ACA can monitor the timeliness of porting processes.

14.6 The benefits and costs of implementing number portability

Benefits of number portability

Number portability produces benefits for customers that change operator (by removing the costs associated with switching phone numbers) and correspondents of those customers (box 14.2). More generally, number portability benefits all users by increasing competition.

¹² Over a previous period, compliance was close, but not always on target.

¹³ Visit to the Telstra local number porting facility, Canberra, 24 July 2001.

Quantifying the benefits of number portability

As part of its study of consumer benefits of number portability, STM Consulting estimated the value of these benefits for three years, 1988, 1993 and 1998 for a range of services including PSTN. These are outlined in table 14.4, but suffer a number of shortcomings.

Table 14.4 STM Consulting estimates of benefits from introducing portability

<i>Benefit element</i>	<i>1988</i>	<i>1993</i>	<i>1998</i>
	<i>\$ million</i>	<i>\$ million</i>	<i>\$ million</i>
Easier change of carrier	587	675	874
Lower prices due to increased competition	1 102	1 287	1 695
Inbound callers	7	8	13
Total benefits	1 695	1 970	2 583

^a All figures are expressed in 1994 dollar values and relate to PSTN, digital mobile, freephone, local rate, universal personal telephone and information services.

Source: STM Consulting (1995, p. 11).

The benefits for customers that change operators

The STM estimates of these benefits include benefits ‘accruing because of avoidance of a possible loss of business resulting from a number change’. Although the cost of lost business may well be significant on an individual level, in aggregate the economic cost at a national level may be smaller since a frustrated caller will usually call elsewhere and increase the business of an alternative supplier.

The benefits of stimulating competition

Underlying the estimates of these benefits is the assumption that number portability realises a 10 per cent reduction in the price of the relevant telecommunications services. As indicated in table 14.4, these benefits form the largest proportion of total benefits for the services assessed.

However, the main effect of a reduction in prices is a transfer from telecommunications firms to their customers and, as such, does not result in a benefit to the overall economy. The only relevant economic benefit from competition associated with portability would be reduced deadweight losses. (The benefits to consumers from additional consumption generated by lower prices.

Intensification of competition may also drive dynamic efficiencies through greater innovation and cost control by the incumbent.)

Moreover, even if the aim of regulation was purely distributional, there is little evidence to suggest that the introduction of portability has resulted in price reductions of 10 per cent (particularly given that portability is only one of a number of telecommunications competition policy measures).

The benefits for callers

To the extent that subscribers that use the phone for private purposes inform virtually all their potential callers of their new number then there are virtually no costs to callers.

The Commission's assessment of benefits

A major limitation of the STM Consulting estimates of benefits is the treatment of what, essentially, are transfers between different groups in the economy. This limitation is recognised by the authors who note:

Some benefits from portability are transfers from one group to another, and therefore do not result in a benefit to the overall economy ... However, because our brief was to examine benefits to consumers of telecommunications services, we have aggregated these private benefits to give total consumer benefits (pp. 11–12).

While an aggregation of private benefits may be an appropriate factor in determining whether a service is in the long-term interests of end-users, this particular application of the test has limitations. The Commission considers that the relevant test for deciding whether to introduce number portability for a given service is whether it increases overall economic efficiency. Further, the Commission considers that in deciding whether to introduce portability for a given service, the ACCC should have regard to both the objects clause and the declaration criteria.

RECOMMENDATION 14.3

The Commission recommends that the relevant test for deciding whether to introduce number portability for a given service is whether the economy-wide benefits to the community of requiring the service outweigh the economy-wide costs. Further, the Commission considers that the ACCC should have regard to both the objects clause and the declaration criteria when deciding whether to 'declare' a service portable.

The Commission considers that economy-wide benefits of number portability are considerably less than was estimated by STM Consulting. Further, the main benefits from portability arise from reductions in the costs to consumers of churning. The second form of benefit (improved competition), when stripped of transfers, accounts for less (these benefits arise due to a reduction in deadweight loss). The Commission concurs with the STM Consulting finding that the third type of benefit (to callers) is a relatively small proportion of total benefits.

Costs of providing number portability

In a multi-carrier environment the costs of providing portability extend beyond the direct costs incurred by the donor and recipient CSPs. Other providers may incur costs when customers change CSP and port their telephone numbers since all providers must ensure that calls originating on their network are routed to the appropriate terminating network.

Types of costs incurred and the relationship to the solution employed

There are three broad categories of costs incurred in the provision of number portability.

- *System set-up and maintenance costs* — the costs that a provider incurs in establishing the capacity to provide portability on its network and in its associated administrative systems. These costs are unrelated to the number of calls to ported numbers.
- *Call conveyance costs* — additional costs associated with delivering calls after the introduction of number portability.
- *Customer transfer costs* — once off costs, which the donor CSP incurs each time customers port their numbers to another CSP.

There are potentially a number of different technical methods for providing number portability (appendix E). These solutions, which can be classified into two broad categories, on-switch solutions and off-switch solutions, have varying ratios of system set-up and maintenance, call conveyance and customer transfer costs. Typically, off-switch solutions have high set-up costs but low call conveyance costs. In contrast, on-switch solutions have relatively low system set-up costs but high call conveyance costs.

The appropriate method of providing portability differs from case to case and CSP to CSP. It depends on a range of factors including the number of calls to ported numbers, network design, the demand for other services and expectations

concerning future technology.¹⁴ The regulator has not generally specified which solution CSPs should adopt to provide portability.¹⁵ Rather, the choice of which solution to employ, subject to meeting the requirements of the Numbering Plan, is a matter for each CSP to determine. Given this framework, cost allocation rules have an important role to play in ensuring CSPs adopt the most efficient method of providing portability. This issue is discussed further in section 14.7

Magnitude of costs

Deriving estimates of the cost of introducing number portability in Australia is challenging since:

- a comprehensive analysis of the costs of providing number portability in Australia has not yet been undertaken;
- telecommunication providers are reluctant to provide information on the costs of providing number portability; and
- cost estimates provided by international studies are indicative only since the cost of introducing number portability in individual countries varies substantially.¹⁶

What is clear however, is that the implementation of number portability involves significant costs. In their advice to operators regarding the ‘journey into number portability’ Horrocks and Rogerson (1998, p. 9) note, ‘Take plenty of money for the journey, number portability is much more resource-intensive than you think’.

This appears to have held true in Australia. For example:

- Cable & Wireless Optus stated that the programs to introduce local, local rate, freephone and mobile number portability have so far cost it more than \$100m. Cable & Wireless Optus noted that this is the minimum effective cost figure as many costs are not recorded or identified separately in accounting systems (for example, unpaid overtime, impacts on productivity and training times).¹⁷
- By 1998, Telstra had committed more than \$70 million to provide simple portability between itself and Cable & Wireless Optus (Williams 1998). Telstra has since committed significant additional funds to the implementation of local

14 Generally an on-switch solution remains the lowest cost method of providing portability while the volume of ported numbers remains low, approximately 15–20 per cent of all installed lines.

15 The exception being local rate and freephone portability.

16 The level of investment required depends on the geographical spread of the network, the inherited network and system capabilities of the organisation, the timetable imposed and the commercial and regulatory environment in which it is set.

17 Information made available to the Commission.

number portability in order to meet the requirement for full local number portability from January 2000. It is estimated that the second stage also involved expenditure of more than \$70 million.¹⁸

Publicly available information indicates expenditure of over \$240 million, which excludes expenditure by CSPs other than Telstra and Cable & Wireless Optus, and also excludes Telstra's expenditure on implementing local rate, freephone and mobile number portability. To the extent that providers further modify their systems in order to accommodate increased ported traffic then expenditure will increase further. Additionally, providers incur call conveyance and customer transfer costs.

Given the estimated costs of providing portability, the net economic benefits of number portability are still likely to be positive — notwithstanding the overestimates of benefits in the STM Consulting study. In the main, these benefits are likely to accrue to business customers.

14.7 Pricing principles

Under the TA, the ACCC may be required to arbitrate disputes between parties that are unable to agree on the terms and conditions upon which number portability is provided.

The ACCC has released pricing principles for local and mobile number portability relevant to an arbitration dispute between a donor CSP and a recipient CSP. The ACCC considers that these principles may narrow the boundaries for negotiations and/or act as a useful tool in alternative dispute resolutions (ACCC 1999j, p. 4).

The efficient timing, choice and cost of technology and precise value of portability to consumers remain unclear. Given this, the pricing principles need to provide incentives for providers and ultimately consumers. The ACCC has identified three key incentives that the pricing principles should embody:

- *Provide incentives for CSPs to minimise the overall costs of providing portability.* Where there are a number of different technical methods of providing number portability, an allocation of costs between the donor and recipient providers is likely to influence the choice of technical solution. For example, if the donor is able to recover system set-up costs from the recipient provider, the donor has an incentive to employ a solution with high system set-up costs and low call conveyance costs (ie a solution that minimises the cost to the donor) even if this is not the least cost solution overall.

¹⁸ Information made available to the Commission.

- *Provide appropriate signals to encourage efficient porting of telephone numbers by customers.* To the extent that the costs of portability are not passed on to customers, then they will not face the correct incentives. If the customer does not pay any of the cost of portability then customers will wish to retain their numbers when switching carriers, no matter how low they value porting.
- *Provide incentives for CSPs to provide appropriate levels of quality of portability.* Different solutions for portability can provide different levels of quality and reliability. However, this is addressed in part by obligations in the Numbering Plan requiring ‘equivalent service’ — any differences in quality for ported services, relative to non-portable services, should not be apparent to a customer, or if they are apparent, should not affect the customer’s choice of CSP (Telecommunications Numbering Plan, s. 11.4).

However, in order to influence a firm’s choice of technology (to ensure that the overall costs of providing portability are minimised), pricing principles need to be signalled to firms prior to their decision to invest. Under the current arrangements, there is a time lag between the *decision* to mandate portability for a given service and the release of the relevant pricing principles (table 14.5). Consequently, carriers are only made aware of their financial obligations (that is, who will pay for the provision of portability) after they have invested in a portability solution.

Table 14.5 Articulation of technical versus financial obligations for number portability

<i>Service</i>	<i>Date of decision to declare service portable</i>	<i>Mandated implementation date</i>	<i>Date pricing principles finalised</i>
Local number portability	22 September 1997	1 May 1998 (limited) 1 January 2000 (full)	July 1999
Mobile number portability	30 September 1999	25 September 2001	May 2001
Local rate and freephone portability	22 September 1997	16 November 2000	No pricing principles articulated

Source: ACCC 1997c and 1999r.

RECOMMENDATION 14.4

The Commission recommends that the ACCC inform parties of the pricing principles that it is inclined to apply, if required to arbitrate over terms and conditions, at the same time that it informs parties of their obligation to provide portability for a given service.

Pricing principles for local number portability

The ACCC's principles state that where there is a dispute it favours the allocation of the costs of local number portability between the donor CSP and the recipient CSP such that:

Each CSP should be responsible for all system set-up and maintenance costs, any additional call conveyance costs, and customer transfer costs incurred in their own network to meet their obligations under the Numbering Plan to provide limited and full local number portability (ACCC 1999j, p. 28).

This is an initial allocation of costs. Once this allocation is made each CSP can determine whether and how to recover these costs from its customers.

Telstra asserts that the ACCC's guidelines are 'completely at odds with economic efficiency principles':

Under the ACCC's approach the customer that chooses to port incurs none of the costs associated with that decision and hence customers will choose to port even when the costs of doing so outweigh their valuation of this service. Such an approach will lead to inefficient porting decisions ... (sub. 42, p. 25).

The Commission considers that the ACCC's pricing principles for local number portability do enable a donor (losing) carrier to signal transfer costs to consumers — either by offering customers a discount for foregoing the right to port or charging exiting customers a porting fee. While the scope to signal call conveyance (transit) costs is limited,¹⁹ these costs are minor (effectively zero) for carriers utilising an IN system.

Creating transferable ownership of telephone numbers

In its draft report the Commission put forth the option of allowing customers to 'own their own phone numbers' as a means of encouraging carriers to adopt the most efficient solution to provide portability — such an option also allows porting costs to be signalled directly to end-users by the donor offering to compensate customers for foregoing their number. However, feedback from participants suggests that the magnitude of call conveyance and customer transfer costs would render such a system ineffective. For example, Cable & Wireless Optus noted (sub. DR95, p. 65):

In relation to the [call conveyance and customer transfer costs] identified in the Commission's draft report, Optus provides the following estimates:

¹⁹ As recognised by the ACCC (1999j) it is difficult to set a discount or structure a fee to recover call conveyance costs as the donor will not know with accuracy the number of calls to the ported number.

Call conveyance costs — Optus uses an IN solution which treats calls to ported and non-ported numbers equivalently and therefore, the additional call conveyance cost for calls to ported numbers amounts to \$0;

Customer transfer costs — Optus estimated customer transfer costs as part of the process of determining which technical solution to adopt for LNP. Optus adopted an IN solution, which we believe is the most efficient technical solution for LNP. Optus estimated that, by using an IN solution, customer transfer costs would amount to no greater than \$1.80 per number.

Given these estimates, it is likely that the transactions costs to carriers of ‘buying back’ numbers from customers would exceed any gains from trade (the avoided call conveyance and customer transaction costs). Consequently, the Commission does not consider this to be a viable option.

Provision for review of decisions pertaining to number portability

To date the ACCC has focused most heavily on portability in circumstances that are very likely to meet the LTIE (ACCC 1997c, p. 3). However, in the future, it is not clear that the benefits of new portability provisions will justify the costs. This suggests the need for a review mechanism to ensure that new forms of mandated portability are really worthwhile.

The Commission recommends that any *future* decisions to require portability for a given service should be subject to merits review by the Australian Competition Tribunal. Since the Commission has also proposed that any new portability requirements should also outline associated pricing principles, this review mechanism is also a way of testing those pricing principles. In order to reduce the costs associated with delay, the Commission proposes that any review have a short binding time limit.

RECOMMENDATION 14.5

The Commission recommends that any future decision to require portability for a given service, and the associated pricing principles, should be subject to merits review by the Australian Competition Tribunal.

The Commission’s proposal for a review mechanism does not extend to arbitration determinations or pricing principles for services that have already declared portable, such as LNP, MNP and local rate and freephone services. This is because it is considered that the gains of such an additional review capacity would be small compared to the costs. In these cases, the investment (in providing portability) is primarily sunk, hence the benefits of an appeal would be predominantly distributional in nature. To the extent that carriers and CSPs modify their approach

to providing portability over time, there are implications for efficiency, but given that a large component of costs are already sunk, these implications are likely to be minor.

15 Carrier pre-selection

Box 15.1 Key messages

Pre-selection allows customers directly connected to the network of one provider to have access automatically to another company's services when they pick up the phone to make certain types of calls.

Currently, pre-selection is mandated for domestic long distance, international and fixed to mobile calls originating on a fixed network. The requirement to provide pre-selection only applies where a customer selects one provider to supply all the pre-selectable services — this is referred to as 'single-basket' pre-selection.

The Commission considers that there are sound *prima facie* reasons for mandating pre-selection in the transition to a competitive telecommunications market.

The introduction of pre-selection for a given service has significant competitive implications. For this reason, the Commission recommends shifting responsibility for determining which services should be subject to pre-selection from the ACA to the ACCC.

Multi-basket pre-selection enables customers to pre-select different providers for different pre-selectable services. However, given the scope for customer premises equipment to provide for the same outcome, the Commission does not consider it necessary to mandate multi-basket pre-selection.

Complex pricing structures and the need to contract with more than one provider may discourage consumers from using pre-selection and override dial code services. Nevertheless, the Commission does not consider that this is an area warranting government intervention or funding.

The Commission considers that the requirement to provide pre-selection should be restricted to carriers with significant market power, consistent with the Commission's view that service providers without such power should not have their services declared.

15.1 Introduction

All telecommunications customers must be directly connected to at least one operator by a wire, fibre-optic, wireless or other link in order to reach other customers. In the early stages of competition in Australia, most customers were connected to the incumbent's fixed wire network.

The long distance call market is often the entry point for new competitors. This usually occurs by enabling customers, directly connected to the incumbent's network, to obtain access to the network and the services of other carriers — this is referred to as indirect access. As noted by Lewin and Kee (1997, p. 121):

New entrants offering long-distance services build their own infrastructure to connect their networks to large corporate sites. Invariably they rely on indirect access, via the local network of the incumbent, to reach the mass market of residential and small business users. The way in which such users select between operators for long-distance services has a major effect on the speed with which new entrants gain long-distance market share and the effectiveness of competition in this segment.

When competition reforms were introduced in Australia, regulators considered several options for enabling customers to access the long distance services of new carriers (AUSTEL 1991):

- *Carrier selection codes for new entrants* — customers need to dial carrier selection codes (typically of three to five digits) to select their carrier of choice on a call-by-call basis. If customers do not dial a carrier selection code the incumbent's network automatically carries the call;
- *Carrier selection codes for all operators* — all long distance calls require carrier selection codes. If the caller does not dial a carrier selection code the call is not completed; and
- *Carrier pre-selection* — customers nominate their carrier of choice in advance and this information is stored in the local exchange so that calls are automatically routed via this carrier without the need to dial any special codes. Customers can override their pre-selected choice on a call-by-call basis by dialling the carrier selection code of another operator.

The Government determined that customers should have 'equal access' to carriers¹ and, under the 1991 regime, pre-selection between Telstra and Cable & Wireless Optus was gradually introduced. This requirement was extended under the 1997 regime to include other carriers and carriage service providers (CSPs).

This chapter examines the requirement for carrier pre-selection under the 1997 regime. It begins by examining the rationale for government involvement in the regulation of carrier pre-selection (section 15.2) followed, in section 15.3, by a brief outline of the current regulatory framework and its application. Section 15.4 examines the costs and benefits stemming from the current regulatory requirements.

¹ Equal access means customers are able to use a competitor's service in exactly the same way as they use the incumbent's service.

Finally, section 15.5 examines options for refining the current regulatory requirements including options to facilitate the use of pre-selection and override dial codes, ‘multi-basket’ pre-selection and asymmetric application of pre-selection requirements.

15.2 The rationale for regulation

Under the *Telecommunications Act 1997* (the TA) the ACA must regulate for the provision of carrier pre-selection. The Explanatory Memorandum to the Telecommunications Bill 1996 outlined the Government’s objective in relation to this requirement:

Pre-selection requirements are intended to facilitate competition by enabling customers to choose their preferred carriage service provider and change that preference from time to time, or make use of over-ride dial codes to choose a different carriage service provider, on a call-by-call basis. This is important to facilitate the development of competition in the supply of telecommunications services (p. 25).

The competitive effects of carrier pre-selection are twofold. First, in the absence of indirect access, new long distance operators would only have access to the limited number of customers for which it made commercial sense to provide direct connections. This would severely limit competition in the long distance market. Both carrier pre-selection, and carrier selection on a call-by-call basis, are forms of indirect access.

Additionally, carrier pre-selection promotes competition, relative to other forms of indirect access, by reducing the costs to customers of switching between phone companies — the customer does not have to dial a carrier selection code or follow any other different procedures in order to make the call.

The requirement to dial additional digits on a call-by-call basis may appear insignificant. However, callers often forget, or cannot be bothered, to insert the carrier selection code. Consequently, call revenues revert to the local access provider (typically the incumbent). Lewin and Kee (1997, p. 123) noted that ‘studies in New Zealand and the UK suggest that the leakage back to the incumbent that this option creates could represent 20–30 per cent of a new entrant’s potential revenues’.

While this problem can be addressed by locating smart boxes (that insert carrier selection codes automatically) at the customer’s premises, there is evidence to suggest that the cost of carrier pre-selection is lower where pre-selection is at the network level rather than at the customer site. The typical smart box costs \$50–100 per line to install. According to the findings of an independent arbitration in New

Zealand, pre-selection at the network level offers a functional equivalent at \$5 per line (Lewin and Kee 1997, p. 123).

Will the market provide carrier pre-selection?

In the absence of a regulatory requirement for pre-selection, there is no legislative barrier in the Australian regulatory framework to industry negotiating or agreeing to provide pre-selection. However, there is little incentive for a vertically integrated carrier to provide pre-selectable services. As AAPT argued:

Pre-selection was initially developed as a means of promoting competition in the long distance market as the industry moved from being a monopoly dominated by a vertically-integrated incumbent ... In a hypothetically competitive, non-integrated industry, there would be two sets of firms, each operating in separate markets. As customers of a local access firm would need to be a customer of a long distance firm who would be accessed via the local access network, local access firms would compete for customers by developing good packages for making choices about long distance providers. This would see the local access firms introducing whatever pre-selection options ... end user customer demand warranted. Unfortunately there is a long way to go before there is a fully competitive local access market (sub. 7, p. 43).

However, if carrier pre-selection is to be mandated, even if only as a temporary mechanism to encourage competition in the transition from monopoly provider, it is important to be sure that the benefits of pre-selection outweigh the costs. This question is examined in section 15.4.

15.3 The current regulatory framework and its application

The requirement to provide pre-selection

The ACA is empowered under the TA to set requirements for pre-selection (box 15.2). This was initially aimed at domestic long distance and international calls (Explanatory Memorandum to the Telecommunications Bill 1996, p. 25). However, the ACA can extend pre-selection requirements to other carriage services.

Box 15.2 Summary of the key elements of the Telecommunications Act 1997 relating to carrier pre-selection

- The TA gives two criteria for pre-selection. The controlled networks and facilities of a carrier or CSP must enable an end user to:
 - pre-select their preferred CSP and change that selection from time to time; and
 - select alternative CSPs on a call-by-call basis by the use of override dial codes (s. 350).
- When making determinations the ACA must consult with the ACCC. In addition, the ACA must have regard to :
 - the technical feasibility of complying with the requirement concerned; and
 - the costs and benefits of complying with the requirement concerned (s. 349).
- Pre-selection is to be provided on such terms and conditions as agreed between the parties, or failing agreement, as are determined by an arbitrator appointed by the parties. Where parties fail to agree on the appointment of an arbitrator, then the ACCC is to be the arbitrator (s. 351).
- The ACA may exempt a particular carrier or CSP from the requirement to provide pre-selection. When making an exemption the ACA must consider whether it would be technically feasible for the carrier or CSP to comply with the requirement and whether compliance with the requirement would impose unreasonable financial hardship (s. 352).
- In making a determination the ACA may adopt or incorporate matters contained in codes or standards. This is designed to enable the ACA to readily adopt pre-selection arrangements already agreed upon by industry (s. 349).

Source: Telecommunications Act 1997.

Application of the current framework

In July 1997, the ACA specified that four key services originating on a fixed network must be made pre-selectable.² These were national long distance calls, international direct dial voice calls, specified operator assisted calls and international ring-back pricing code calls.³

This requirement means that, regardless of the CSP supplying local calls and access services, a customer must be allowed to pre-select another CSP to supply and bill the customer for these four services.

² Telecommunications (Provision of Pre-Selection) Determination 1997.

³ A ring back price call is a call that, for an additional charge, the cost of the call is telephoned back within minutes of the call's completion.

However, the requirement to provide pre-selection for these services for a customer only applies when the customer selects one provider to provide all four pre-selectable services: the basket cannot be unpacked. This concept is known as ‘single-basket’ pre-selection. Pre-selection of a supplier means that all four of the above types would be routed or billed via the pre-selected supplier.

While the end-user is not able to pre-select one provider for national long distance and another provider for international calls, end-users may use override dial codes to select an individual provider for each pre-selectable service on a call-by-call basis. An alternative, multi-basket pre-selection, is discussed in section 15.5.

Fixed to mobile determination

In December 1998, the ACA made a further determination requiring carriers to add fixed to mobile calls to the existing single basket of pre-selectable services.⁴ This determination came into force on 1 July 1999. While pre-selection is typically used as a tool to encourage competition for long distance services, potentially it can be used to foster competition in the provision of a wide range of services and/or networks. For example, in some other jurisdictions pre-selection is required for local rate and freephone calls and calls originating on mobile networks.

The basis of the ACA’s decision to require pre-selection for fixed to mobile calls was the perception that mobile terminating access charges in particular were not being driven down through competition. The ACA (1998a) observed:

The potential for competition to reduce prices and charges is most evident in terminating access charges ... With the limited competition in the market at present there are not significant competitive pressures on mobile terminating access charges to significantly reduce prices. However, as these charges are not required to be lodged as tariffs, it is difficult to measure historical movement in terminating access charges. Nevertheless, there has been very little downward movement in retail prices and therefore it is expected that there has been little, if any movement in terminating access charges (p. 17).

There are a number of means by which carrier pre-selection can influence the price of fixed to mobile calls:

- Competition for customers wanting to make fixed to mobile calls reduces originating margins for such calls. Previously these calls were dominated by Telstra due to its ownership of the ubiquitous originating local loop; and

⁴ Telecommunications (Provision of Pre-Selection for Specified Carriage Services) Determination 1998.

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- As the volume of fixed to mobile calls offered by other carriers increases, the possibility of international transit options creates arbitrage gains on termination charges. The increase in volume may also give the pre-selected carrier greater capacity to seek volume discounts on termination (ACA 1998a).

However, as noted by the ACA (1998a, p. 3), extending pre-selection requirements to fixed to mobile services is:

... effectively a process of giving customers access to alternative carriage service providers notwithstanding that the customer may be connected to the network of another carrier or carriage service provider. This access process has the potential to have impacts on the provision of carriage services generally, similar to the access regime administered by the ACCC under Part XIC of the Trade Practices Act 1974.

Moreover, introducing pre-selection for fixed to mobile services is only one of several measures that may facilitate competition in terminating charges for mobile services (see for example, Gans and King 1999b). Clearly, the ACA could not consider other options due to its limited powers under the TA in relation to competition issues.

Shifting responsibility for setting pre-selection requirements from the ACA to the ACCC might help ensure that pre-selection is but one of a wider range of regulatory options considered in the future. Given decisions regarding pre-selection have clear competitive implications, this would also be consistent with the division of responsibilities between the ACCC and the ACA with respect to other issues such as number portability. This option was generally supported by participants.⁵

RECOMMENDATION 15.1

The Commission recommends that the ACCC be responsible for determining which services should be subject to pre-selection requirements, consulting with the ACA on technical matters.

⁵ Cable & Wireless Optus, SPAN, PowerTel, Primus and the Communications Law Centre. The ACA noted that it had no concerns regarding the recommendation, while the ACCC did not comment on this matter.

15.4 Costs and benefits of carrier pre-selection

Costs of carrier pre-selection

The costs of introducing pre-selection (table 15.1) are initially incurred by originating access service deliverers⁶, pre-selected carriers, regulatory authorities and end-users.

Table 15.1 Costs arising due to the introduction of carrier pre-selection

<i>Party that incurs cost</i>	<i>Basis for cost</i>
Originating access service deliverers	<ul style="list-style-type: none">• Modifying exchanges to facilitate basket(s) of pre-selectable services where pre-selection capability does not exist in the local network.• Conditioning controlled networks and facilities to implement pre-selection including programming exchanges to recognise carrier routing prefixes.• Increasing the number of exchange ports to handle extra traffic that may flow between the originating access service deliverer's network and the preferred carrier's network.• Introducing or amending information systems to record a customer's pre-selected choice and allowing data to be exchanged between operators for billing and customer service purposes.• Maintaining customer records, administering the churn process, staff training and generally developing procedures for complying with a pre-selection requirement.
Pre-selected carriers	<ul style="list-style-type: none">• Software changes in exchanges to route pre-selectable calls.• Development of information services to record and amend a customer's pre-selection choice.• Negotiating the terms and conditions of pre-selection with originating access service deliverers.
Customers	In limited cases, there may be direct costs to end-users. For example, some customer equipment may need to be reprogrammed.
Regulatory authority	Costs associated with administering the system.

Sources: ACA 1998a, 1998b.

Magnitude of the costs

A quantitative analysis of the costs and benefits of introducing pre-selection has not been undertaken. However, some available information, although dated, suggests that the costs of implementing (single-basket) carrier pre-selection are relatively

⁶ In Australia both Telstra and Cable & Wireless Optus provide originating access services.

minor. A study of customer access arrangements undertaken by AUSTEL (1991, p. 74) noted:

Telecom has indicated that simple pre-selection [between itself and Optus] could be implemented on all AXE and System 12 exchanges within 6 months of agreement of requirements, and on all ARE exchanges within 9 months of such agreement. The national cost of this implementation (data preparation, loading and testing for carrier override codes and category recovery and re-allocation) is estimated by Telecom to be about \$0.46m ... preselection could be introduced on CLI capable ARF and ARK exchanges by 1994 ... It would be capable of supporting multiple carriers in the post-1997 environment as well as separate preselection of STD and IDD carriers. Implementation of preselection in ARF and ARK by 1994 is estimated by Telecom to cost about \$1.2m ... Telecom also proposes to introduce expanded category structures in AXE and ARE in 1994, at an estimated cost of \$1.5m. This would allow separate preselection of STD and IDD carriers and would support multiple carriers. Telecom estimates that the subsequent changes required to provide longer, multiple-carrier override codes for 1997 would cost another \$1.3m to implement.

Benefits of carrier pre-selection

The benefits of pre-selection accrue to customers that opt to use the services of alternative providers. These may include lower call prices, better quality, more service features and increased ease of making calls through dialling fewer digits than a call-by-call selection would require.

Further, ease of migration or 'churn', which pre-selection encourages, leads to competitive pressure on providers. To the extent that providers are unable to identify customers most likely to churn, they need to compete for all customers' business in order to retain market share. Therefore pre-selection can benefit all consumers, not just those that switch telecommunications provider.

Evidence of effects and benefits from carrier pre-selection

It is difficult to estimate the magnitude of benefits that arise due to pre-selection since it is difficult to separate the influences of pre-selection from other regulatory measures aimed at increasing competition.

However, there are a number of possible measures that may shed some light on the degree to which the introduction of pre-selection has been successful in increasing competition. Such measures include:

- the rate of pre-selection churn; and
- the price of pre-selectable services over time.

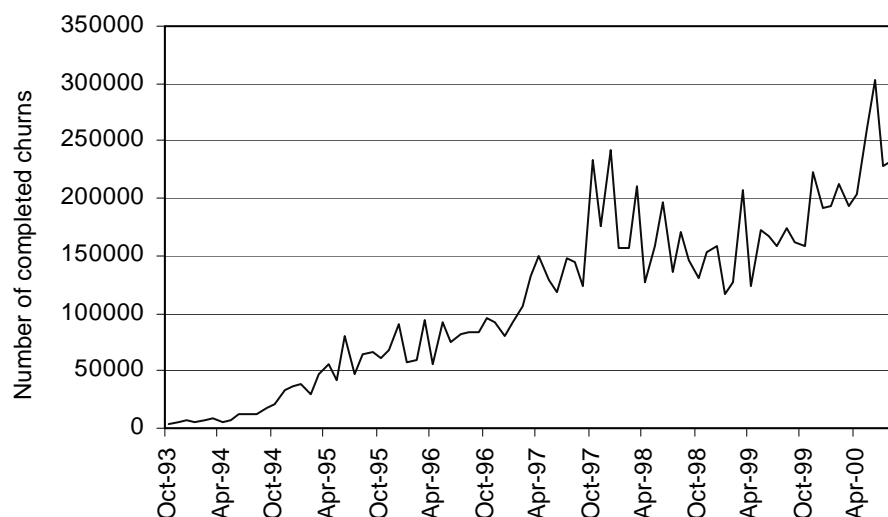
In assessing these measures it is important to recognise that the introduction of pre-selection for domestic long distance and international services has been staggered. First was the introduction of pre-selection between Cable & Wireless Optus and Telstra in 1993 through to 1997. This was followed with the progressive introduction of other pre-selectable service providers from 1997 onwards. Pre-selection for fixed to mobile services was introduced in 1999.

Rate of pre-selection churn

The rate of pre-selection churn for the period October 1993 to August 2000 is depicted in figure 15.1.

The number of customers churning between providers for their pre-selected traffic has increased from approximately 130 000 per month towards the end of the duopoly period, to a peak of approximately 300 000 per month by June 2000.

Figure 15.1 Pre-selection churn
October 1993 – August 2000



Data source: Telstra, including sub. 24, p. 12.

Price comparisons

Based on data obtained from five carriers⁷, the ACCC (2001c) determined that between 1996-97 and 1999-00 the price of national long distance calls decreased by

⁷ AAPT, Cable & Wireless Optus, One.Tel, Telstra and Vodafone.

23.5 per cent. The price of international calls also fell significantly over the same period, dropping by 53 per cent.

Competition in the provision of fixed to mobile calls was limited until the inclusion of fixed to mobile calls in the pre-selection basket in 1999. The price of fixed to mobile calls increased by 5.9 per cent between 1996-97 and 1997-98. The price subsequently declined, decreasing by 5.3 per cent between 1997-98 and 1998-99, and 8.1 per cent between 1998-99 and 1999-00.

Some participants have questioned the effectiveness of pre-selection for fixed to mobile services in the short run, noting that it may be some time before the full competitive advantage of adding fixed to mobile calls to the pre-selectable basket is realised by customers. As Vodafone argued (trans., p. 484):

... when fixed-to-mobile was added to the preselection basket those preselection providers didn't have to compete for that traffic stream; it was just given to them. Naturally it takes a while for competitive forces to flow through and impact on rates in that particular revenue stream.

While it would appear from the data presented above that there has been increasing intensity of competition for pre-selectable services — particularly for domestic long distance and international calls — it is difficult to determine whether this was a consequence of the pre-selection determinations or other competitive forces. However, given the relatively small costs of providing pre-selection, the Commission considers that it is likely that the net economic benefits of carrier pre-selection have been positive.

15.5 Options for refining the current regulatory requirements

Enhancing the use of pre-selection and override dial codes

Currently pre-selection is offered as a single-basket or bundle — a customer can only pre-select one provider to supply all five pre-selectable services. This bundling, in conjunction with complex pricing structures, may have reduced the impact of single-basket pre-selection on competition.

Options for information provision

The Tasmanian Government argued (sub. 36, pp. 6–7):

Cost obfuscation through price complexity is becoming increasingly prevalent in the telecommunications market ... bundling and price obfuscation not only affects

competition at the supply end but also prevents consumers (the demand-side) from making informed choices in the marketplace and hence limits competition. For consumers to have the ability to exercise power in the market there must be a high level of pricing disclosure from companies ...

Similarly, Australian Business Limited (ABL) noted in relation to pre-selection:

Surveys conducted by ABL show that the advent of bundled service packages for businesses made it hard to compare value for money and service quality and many businesses do not consider that they have enough information from which to select telecommunications products and services to suit their needs (sub. 31, p. 3).

ABL recommended a role for information provision:

ABL recommends that consideration be given to supporting a comparison service for residential and small business consumers of telecommunications voice and data services to enable greater understanding of industry offerings and to foster 'informed choice' (sub. 31, p. 4).

While the provision of price and service information may be useful for smaller businesses and high use residential customers, there are potential private solutions for provision of this information (such as consumer and business organisations). Indeed, it appears that in some jurisdictions, including Australia, such services have sprung up autonomously (see, for example, phonechoice.com.au). While information asymmetries can lead to market failure, in this particular instance the Commission does not consider that government intervention and funding is warranted.

Options for unbundling

There are a number of options (that are currently available) which enable customers effectively to 'unbundle' the package of pre-selectable services:

- Override dial codes — which allow customers to select providers on a call-by-call basis. Contractual arrangements need to be entered into with the provider for each override code required and customers must dial whichever override code they wish to use for each particular call; and
- Customer premises equipment — which provides effective unbundling for high-use customers. For example, Telstra notes most business traffic is routed through business systems such as PABX, Commander and Key systems, and small business systems, where least cost routers and override codes are used to obtain the lowest priced services.⁸ Further, some companies, by acting as intermediaries, enable customers to select from different providers on a call-by-

⁸ Information supplied to the Commission.

call basis without having to enter into agreements with a number of providers or having to dial override codes.⁹

Another means of unbundling the current package of pre-selectable services is multi-basket pre-selection. Multi-basket pre-selection allows an end-user to pre-select a different provider for different pre-selectable services. For example, if national long distance and international calls were placed in different pre-selectable baskets a customer could pre-select one company for national long distance and another company for international calls. However, at present, technology presents a barrier to the introduction of this service.¹⁰

A number of participants have commented on the desirability of requiring multi-basket pre-selection. While some participants supported its implementation¹¹, in the main, participants questioned whether the long-term benefits of requiring multi-basket pre-selection would outweigh the costs.¹² The key arguments that undermine the case for multi-basket pre-selection are:

- substitutes for multi-basket pre-selection already exist (including customer premises equipment) hence any additional consumer benefits would be minimal;
- there appears to be limited (if any) consumer demand for multi-basket pre-selection. As the ACCC (1999c, pp. 38–9) recognised, the preference of customers appears to be for a single service provider:

There does ... appear to be a significant proportion of end-users that prefer to purchase national long distance and international calls from the local telephony services provider. By dealing with a single supplier, end-users receive 'one-bill' for both their local and long distance telephony requirements and have a single point of contact for service inquiries. Many end-users see this as being more convenient and, for some businesses, one bill facilitates more effective cost management.

- multi-basket pre-selection is not currently technically feasible and the costs of developing and implementing the service may be significant; and
- there are sufficient participants in the industry that individual retail offerings include elements from a range of providers;

Consequently, the Commission does not consider it appropriate to mandate multi-basket pre-selection.

⁹ For example, MULTeLINK offers a service that enables customers to access the cheapest provider on a call-by-call basis.

¹⁰ Most of Telstra's PSTN exchanges can only support two baskets of pre-selectable services and Cable & Wireless Optus local exchanges support only one basket of services.

¹¹ Communications Law Centre, Macquarie Corporate Telecommunications and PowerTel.

¹² Vodafone, Cable & Wireless Optus, AAPT, Telstra and Austar.

Asymmetric pre-selection

Currently, pre-selection requirements apply to all carriers and CSPs. However, Cable & Wireless Optus argued that pre-selection should only be applied to carriers with significant market power (asymmetric pre-selection). The implication of asymmetric pre-selection is that other CSPs or carriers would not have the right to gain access to Cable & Wireless Optus' originating call network for other services, such as long distance, but Telstra would be obliged to grant access.¹³ Cable & Wireless Optus (sub. 8) claimed that regulation of new entrant infrastructure:

- is not required unless the new entrant has market power and can control price or supply; and
- creates a disincentive to further investment in originating services by new entrants, with the ultimate effect of hampering competition.

This view is echoed by a number of regulatory authorities in other jurisdictions, particularly the British regulator Oftel, which argued (1996, para 28):

When applied to new networks, indirect access is likely to exploit the high initial costs experienced by such networks and discourage the development of competing infrastructure.

Similarly, OVUM in its review of the EU Interconnect Directive argued that requiring carriers without market power to provide pre-selection is over intrusive regulation since:

It lowers investment incentives for alternative network operators who would be forced to provide rivals with access to their customers for high profit long-distance services; and

It pre-empts use of the market mechanism. Customers of alternative access network operators which do not offer carrier selection can always switch back to the dominant operator which does. The threat of customers exercising this option puts substantial competitive pressure on an alternative access network operator to ensure that its customers are satisfied with its services (1999, p. 23).

A further potential disadvantage of general pre-selection is that it requires investment in the exchanges of all originating access service deliverers, which is a resource cost.

The Commission considers that the primary function of pre-selection requirements is to overcome a lack of competition at the customer access level by ensuring that a carrier with market power at the customer access level cannot use this power to gain an advantage in a separate market — such as the market for international and long

¹³ Nothing would preclude voluntary commercial negotiations for access and installation of equipment in relevant exchanges.

distance services. By extending pre-selection requirements to all carriers, the incentive for new entrants to invest in local access infrastructure is reduced without an additional corresponding benefit for competition.

Hence, the Commission considers that the requirement to provide pre-selection should not be applied to new entrants which do not have market power. Participants generally supported this option (box 15.3).

In the case of current non-dominant networks, the economic costs of providing pre-selection capability are sunk — and therefore not relevant to the assessment of its desirability. However, it still remains unclear that there are obvious benefits to retaining pre-selection requirements for such carriers, especially given that so few customers have pre-selected another carrier on a non-dominant network.¹⁴

Moreover, requiring pre-selection for existing, but not future, non-dominant networks would result in a set of complex and potentially unworkable arrangements. In particular, it would be difficult to explain to customers of non-dominant carriers the conditions under which they were entitled to receive pre-selectable services.

The Commission recommends pre-selection as a service be subject to the new declaration criteria. This view is consistent with the Commission's recommendation that declaration of services should only relate to services produced by carriers or CSPs with significant market power.

This approach still allows for pre-selection of a new network, where that network has market power. This could arise, for example, were a network to be established that displaced Telstra's network in a particular region.

The effects of asymmetric pre-selection for customers are likely to be modest. These customers can readily switch back to Telstra if they place a particularly high value on pre-selection (especially so in the presence of number portability). Further, if the availability of pre-selection is a significant factor for customers, one might expect a lack of pre-selection on 'non-dominant' networks to constitute a disadvantage to those networks. Under these circumstances, they themselves may choose to offer pre-selection on their networks.

RECOMMENDATION 15.2

The Commission recommends that pre-selection as a service be subject to the new declaration criteria and therefore the requirement to provide pre-selection should not be applied to new entrants that do not have market power.

¹⁴ Cable & Wireless Optus advised the Commission that less than five per cent of the customers on its networks are pre-selected to other carriers.

Box 15.3 Participants' views on asymmetric pre-selection

Restricting pre-selection requirements to carriers with significant market power was supported by a number of participants:

We consider that 'pre-selection' as a service should be required to pass the new declaration criteria. This would focus regulatory intervention on areas of durable market failure and restrict regulatory intervention to services provided by facilities that were not feasible to duplicate. (Vodafone sub. DR70, p. 26)

Optus believes that the requirement to provide pre-selection should be linked to market power and should not apply to new entrants for the following reasons: (a) Requiring preselection where there is no market power reduces facilities-based investment and competition; (b) Symmetrical preselection requirements are not required unless the new entrant has market power and can control price or supply (which is unlikely to be the case); (c) Symmetrical application of preselection obligations has been rejected by overseas regulators in the EU, UK and the US, who have consistently refused to apply access and interconnection regulation symmetrically between incumbents and new entrants (sub. DR72, p. 54).

It is AUSTAR's view that pre-selection should, at this stage, be applied asymmetrically to the dominant carrier (sub. DR79, p. 2).

Preselection should be restricted to dominant carriers rather than to 'Telstra' — Telstra may be displaced in some areas or markets (PowerTel sub. DR102, p. 18).

However both the ACA and the Communications Law Centre opposed restricting requirements to carriers with market power.

The ACA does not support, *prima facie*, the concept that pre-selection obligations should only apply to access services supplied by Telstra Corporation. If it were appropriate that access providers other than Telstra should not be subject to pre-selection obligations, current legislation allows for exemptions to be granted by the ACA on a case by case basis, or as a class exemption (ACA sub. DR99, pp. 4–5).

In relation to the arguments of C&W Optus that pre-selection should only apply to Telstra, the Centre rejects this view as a self-interested commercial position which is not founded on any sector-specific benefits that come from competition regulation (Communications Law Centre sub. DR116, p. 12).

While Telstra did not comment in its submissions to the Commission on restricting pre-selection requirements to carriers with market power, in its submission to the ACA's review of pre-selection Telstra argued:

Regardless of the cost of implementing pre-selection, Telstra does not consider it appropriate for the ACA to consider asymmetric pre-selection ... The requirement to provide pre-selection is simply another cost associated with operating in the Australian regulatory environment. Any attempt to limit the costs of operation for some players and not others would be inconsistent with the current telecommunications regulatory regime.¹⁵

¹⁵ Information supplied by Telstra in response to a query by the Commission.

16 Regional differences in competition

Box 16.1 Key messages

Market segments in telecommunications can be defined by geography and population, which influence the number, density and demands of customers and per capita costs of deploying networks. Relevant market segments include CBD, metropolitan, regional, and rural and remote areas.

Facilities-based competition is sustainable in the more densely populated segments such as CBDs, metropolitan areas, and larger regional towns. There is less scope for facilities-based competition in rural and remote areas. In remote areas, it may only be economic for a single provider to serve the market via terrestrial technologies — in such areas, satellite technologies provide greater scope for competition in service provision.

While many of the new carriers and service providers that have entered the Australian telecommunications market since 1997 have focused their infrastructure investment on CBD and metropolitan areas, other carriers have sought to develop niche markets in regional and rural Australia. So-called new models of competition in regional markets have supported a range of entry strategies, including community telco-type models.

The entry of these new regionally-focused carriers and service providers has had a limited impact on competition to date, but it can be expected to have a greater effect in the next few years as their networks are developed and they gain a larger customer base.

Some participants suggested that the ACCC should give greater emphasis to the geographical dimension of the relevant market in its consideration of the declaration of services. However, in the Commission's view, the ACCC appears to adopt a balanced approach in relation to market definition, taking into account the four main dimensions of a market — product, function, geography and time.

There was a wide cross-section of views reported by participants in relation to the declaration of services specifically for regional markets, ranging from declaration being required to encourage service-based competition to the view that such declaration may well discourage facilities-based investment. In the Commission's view, the current declaration and access regime has sufficient flexibility to take account of regional issues.

16.1 Introduction

In January 2001, the Commission received two additional terms of reference, as a result of recommendations contained in the Telecommunications Service Inquiry (the Besley inquiry). The Commission was asked in undertaking its inquiry to:

... have regard to the differing levels of competition across Australia and consider whether a greater recognition of those differing circumstances should be incorporated into competition regulation; and

... specifically consider the implications of current pay television programming arrangements for the development of telecommunications competition in regional Australia, and consider whether any additional regulatory measures are needed to facilitate access to pay television programming.

The Besley inquiry

In March 2000 the Government established the Besley inquiry to assess the adequacy of telecommunications services in Australia. In September 2000, the Committee concluded that:

Australians generally have adequate access to a range of high quality, basic and advanced services comparable to the leading information economies of the world. ... However, a significant proportion of those who live and work in rural and remote Australia have concerns regarding key aspects of services which, at this stage, are not adequate (Besley 2000, p. 165).

The Committee judged that:

... the continued development of competition throughout Australia, combined with key government initiatives (such as USO contestability) will have a positive effect on services over the next few years. These developments are likely to materially improve the services available to rural and remote consumers (p. 165).

It added that:

... the only way in which the service issues can be effectively addressed is by placing increased competitive pressures on Telstra and other providers (p. 4).

This chapter looks at levels of competition in telecommunications across Australia. The reasons for regional differences in competition are examined in section 16.2, while the forms of competition that take place in different telecommunications markets are discussed in section 16.3. A brief review of infrastructure investment by new carriers is reported in section 16.4, and the implications of regional differences in competition for competition regulation are examined in section 16.5. Related issues such as regional aspects of pay TV arrangements are examined in chapter 17 and the universal service obligation (USO) arrangements in chapter 18.

16.2 Geographic differences in competition

In chapter 4, it was noted that one factor relevant for defining markets is geographic dimension — a market is defined as the geographic area in which products or services are, or potentially could be, supplied. As the Besley inquiry (2000, p. 34) noted:

It is no longer accurate to speak of a single, homogeneous, telecommunications market. The current telecommunications landscape is complex, and can be characterised as a series of matrices in which the effects of geography and population (metropolitan, rural and remote markets) may be overlaid with demand for specific services (mobile telephony and internet markets).

Within each of the telecommunications service markets, the scope for competition and the number of alternative providers can differ according to the particular geographic segment. For example, in relation to the retail dial-up internet market, there are currently more than 650 different internet service providers (ISPs) in Australia (chapter 3). In densely populated and high demand market segments like capital city CBDs and metropolitan areas, customers are likely to be able to choose from a large number of ISPs providing local call access. In regional capital cities, there is likely to be a smaller choice, but still a range of alternative providers as many of the national ISPs have points of presence in 50 or more locations Australia-wide. However, in rural localities, there might only be one ISP providing local call access and in very remote areas, no such provider at all.

Several of the state and territory governments commented on the extent to which effective competition had developed in different geographic regions. For example, the Northern Territory Government stated:

For all of the activity in the competitive provision of higher levels of service and lower prices in urban markets, the rural and remote areas markets are still for all practical purposes dominated by Telstra and the same services that they suffered prior to 1997. ... Other carriers have not been induced to invest in physical infrastructure significantly outside of urban areas (sub. 22, p. 5).

Similarly, the Queensland Government commented:

... telecommunications competition under the current regulatory regime has primarily been concentrated in metropolitan Australia. These markets continue to be the main focus of competition and of new infrastructure investment (sub. 39, p. 1).

The Tasmanian Government stated that deregulation had failed in regional areas:

The present competitive and regulatory environment is not delivering in regional Australia ... There is a reasonable chance that telecommunications competition in regional areas will in fact decrease in the next few years, rather than increase ... (sub. 36, p. 3).

ATUG noted the distinction between competitive conditions in regional markets compared with rural and remote markets:

Competition in regional centres and the immediately surrounding areas is often reasonable with one or two carriers and a number of service providers offering services. In rural and remote areas often only one fixed network is present with the only competition being offered by satellite services (sub. 52, p. 1).

While it is apparent that there are differing levels of facilities-based and service-based competition across Australia, it is also important to understand the reasons for these differences.

Reasons for regional differences in competition

Several participants stressed that the thinness of markets in rural and remote areas and the relatively high cost of deploying networks in these regions create entry barriers for potential providers. For example, AAPT stated that:

The development of competition has generally been slower in regional and rural markets than in metropolitan and CBD markets, because demand is usually thinner and greater per capita investments per head are required. These characteristics mean that to date regional markets have been akin to local monopolies (sub. 7, p. 14).

Similarly, Macquarie Corporate Telecommunications commented that:

Non-metropolitan markets face high infrastructure costs and thin markets and therefore present considerable barriers to entry for potential entrants ... As a consequence of these factors, there is limited competition in regional areas resulting in higher prices and a limited range of services (sub. 34, pp. 6–7).

But it is likely that factors such as growth in demand for services will provide opportunities for market entry and scope for greater competition in regional areas. The Besley Committee (2000, p. 134) stated:

In particular, demand growth raises the prospects that markets which were once capable of sustaining only one provider may become viable for multiple suppliers. Demand growth can also stimulate investment in new technologies and services which may previously have been uncommercial.

Further, particular types of delivery technologies are well-suited to servicing rural and regional areas. A report undertaken by Network Economics Consulting Group (NECG) for the Besley inquiry (2000, p. 138) concluded that:

... there is evidence of increasing competition. This is particularly evident in the regional cities and larger towns where opportunity exists for the deployment of a variety of telecommunications technologies, particularly terrestrial and wireless based solutions.

However, NECG also pointed out that demand levels in remote areas are unlikely to be able to sustain terrestrial technologies. Rather, in areas of low population density or places which are a great distance from existing communications infrastructure, satellite services have advantages over other technologies (<http://www.vsat.com.au>). There is already competition in satellite services in some telecommunications areas (such as satellite mobile services).

Austar, which has rolled out infrastructure in regional and rural Australia to the value of over \$800 million to provide pay TV and high speed internet services, summarised the prospects for competition in regional areas as follows:

... developments in wireless and satellite technology will ultimately provide cheaper and more widely available telecommunications services in sparsely populated regional areas than can be provided using the copper network and xDSL technology (sub. 60, p. 2).

Examples of regional differences in competition

As an illustration of how competition has developed on a regional basis, the Queensland Government (sub. 39) examined the telecommunications market in that state in terms of three major geographic regions and assessed the degree of competition in each (table 16.1).

Table 16.1 Competition in telecommunications markets in Queensland

<i>Region</i>	<i>Voice</i>	<i>Mobile</i>	<i>IP/Data</i>
Brisbane and Gold Coast	Contestable.	Contestable at both an infrastructure and service level.	Contestable.
Coastal strip (regional)	Contestable at a service level. Increasingly contestable at an infrastructure level.	Contestable at a service level.	Increasingly contestable at an infrastructure level as a result of government support. POPs in major centres.
Far north and west of the divide (rural and remote)	Imperfect market.	Contestable at a service level (eg CDMA) in a small number of locations.	Imperfect market.

Source: Queensland Government, sub. 39, p. 2.

The regions in which facilities-based competition has developed are the urbanised zone of Brisbane and the Gold Coast and the coastal strip. One new network deployment to promote facilities-based competition in the coastal strip is the rollout of a fibre optic link between Brisbane and Cairns by Reef Networks. As the Queensland Government reported:

To influence competitive pricing in regional Queensland the Government has had to use its rights of way and procurement practices to facilitate the establishment of the private sector led Reef Networks project to provide a competitive fibre backbone along the Queensland coast (sub. 39, p. 10).

However, the Queensland Government assessed that there was no facilities-based competition and virtually no service-based competition in the rural and remote areas ('far north and west of the divide'), with the main impediments to competition being the commercial realities of costs, investment hurdle rates and price barriers.

The Western Australian Department of Commerce and Trade (WADCT) (sub. 56) also suggested a breakdown of the WA market into three regional sub-markets (table 16.2). In the rural and remote market segments, the WADCT considered that regulatory intervention in the form of the current tender process for extended zones was appropriate (chapter 18).

Table 16.2 Regional markets in WA telephony services

<i>Market segment</i>	<i>Market characteristics</i>	<i>Form of competition</i>
Metropolitan (Perth and largest regional centres)	Dense population and sufficient market capacity to support multiple infrastructure.	Facilities-based competition and service-based competition.
Country (small towns)	Low population and insufficient market capacity to support multiple infrastructure.	Service-based competition requiring access to facilities-based carrier's network.
Remote	Very sparse populations and long distances between towns ('extended zones').	Tender process for provision of services.

Source: Based on Western Australian Department of Commerce and Trade, sub. 56, p. 2.

16.3 Forms of competition in telecommunications markets

Competition 'within' the market

In most geographic segments of telecommunications markets, competition takes place *within* the market. For example, in capital city CBDs where there is a high density of high value customers and relatively low infrastructure costs per customer, these factors encourage both facilities-based and service-based competition among a relatively large number of alternative providers. This also tends to be the form of competition in market segments such as metropolitan areas and relatively more densely populated regional areas.

One characteristic of many new carriers and carriage service providers which have entered since 1997 is that they have followed a targeted strategy in relation to contesting markets. The Besley inquiry (2000, p. 137) commented on this feature as follows:

With the advent of open competition, Australia is witnessing the development of new market entry strategies ... New market models include carriers or service providers which focus on limited geographical markets or market segments ...

The ACA has also pointed to two significant trends, with regional implications, associated with the recent entry of new carriers (ACA 2000b):

- *technological changes are likely to promote competition* — wireless technologies offer opportunities for the more economical provision of telecommunications services to specialised market segments, such as residential and business customers in regional areas; and
- *regional niche market opportunities* — there has been a growth in the number of new carriers seeking to develop niche markets in regional areas.

In relation to the first point, ATUG saw new access technologies, particularly wireless and satellite, as likely to create opportunities for greater competition in service provision in regional areas:

... recent developments suggest that local area or regionally focused carriers, using the best of today's technologies and with reasonable access arrangements to transmission links to capital cities and other national networks, will be able to build regional customer access networks and offer services which will attract customers (sub. 52, p. 2).

On the second point, ATUG also considered that while regional markets had some characteristics which meant that competition generally was likely to be limited, there is also scope for niche market entry:

The relatively small size of regional, rural and remote markets may well mean that for some time to come competitive offerings will be limited. [But] it may also be that small carriers or service providers with low operating costs and with the community support that is often offered, will succeed in bringing a reasonable level of competition to non-urban areas (sub. 52, p. 1).

AAPT also mentioned that while competition has yet to broaden and deepen in rural areas, entry of new competitors *has* started to occur:

While competition is slower to develop outside CBD and metropolitan areas, regional infrastructure roll out and market entrance by new carriers attest to the fact that the current regime is conducive to competitive developments in regional Australia (sub. 58, p. 2).

Some examples of new network deployments in regional areas, which are expected to promote facilities-based and service-based competition, are reported in section 16.4.

Competition ‘for’ the market

In many rural and remote markets, the costs of infrastructure rollout compared to the revenue stream are generally such that it is only economic for a single facilities-based provider to serve the market. In these markets, the most likely way of achieving a competitive outcome (in terms of prices and range and quality of services) is to encourage competition *for* the market.

Woodbridge stated:

In such circumstances, the forces of competition may be brought to bear by competition *for the market* rather than competition *within the market*. Competition for the market and provision of services by a single provider can lead to prices for services which would be obtained if the market was openly competitive (sub. 41, annexure A, p. 5).

The Queensland Government commented:

... it is accepted that there will be limits on the benefits competition can provide to rural and remote communities and that a broader range of policies are required for the provision of telecommunications services to those areas (sub. 39, p. 1).

One mechanism to promote competition ‘for’ rural and remote markets is via a competitive tender process, where a carrier is selected to exclusively service an area for a contract period. Such a tender was recently conducted by DCITA to provide untimed local calls and untimed local call access to the internet in ‘extended zones’ in rural and remote Australia — the extended zones are call charging zones that currently lie outside Telstra’s standard local call charging zones. On 14 February 2001, the Government announced Telstra as the preferred tenderer in the \$150 million contract (the unsuccessful tenderers were Cable & Wireless Optus, and new carriers Pacific Telco and Heartland Communications) (Alston 2001b). The contract relates to about 40 000 services, which cover 80 per cent of Australia’s land mass (*exchange*, 13/1, p. 11).

Recent amendments to the *Telecommunications (Consumer Protection and Service Standards) Act 1999* have established a framework for greater competition in the supply of universal services, motivated in part by a desire to encourage greater competition in the provision of rural and regional telecommunications services. Competition in the provision of USO services is discussed in chapter 18.

New models of competition in regional markets

The Besley inquiry reported that the period of open competition has seen the development of new market entry strategies — so-called ‘new market models’ (Besley 2000, p. 137). In cases where regional areas have difficulty attracting new commercial players to provide telecommunications services, some degree of community or government involvement may be necessary to achieve improved service provision. In this respect, DCITA (2001) has released a ‘toolkit’ explaining how regional and rural communities can take action to improve their telecommunications infrastructure and services. The types of new network models identified fall broadly into three categories:

- *commercial ownership* — where a private company provides new infrastructure or services to a region and works closely with the regional community to ensure its services match community needs;
- *community ownership* — where the community plays a greater role in the ownership and control of the regional service provider; and
- *government initiated networks* — where governments leverage their requirements for telecommunications services in regional areas to bring about benefits both for themselves and regional communities generally.

AAPT (sub. 58, p. 9) referred to the Bendigo Community Telco Group as an example of the commercial ownership-based model of competition. It and other examples of new network models for regional Australia are reported in box 16.2. Other case studies are described in DCITA (2001).

One factor that can make regional markets more attractive to commercial ownership new network models is demand aggregation. As Woodbridge noted:

This involves major users of telecommunications services within a region aggregating their business in order to encourage an alternative local network provider. This provides the entrant with some certainty of demand prior to entry ... (sub. 41, annexure A, p. 30).

In relation to such new models of competition, AAPT stated that:

AAPT would support a greater level of consideration of differing levels of competition across Australia being incorporated into the application of competition regulation ... to ensure that demand aggregation in sanctioned circumstances does not constitute a contravention of part IV of the TPA (sub. 58, p. 9).

Box 16.2 Examples of new regional telecommunications models

- *Bendigo Community Telco* (BCT) — an example of a commercial ownership model. BCT was launched in August 2000 and is the first regional and community-based telecommunications carrier established in Australia. It was established to provide communications services tailored to meet local needs. AAPT is the commercial and strategic partner and is working to help the group evolve into a regional telecommunications services provider. As AAPT noted:

The aim of the project is to shift the provisioning model from supply driven to demand driven so that the user, rather than the provider, will decide which services will be provided (sub. 58, attachment B).

- *Green Telephone Inc.* (GTI) — an example of a community ownership model. GTI was developed by the South East Economic Development Board and the Greater Green Triangle Regional Association (GGTRA) to provide a full suite of telecommunications services in the south east of South Australia, Western Victoria and the Wimmera region. GGTRA and equipment vendor Marconi Australia are developing a partnership arrangement for the running of the network.
- *TASINET and Networking Tasmania* — with these projects, the Tasmanian Government (the largest purchaser of telecommunications services in Tasmania) has entered into two purchasing arrangements aimed at improving the quality of voice and data telecommunications services in Tasmania.

Source: AAPT sub. 58, attachment B, DCITA 2001.

16.4 Infrastructure investment in regional areas

Some commentary focused on the claim that many of the networks deployed by new carriers have been concentrated in capital city CBD and metropolitan areas, to engage in facilities-based and service-based competition in those areas. For example, the Northern Territory Government commented that:

... carriers have not been induced to invest in physical infrastructure significantly outside of urban areas. The major infrastructure that has taken place has been in major backbone infrastructure, duplicating existing infrastructure elements that were already arguably sufficient and ignoring areas where the infrastructure is demonstrably lacking (sub. 22, p. 5).

But as noted above, many of the new carriers that have entered the market since 1997 have plans to deploy networks in regional Australia. In table 16.3, some of these new carriers are classified on the basis of the regional coverage of their current (or planned) networks. Most of these new regional networks are either still being deployed or in the very early stages of developing customer bases and as yet appear to have had little impact on competition.

Table 16.3 Examples of new infrastructure providers in regional Australia^a

<i>Area</i>	<i>Operator</i>	<i>Network details (including planned deployments)</i>
Regional city local access networks	Neighborhood Cable	HFC networks in Mildura and Ballarat and plans for Geelong, Bendigo, Albury and Wodonga.
	Smart Radio Systems	'Fibre to the home' network planned for Cooma.
	TransACT	Rolling out a fibre optic network in Canberra and Queanbeyan.
	Cable & Telephone	Planning to roll out a HFC network in Kalgoorlie and then to other regional centres in WA.
Australia-wide	AAPT	Deploying a national LMDS network.
	Agility Networks	Deploying a national LMDS network, with a focus on regional Australia.
	Pulsat	Building a wireless network targeting regional areas.
	Third Rail	Deploying a national microwave network with wireless local loop.
	Austar	Provides services to regional and rural Australia via satellite/wireless networks.
	Airnet	Services to rural Australia via satellite/wireless network.
	COMindico	Plans to deploy Australia's first pure IP network by installing nodes in all 66 Telstra call charging areas.
	ARBT (Heartland Communications)	Provision of telephony and broadband services to rural and regional Australia using satellite technologies.
	BinCom Satellite Systems	Services to regional and remote areas of Australia using a satellite-based network and VSAT (Very Small Aperture Terminal) technology.
	Pacific Telco	Plans to provide services to rural and remote areas of Australia using VIP SatNet (Voice Over Internet Protocol Satellite Network) technology.
Victoria	OMNIConnect	Wireless network to service Melbourne and Mornington Peninsula.
	Advanced Cellular Technologies	Wireless network to service Melbourne and south-eastern Victoria.
	ntl Telecommunications	Plans network points of presence as part of a backbone in Albury-Wodonga and Mildura.
NSW	Soul Pattinson	Interconnection to Brisbane-Sydney backbone from northern NSW centres such as Newcastle, Taree, Port Macquarie, Coffs Harbour, Lismore and Tamworth.
	SouthTel	Plans to deploy a fibre optic backbone from Sydney to South Coast, with services to Bega, Eden and other centres.
	ntl Telecommunications	Plans points of presence in towns such as Tamworth, Dubbo and Griffith as part of backbone network.

^a Includes organisations that have made announcements about new network deployments but that have not yet been granted a carrier licence.

(Continued next page)

Table 16.3 (Continued)

Area	Operator	Network details (including planned deployments)
Queensland	Soul Pattinson	Interconnection to Brisbane-Sydney backbone from SE Queensland centres such as Tweed Heads and Gold Coast.
	ntl Telecommunications	Plans points of presence in regional towns such as Toowoomba as part of backbone network.
South Australia	Agile	Wireless-based network to service rural areas.
Western Australia	Chime	Wireless network to service regional and remote centres.
	Swiftel	Plans wireless network to service rural areas such as Kalgoorlie, Geraldton, Albany, Karratha and Port Hedland.
	Netcare Bush Telegraph	Microwave rollout in rural and regional areas. Plans services to regional areas in WA and the NT, including Broome, Alice Springs, Derby, Darwin, Geraldton, Port Headland, Karatha and Katherine.
Tasmania	ntl Telecommunications	Plans points of presence in Tasmania as part of backbone network stretching from Cairns to Hobart.

Sources: Carriers' websites, carriers' Industry Development Plans (<http://www.dcita.gov.au>), *exchange* (various issues).

Among the individual states, Western Australia in particular has attracted several new providers who intend to deliver broadband services to rural and regional areas. When allowance is made for the growing number of network operators planning to provide *national* coverage as well, there will be an expanding range of infrastructure providers to deliver services to regional areas in all states.

16.5 Should competition regulation take account of regional differences in competition?

Market definitions used by the ACCC in the declaration process

Some participants suggested that the ACCC should give greater emphasis to the geographical dimension of the relevant market in its consideration of the declaration of services. For example, the Northern Territory Government stated that:

The conditions in remote areas are sufficiently different from the rest of the telecommunications environment to warrant the consideration of a separate market defined primarily on geographical or locational aspects (sub. 22, p. 11).

AAPT also argued that a telecommunications market should be able to be defined in geographic terms where appropriate and stated that:

AAPT suggests Part XIC be amended to insert a definition of ‘market’ which expressly recognises regional markets ... (sub. 58, p. 3).

On the other hand, the IPA argued that regional considerations can already be taken into account under the current regime:

Regional competition policies ... can already be applied if the ACCC defines the relevant market sufficiently narrowly, which it has not been reluctant to do (sub. 48, p. 2).

What approach does the ACCC use in defining markets?

In considering how the declaration of particular services might promote the long-term interests of end-users, the ACCC is required to have regard to whether declaration is likely to promote competition in markets for particular services (s. 152AB(2)(c) of Part XIC of the Trade Practices Act (TPA)). A definition of the term ‘market’ is provided in section 4E of the TPA and subsequent decisions by the Trade Practices Tribunal (now the Australian Competition Tribunal) and High Court have further clarified the concept.

But in identifying relevant markets, Part XIC of the TPA does not require the ACCC to take a definitive stance on how a market is defined. The approach used by the ACCC has involved assessing markets in terms of four dimensions — product, geography, function and time. A detailed discussion of the market definition principles is given in ACCC (1999a). In relation to the geographic dimension, the ACCC (1999a, p. 33) has described its approach as follows:

Delineation of the relevant geographic market (or markets) involves the identification of the area or areas over which the carrier or carriage service provider and its rivals currently supply, or could supply, the relevant product and to which consumers can practically turn.

Some examples of the ACCC’s analysis of the geographic dimension of markets in relation to service declaration are reported in box 16.3.

The ACCC (1999a, p. 34) has also noted that substitutability tests tend to be of limited relevance when defining the geographic dimension of telecommunications markets. For example:

... a local call in one regional city is unlikely to be substitutable for one made in another capital city. Accordingly, in delineating the geographic dimension of telecommunications markets, the [ACCC] looks to factors such as the area over which major suppliers operate to ensure that it describes the relevant arena of competition.

Box 16.3 Selected examples of the ACCC's assessment of the geographic dimension of markets**Unconditioned local loop**

The demand [from access seekers] for the unconditioned local loop service in central business districts, inner city and suburban areas, and in regional (country) town locations suggests that the market should be treated as a national market. On the other hand, the roll out of additional customer access infrastructure by new entrants and existing players in particular locations (notably central business district areas) suggests that the features affecting competition in these locations are different from those in other areas. There is a risk that these features may be overlooked if the market were treated as national. The [ACCC] did not, however, consider the extent of roll out to be of sufficient scale to warrant the identification of separate geographic markets at this stage (1999c, p. 36).

Local and long distance telephony

The Telstra fixed [PSTN] extends nation-wide and it uses this network to supply services to end-users. The networks of Telstra's major competitors (Cable & Wireless Optus and AAPT) are also located in various parts of Australia. They use these networks and inputs purchased from other carriers to supply services to end-users nationally. Moreover, both local and long distance telephony services supplied by Telstra, Cable & Wireless Optus and AAPT tend to be priced on a national basis, rather than on a regional or State basis. ... In the [ACCC's] view, the identification of business and residential segments within the local and long distance markets adequately captures any competitive differences and, accordingly, it is not necessary to delineate separate geographic markets (1999c, pp. 41–42).

Data markets

The [leased line services market] is a national market including ISDN and frame relay services (1998a, p. 15).

The [ACCC] considers the following geographic markets exist in the provision of transmission capacity greater than 2 Mbps: inter-capital; regional to capital; intra-regional; metropolitan; and CBD (1998a, p. 33).

Mobile services

The [ACCC] considers that the geographic dimension of the market in which mobile calls are supplied to be a national one (2000g, p. 24).

Are some services declared when they should not be?

Where a market is defined as national in scope for the purpose of the declaration process, this implies the market is inclusive of all geographic segments — such as CBDs, inner city and suburban areas and regional and rural locations. But this can mean that some services might be declared when they should not be. For example, in relation to the local loop decision (box 16.3), while new customer access networks have been rolled out in CBDs, the ACCC considered at the time that the extent of the rollout was not sufficient to warrant identifying CBDs as a separate

geographic market. Had the ACCC thought otherwise, then the relevant market might have been defined as ‘non-CBD’ geographic segments.

Since the release of its report on *Local telecommunications services* (1999c), the ACCC has released two discussion papers examining the possible exemption of Telstra and other carriers from the standard access obligations applying to local carriage services (ACCC 2000h, 2001m). It has announced a draft decision to remove current access regulation on Telstra and other carriers supplying wholesale calls in the CBDs of Sydney, Melbourne, Brisbane, Adelaide and Perth (ACCC 2001k). The question of exemption in regard to other areas, including the regional centres of Newcastle, Wollongong and Geelong is still under consideration.

Are some services not declared when they should be?

In other instances, defining a market as national in scope might result in some services *not* being declared when perhaps they should be. One example raised by the Northern Territory Government (sub. 22) and AAPT (sub. 58) in this category related to the mobile services market, and in particular mobile roaming. Inter-carrier roaming enables the customers of one mobile network to make and receive calls in areas covered by the networks of other providers.

As the Northern Territory Government stated:

... inter-carrier roaming is not currently mandated for any mobile services presumably because the robustness of the mobile market as a whole indicates that this is not warranted ... This only holds true when considered at a national level and assumes that demand is uniformly dense enough to accommodate duplication of infrastructure (sub. 22, p. 11)

AAPT stated that:

In the absence of roaming agreements in some regional areas people ... cannot use their mobile phones ... If the roaming service could be analysed within a particular regional market, rather than on a national basis, the ACCC may be more inclined to find that declaration is in the Long-Term Interests of End-Users (sub. 58, p. 12).

The ACCC (1998b) held an inquiry into declaration of inter-carrier roaming and decided against declaration, largely because it considered that:

- declaration may have adverse effects on investment incentives for the three main incumbents, in so far as they compete on the basis of network coverage; and
- it was likely that roaming agreements would be commercially negotiated between new entrants and the three incumbent mobile carriers.

On the second point, since the ACCC inquiry two new entrants have entered into commercial roaming agreements — the former One.Tel had a national GSM roaming agreement with Telstra, and Hutchison has a CDMA roaming agreement also with Telstra (sub. 15, p. 33). However, AAPT, which is deploying a CDMA mobile network, stated that:

... failure of commercial negotiations with Telstra with respect to access to CDMA roaming in regional areas has contributed to the delays in the roll out of AAPT's CDMA network (sub. 58, p. 14).

In its inquiry, the ACCC (1998b, p. 13) also stated that:

The [ACCC] considers it should not declare services enabling roaming where existing market conditions already provide for the competitive supply of mobile services.

In the period since the ACCC inquiry, there have been developments in the mobile services market, influencing the state of competition in regional markets. For example:

- Telstra has established a CDMA mobile network, which is the largest single land-based cellular network in Australia. At end June 2000, it had a coverage of 97 per cent of the Australian population and 12.5 per cent of the Australian land mass — an area 79 per cent larger than previously covered by the AMPS network and an extra geographic reach of 500 000 people (Besley 2000, p. 120).
- On 1 February 2001, the Government announced funding of \$5 million through the Commonwealth's Networking the Nation (NtN) program for 25 terrestrial mobile telephony projects in NSW, Queensland, Tasmania and WA. These projects are expected to give mobile access to an additional 30 000 people and increase the CDMA coverage to more than 14 per cent of the Australian land mass (more than 97 per cent of the Australian population) (Alston 2001a).
- There are three satellite mobile services (operated by Telstra, Cable & Wireless Optus and Vodafone) offering 100 per cent coverage of the Australian population and land mass. Vodafone's service is supplied using Globalstar satellites and is integrated with its GSM network — so that calls are carried by satellite only when the customer is outside Vodafone's terrestrial coverage area.
- On 17 January 2001, the Government announced two programs to boost mobile phone coverage in WA. One is the Western Australian Satellite Mobile Phone program (funded from a grant under the NtN program) to partially subsidise satellite mobile phone handsets, particularly for residents in remote regions where terrestrial mobile services are not feasible. The other program (WirelessSWest) involves completing CDMA mobile coverage in the south west of WA, funded by equal contributions of \$7 million from the Commonwealth Government, WA State Government and Telstra (Alston and Campbell 2001).

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- On 28 February 2001, the Government announced Vodafone as the preferred tenderer for a \$25 million contract to provide continuous GSM mobile phone coverage along eleven of Australia's major highways in Queensland, NSW, Victoria, SA, Tasmania and the ACT. The Vodafone offer includes roaming to base stations along the eleven highways so that all GSM users will have continuous coverage along those highways (Alston 2001c).

Against the background of developments such as these, the Commission is of the view that there is unlikely to be a strong case for the declaration of mobile roaming in regional areas.

Conclusion on market definitions

Where effective competition is lacking in *all* geographic segments of a market, then it seems appropriate to define the market as national in scope for the purposes of the declaration process. However, if effective competition is lacking in only *some* geographic markets, and the tests for declaration are satisfied in these markets, then it seems appropriate to declare services in relation to particular geographic markets.

In the Commission's view, while Part XIC of the TPA does not prescribe how markets should be defined, the ACCC has the ability to take into account the four main dimensions of a market — product, function, geography and time. Accordingly, the Commission sees no need for changes to Part XIC of the TPA to recognise regional markets explicitly.

Other aspects of the declaration process

Several participants made other suggestions in relation to access, declaration and other Part XIC processes regarding services in regional Australia.

Declaring regional services to encourage service-based competition?

The Tasmanian Government argued for an open access framework in regional areas. In its view, because much telecommunications infrastructure in a small market such as Tasmania forms a natural monopoly, the viability of competition depends on open access to infrastructure and facilities. It stated that:

The ACCC's narrow view that the critical aspects of each telecommunications market are essentially uniform across Australian has lessened the impact that declarations could have on the market ... A broad framework for the declaration of services or other mechanisms for ensuring open access to infrastructure is essential if the ACCC is to be

able to take into account factors that may be critical to each regional market (sub. 36, pp. 4–5).

Macquarie Corporate Telecommunications was also in favour of opening up access to facilities in poorly served areas to allow service-based competition to develop and avoid inefficient duplication of infrastructure. It suggested introducing a fast track declaration process for regional services and establishing specific powers for the ACCC in relation to access to regional facilities:

Implementation of a fast track declaration process for facilities and infrastructure in poorly serviced areas would assist in opening up access and reducing the inherent delays and costs currently encountered by parties seeking access ... The ACCC could rely on powers to prescribe terms and conditions for access to declared facilities in poorly served markets and also to determine priority of access to those facilities. This power would be facilitated by the fast track declaration process (sub. 34, pp. 7–8).

Declaring regional services might discourage facilities-based competition?

Other participants were concerned that the prospect of future declaration or required access under existing declaration would deter infrastructure investment in remote areas. For example, the Northern Territory Government stated that:

Carriers that recognise the potential of marginal markets should be given adequate protection of what might be slender profits to maintain their interest in investing in that area. It is believed that some carriers might be prepared to develop local, remote area telecommunications if they could be assured of sole access to that market for a reasonable period of time (sub. 22, p. 10).

Similarly, the IPA considered that declaration of regional facilities would be likely to have an adverse effect on investment in regional areas. The IPA stated that:

... there are obviously bottleneck facilities in the regions by virtue of the fact that, despite all the interventions by government to encourage competition, it has not been worthwhile any operator duplicating the Telstra local loop ... The use of newly released wireless bandwidth may, in time, provide an alternative local network to the more densely populated parts of the regions but, in all areas, this will be dependent on the generation of profit. The threat of declaration of such new technologies would be likely to be sufficient to guarantee their abortion (sub. 48, pp. 2–3).

But on the other hand, some participants suggested that access to facilities in regional Australia can actually encourage investment in downstream markets. For example, AAPT commented that:

In AAPT's experience, access to bottleneck facilities has assisted it in the roll-out of network extensions. The declaration of the DDAS [Digital Data Access Service] and ISDN [Integrated Services Digital Network] services has been a factor which has enabled AAPT to roll-out network extensions into regional Australia. AAPT has had to

resort to arbitration in relation to the DDAS service in order to cost effectively provide access for its roll-out of the VicOne network in Victoria (sub. 58, pp. 13–14).

Also, ATUG commented that:

ATUG has a view that the concept of ‘lack of incentives to invest’, raised in relation to the provision of bottleneck services which have been or are likely to be declared, is simply a ploy or scare tactic to push up access prices (sub. 52, p. 4).

Preference for current declaration and access regime?

PowerTel argued that because in some instances declaring a service in a regional area may assist investment whereas in other circumstances declaration may harm investment, it favoured the current flexibility of Part XIC:

PowerTel believes that Part XIC already provides an appropriate mechanism for dealing with differing levels of competition across Australia. PowerTel would not, however, object to amendments to Part XIC to make it even clearer that regional variations (in competition and other relevant matters) are factors which the ACCC may take into account in relation to the declaration and exemption processes (sub. 53, p. 1).

Similarly, AAPT concluded:

AAPT submits that the competition and access regimes in Part XIB and Part XIC of the TPA are ... sufficiently adaptable to competition problems in regional, rural and remote markets (sub. 58, p. 2).

Austar thought it neither necessary nor appropriate to regulate competition in regional areas differently from other areas:

Investments in new technology, and particularly wireless technology, are threatened if access is widely granted out of a desire to promote access based competition. Our view is that continued investment in facilities would be best achieved under the current regulatory regime (sub. 60, p. 3).

The current regulatory regime allows the ACCC, in deciding whether to declare a service, to weigh up the implications of declaration for facilities-based and service-based competition. Combined with the existing scope for the ACCC to define markets in terms of geographic segments where relevant, the Commission considers that the current declaration and access regime has sufficient flexibility to take account of regional considerations. The Commission has also floated the option of access ‘holidays’ for marginal contestable investments — which may well be applicable to some regional investments (chapter 9).

Other participants' suggestions to increase regional competition

Macquarie Corporate Telecommunications suggested other ways in which the regulatory regime could be changed to enhance competition in regional areas, including (sub. 34, pp. 7–8):

- having the facilitation of competition in poorly served telecommunications markets as an additional objective in Part XI of the TPA. This would require the ACCC to apply Parts XIB and XIC in a manner favourable to engendering competition in those markets;
- allowing the ACCC to set absolute service standards for wholesale products in poorly served areas, thereby giving it power to set minimum service standards for bottlenecks on a non discriminatory basis; and
- appointing an ACCC Regional Communications Commissioner to deal with regional dimensions of telecommunications competition policy — including declaration of infrastructure and matters relating to Parts XIB and XIC.

This latter suggestion was supported by the Communications Law Centre, at least on a trial basis (sub. DR116, p. 13). Other participants who commented on the last suggestion mainly considered it would introduce further complexities. Industry analyst Paul Budde stated that:

... [the] suggestion for the appointment of a regional commissioner is laudable, but unless this commissioner is invested with more powers than the ACCC the result will simply be the addition of another regulatory layer into the system and further delays to the process (sub. 49, p. 2).

According to the IPA, the appointment of a Commissioner to the ACCC specifically to deal with regional issues:

.... seems to us a waste of public money and likely to create yet another layer of intervention and potential rigidity in the telecommunications market (sub. 48, p. 2).

AAPT (sub. 58, p. 14) thought that the ACCC was not the appropriate forum for the creation and funding of a Regional Commissioner but rather that DCITA should more properly have responsibility for monitoring and developing policy initiatives to address regional telecommunications issues.

The Commission is sceptical of the need for a Regional Commissioner given the existing capacity of the TPA to deal with issues of market power and access, wherever they arise. There is an additional risk that a special focus on regional competition might lead to excessively narrow market definitions and to interventions when none are necessary. As emphasised in chapters 9 and 11, there is a risk that overburdening incipient facility owners with regulation may reduce investment incentives, with adverse effects on regional consumers.

17 Pay TV and regional telecommunications

Box 17.1 Key messages

The Commission has been asked to:

... specifically consider the implications of current pay television programming arrangements for the development of telecommunications competition in regional Australia and consider whether any additional regulatory measures are needed to facilitate access to pay television programming.

There is limited competition in the pay TV industry, which is dominated by Foxtel and Optus Television in metropolitan areas, and Austar in regional Australia. Much premium pay TV content is held under exclusive contracts by Foxtel or is in the hands of program suppliers related to Foxtel. In addition, both Foxtel and Optus Television have ownership links with the two largest telephone companies in Australia.

New regional delivery systems, particularly cable, through the bundling of pay TV, telephone and broadband services have the potential to increase competition in both the pay TV and telecommunications markets. Behaviour in one of the bundled services can influence the viability, or delay construction, of these new delivery systems. Owners and planners of new networks claim that they are having considerable difficulties in obtaining access to pay TV content and that control of pay TV content reinforces market power in the pay TV market and limits the development of new delivery systems in regional areas.

The Commission considers that the development of competition in the pay TV market and in some telecommunications markets is being hindered by the control of pay TV content.

Current regulatory arrangements cannot sufficiently address this problem. However, the options for additional regulation considered in this report would involve a high level of intervention across the pay TV industry. There is insufficient evidence that the problem warrants this level of intervention or that such regulation would efficiently target the particular problem being faced by regional networks.

However, the Commission does have concerns about the potential anti-competitive effects of the control of pay TV content, and thus it recommends that the ACCC be required to:

- report publicly and annually to the Government on the state of competition in the pay TV and related telecommunications markets; and
- investigate and report on instances where it is aware that proposed or new networks are having difficulty accessing content or pay TV services.

In addition, the Government should signal a clear intent to legislate if there is evidence from the ACCC's reports of a sustained threat to effective competition in either the pay TV or a telecommunications market as a result of the control of pay TV content.

17.1 Introduction

In January 2001, the Commission received two further terms of reference for this inquiry. One related to pay TV programming. It asked the Commission to:

... specifically consider the implications of current pay television programming arrangements for the development of telecommunications competition in regional Australia, and consider whether any additional regulatory measures are needed to facilitate access to pay television programming.

This addition to the terms of reference resulted from recommendations in the Telecommunications Service Inquiry (the Besley inquiry). It arose partly because of a submission to that inquiry by the ACCC, which expressed concern that exclusive contracts for pay TV programming can limit facilities-based telecommunications competition, particularly in regional areas:

In regional and rural Australia, aspiring cable service providers have been frustrated in their investment proposals by limited availability or non availability of quality pay TV programming. In the absence of a pay TV revenue stream, the capital investment in cable which could provide new and competitive telecommunications products to non metropolitan Australia is unlikely to be forthcoming (ACCC 2000o, pt. 2, paper 3, p. 2).

There are a number of factors that influence the development of competition in the pay TV market and in relation to pay TV and telecommunications delivery platforms. Access to pay TV content is particularly important for cable networks because of economies of scope available through bundling with telephony and internet. For the pay TV market itself, anti-siphoning regulations influence its competitiveness against the free to air industry, and thus reduces the incentive to invest in delivery platforms. Further, regulations governing digital TV appear to have significantly reduced the scope for the delivery of pay TV over the broadcasting services spectrum.

This chapter looks at the links between program suppliers, pay TV operators, delivery platforms, and telecommunications companies, and the influence that these links may be having on competitive behaviour in both the pay TV market and certain telecommunications markets. In particular, the difficulties that new infrastructure developers appear to face in obtaining desired programming content are examined. In addition, it looks at the impact of anti-siphoning regulations and recent decisions on the digitisation of broadcasting services.

17.2 Ownership links and other key relationships

The pay TV operators

Pay TV in Australia is dominated by three operators: Foxtel (744 000 subscribers), Austar (432 000 subscribers) and Optus Television (250 000 subscribers) (chapter 4 and appendix H). Together they account for some 99 per cent of pay TV subscribers in Australia.¹

Foxtel and Optus Television supply much of Sydney, Melbourne and Brisbane in direct competition with each other via cable (chapter 4). Foxtel services some other urban areas by cable, and provides satellite coverage to non-cabled areas in most capital cities, some regional centres and parts of rural Western Australia.

Austar, the second largest pay TV operator, is by far the main supplier of pay TV to regional Australia. It is also the largest direct-to-home satellite provider in Australia, with 80 per cent of its subscribers serviced by satellite.

Three smaller pay TV operators provide services by cable or satellite.

- Neighborhood Cable (in Mildura and, shortly, Ballarat) provides a pay TV service over the cable network it owns and operates.
- Access 1, a broadband ISP, broadcasts a small number of pay TV channels by satellite to its customers' computers.
- TARBS provides mainly foreign language channels by satellite (and is seeking to distribute via Telstra's cable).

New cable networks now being rolled out in Canberra and Cooma are also expected to offer pay TV services in the future. PrimeStar Communications and EasyTV are expected to provide competing services over TransACT's open access cable network in Canberra in the second half of 2001. For the present, TransACT is itself broadcasting a small range of current affairs, foreign and parliamentary channels, while an independent company is providing video on demand services over the network.

The provision of pay TV services in Australia is currently not a profitable activity: none of the main pay TV operators has yet made a profit. The Commission understands that a significant factor in this is the high prices attached to long term contracts paid for premium content, negotiated when pay TV was being introduced

¹ The small number of pay TV companies in Australia may not be unexpected, given the small size of the market.

into Australia. However, Optus Television has had some success in renegotiating these contracts on more favourable terms and conditions.

The extent of geographical competition in the retail pay TV market

There is almost no competition between the two biggest providers, Foxtel and Austar, notwithstanding that both have satellite coverage of much of Australia. Broadly, Foxtel serves metropolitan markets while Austar serves regional Australia, and they broadcast many of the same channels. They compete only on the Gold Coast. Austar also broadcasts some of the major channels carried by Optus.

With respect to other operators:

- Optus Television competes with Foxtel in cities where both have cable networks;
- there is no geographical market in which the second and third providers, Austar and Optus Television, compete; and
- Neighborhood Cable competes with Austar in Mildura (and shortly in Ballarat).

The proposed new pay TV operators on the TransACT cable would provide competition for Foxtel in Canberra.

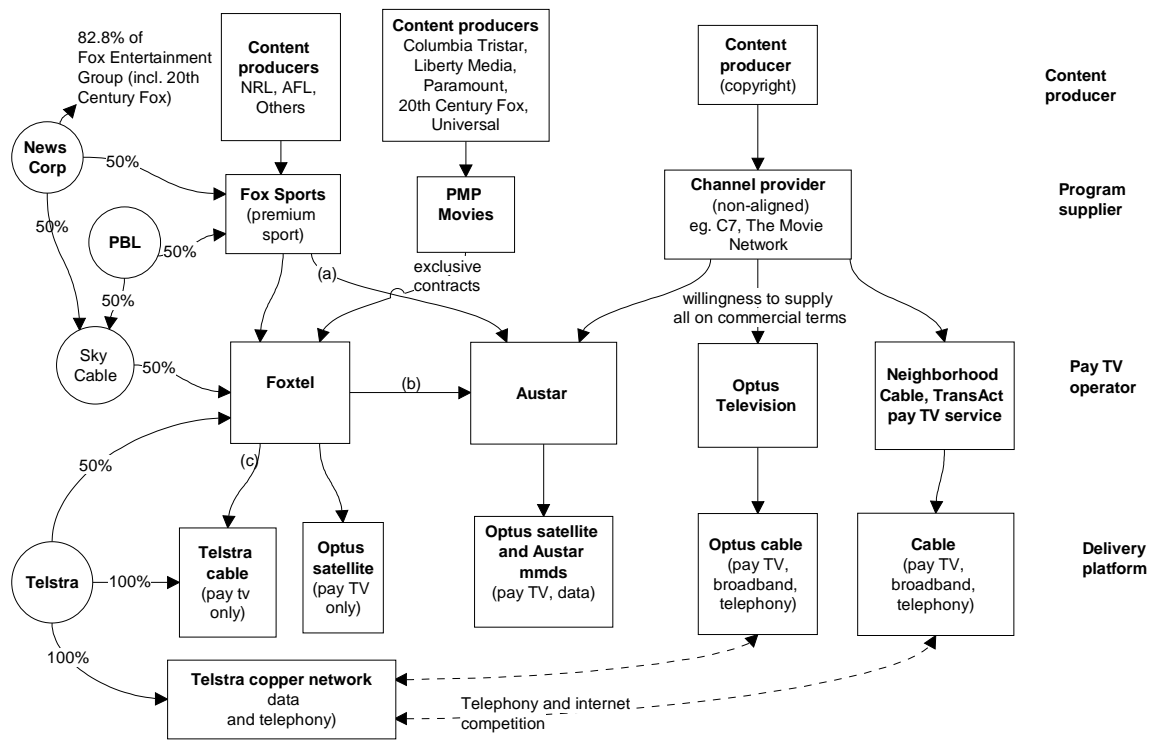
Links between pay TV operators and program suppliers, delivery platforms and telecommunications companies

Most pay TV operators have ownership links to the delivery platforms over which their services are provided to consumers. Some have links to program suppliers via common ownership and exclusive contracts, and some have links to telephone companies (figure 17.1). Foxtel is the most vertically integrated of the pay TV operators in Australia.

Links to program suppliers

It is a widely held view that ‘content is king’, and while the main Australian operators each offer over 30 channels, obtained from a variety of sources, the key drivers of a high volume pay TV business are recent release movies and premium local sport (further details are provided in appendix H).

Figure 17.1 Key vertical relationships in the Australian pay TV industry



^a Fox Sports and Fox Sports 2 also shown on Austar; the NRL is supplied to Optus via the Fox Sports channel NRL on Optus. ^b PMP movies sub-licensed by Foxtel to Austar and Neighborhood Cable. ^c The parties argued that they had an exclusive distribution agreement prior to declaration of analogue pay TV service over cable.

Note: Local distribution rights may be held directly by local pay TV operators.

Similar conclusions about the importance of key content have been reached in the US where debate over control of pay TV content led to regulation prohibiting certain exclusive contracts in 1992. Olsen and Spiwak (1995, p. 295) commented:

This conclusion is bolstered by a recent study which found that there was apparently an industry consensus that ‘the lack of more than one or two of the well-known networks such as ESPN, USA, CNN, and HBO would seriously handicap a multichannel competitor to an established cable system’ ... Accordingly, under certain conditions, vertical restraints that restrict a supplier’s right to deal with competitors of a dominant downstream firm can have the effect of raising rivals’ costs. Through such vertical relationships, a dominant firm can deter competitive entry and retain the power to raise prices or reduce quality in its output market.

In Australia, there are only two providers of a wide selection of recent release Hollywood movies.

- The Movie Network, whose channels were (prior to contracts being renegotiated in 1999) exclusive to Optus Television, but are now supplied non-exclusively. The channels are only broadcast by Optus Television and Austar.

-
- Premium Movie Partnership (PMP), whose two channels are exclusively licensed to Foxtel, which also holds the distribution rights. Foxtel sub-licenses these channels to Austar and Neighborhood Cable.

These two providers are each owned by consortia of major US film studios (appendix H).

There are two providers of premium sport in Australia.

- Fox Sports, a partnership between Publishing and Broadcasting Ltd (PBL) and News Ltd (which together also own 50 per cent of Foxtel), produces *Fox Sports* and *Fox Sports Two* (broadcast on Foxtel and Austar), and *NRL on Optus* (broadcast on Optus Television).
- Seven Cable Television (a subsidiary of the Seven Network) provides *C7 Sport* non-exclusively. It is broadcast by Optus Television, Austar, Neighborhood Cable and Access 1.²

Foxtel is owned by Telstra, PBL and News. PBL and News are joint owners of Fox Sports, the premier local sport provider.

Of the other pay TV operators:

- Austar sources key movies and sports content from Foxtel and Optus Television or their related program suppliers;
- Optus Television sources premium content from The Movie Network, Seven Cable Television and the NRL from Fox Sports; and
- the smaller pay TV companies have a limited range of premium content. For example, while Neighborhood Cable obtains two movie channels from Foxtel, other small operators do not provide either premium movie or sports channels (see appendix H).

In addition to limited geographical competition between the major pay TV companies, there is limited competition in the supply of premium content.

Links to delivery platforms and telecommunications companies

A particular issue for this part of the inquiry concerns the links between pay TV operators, delivery platforms and telecommunications networks (table 17.1), as some participants have said that the control of pay TV content has been used to influence competition in the other markets.

² However, from the 2002 season, C7 will no longer broadcast AFL (appendix H).

Table 17.1 Ownership links with delivery platforms and telecommunications companies

Selected pay TV operators

<i>Pay TV operator</i>	<i>Ownership links to delivery platforms</i>	<i>Links to telecommunications markets</i>
Foxtel	Telstra, Foxtel's half owner, owns the cable over which Foxtel services most of its customers. ^{a, b}	Telstra provides telephony and data services (on other platforms) in direct competition with the services provided (or to be provided) over current and planned regional cable networks.
Austar	Austar broadcasts pay TV via the Optus/Austar joint venture on the Optus satellite, direct to customers and to its own MMDS delivery system. It also distributes pay TV over its own cable in Darwin.	Austar also uses its delivery platforms for the provision of internet and other data services and is a reseller of telephony over the Telstra network.
Optus Television	Distributes only via the cable owned by its parent company — Cable & Wireless Optus.	Cable & Wireless Optus provides telephone and data services over its cable (but not in competition with the new regional cable networks), and resells telephony over the Telstra network elsewhere in Australia.
Neighborhood Cable	Distributes only via its own cable.	Neighborhood Cable operates its own telephony and broadband services over its cable.
TransACT	Distributes only via its own cable.	TransACT provides its own telephony services. Internet services are provided by third party suppliers.

^a Foxtel is the only pay TV operator on this cable, an arrangement that was intended to be exclusive. However, the ACCC's declaration of analogue subscription TV services over line links means that others may now seek to distribute via the Telstra cable. The Seven Network and TARBS have sought to do so, but have not yet been successful. ^b Foxtel's satellite distribution is via the Optus/Austar joint venture on the Optus satellite.

Two of the major pay TV operators, Foxtel and Optus Television, are owned or partly owned by major telecommunications companies which also own the delivery platforms used for their related pay TV services:

- Foxtel is half owned by Telstra, which also owns the cable that Foxtel uses to reach most of its customers; and
- Optus Television is wholly owned by Cable & Wireless Optus, which owns the only delivery platform (the Optus cable) that Optus Television uses.

Austar delivers pay TV via the Optus B3 satellite, over its own MMDS network, and over a cable system in Darwin. In a joint venture partnership with Optus, it provides pay TV satellite carriage services to itself and to Foxtel. Austar also provides data services over the network it uses, and resells telephony.

Neighborhood Cable and TransACT provide telephony services over their cables, in the absence of other parties providing these services on an open access basis.

The following sections look at behaviour in the pay TV market and whether this calls for action by government.

17.3 Access to pay TV content

Introduction

Pay TV content is said to be critical to the development of new infrastructure networks. The business cases of these networks are typically established with three broad streams of revenue in mind — telephony, pay TV and other broadband services — although the relative importance of each may vary considerably. Economies of scope, particularly for cable networks, mean that the additional per subscriber costs of each service is smaller if a network offers them jointly, as compared to their provision through separate networks.³

Networks can be vulnerable to foreclosure through control of any one significant service. For example, an inability to access sufficient video/TV/film entertainment content could undermine the viability of a network, particularly where it was expected to rely on revenue streams from households. In this way, lack of key content could delay or prevent the development of cable networks, and therefore of facilities-based competition in the telephony, broadband and pay TV markets.

Cable & Wireless Optus attributed the greater penetration of pay TV and other services in the UK and the US, together with the greater expansion of digitisation in Europe, in part to regulations precluding dominant pay TV operators from holding exclusive contracts over content. It also attributed the low level of infrastructure investment in Australia, and the low take-up of pay TV services relative to the UK, in part to the adverse effects of content control by Foxtel, and the lack of action on this matter by government (sub. DR72, p. 44).

New and potential entrants seeking to establish cable networks, particularly in regional Australia, have said that they are facing considerable difficulties in accessing premium pay TV content.

³ For examples of the extent of economies of scope see Cave and Williamson 1996 and ACCC 1997e, p. 2.

With the exception of some Foxtel channels sub-licensed to Neighborhood Cable for its Mildura network, the regional cable companies have not been able to negotiate successfully for premium content (box 17.2).

While new network operators can obtain a large range of ‘non-premium’ channels from Australian and overseas sources, much of the key content — which, it is widely agreed, drives pay TV — is controlled by existing pay TV interests through common ownership links and exclusive contracts.

Box 17.2 Participants’ experience in seeking pay TV content

SaskTel said that it:

... has had discussions with Optus and Foxtel regarding SaskTel acquiring pay television content for aggregation and distribution by a new entrant in the Hunter region. While Optus has indicated that it would like to assist SaskTel in acquiring content, Foxtel has not offered any assistance in this regard. SaskTel still does not have access to content from either pay television provider (sub. DR65, p. 13).

The ACCC noted that:

For some time, [Neighborhood Cable] has been trying to access quality programming from vertically integrated program suppliers in Australia. It has had only limited and short-term success (2000, pt. 2, p. 4).

Neighborhood Cable, while now licensed to show two channels from Foxtel on its Mildura network, expressed concern that new regional pay TV operators face significant difficulties in obtaining a broad range of premium content:

... under the present regulatory regime, unless you are Foxtel or Austar (non-competitors) one quickly finds that most ... programming is exclusively licensed and is thus quarantined from any other Australian companies for carriage (2000, p. 4).

In the case of sports broadcasting, Cable & Wireless Optus said that it:

... has for a considerable period of time attempted, unsuccessfully, to license the FoxSports channels for broadcast on the CWO network ... key sports ... are exclusively licensed to FoxSports and therefore denied to CWO (sub. 54, p. 11).

... has been able to negotiate with Foxtel to carry the NRL for the next 12 months; however there is no guaranteed future rights of supply of the NRL to Optus Television on non-discriminatory terms (sub. 54, p. 13).

... the present agreement between Foxtel and CWO is subject to a number of packaging conditions that CWO would not have otherwise agreed to, but for Foxtel’s exclusive programming arrangements (sub. 54, p. 13).

In respect of premium movie content, Cable & Wireless Optus said it:

... has sought unsuccessfully to negotiate the carriage of [Showtime and Encore] on its network. Foxtel’s exclusivity arrangements with these movie studios prevent them from supplying their output directly to Optus Television (sub. 54, p. 12).

Difficulties in accessing content

It is often hard to separate normal commercial practice from anti-competitive conduct. The inability of new networks to obtain premium content might reflect commercial considerations, such as the costs of channel preparation and distribution (and perhaps minimum subscriber requirements) or other transaction costs.

At the public hearings, Austar said that ‘pay TV is an expensive business’ and that there is something of a ‘field of dreams’ approach to new networks — ‘build it and they will come’:

Build it and the programming will just automatically land on your network and you don’t have to pay to get it there ... a lot of these smaller operators just simply don’t understand the economics of operating a pay TV business. It is expensive (trans., p. 525).

It added that:

... we think a number of the other operators have been looking for a ‘free ride’(sub. DR79, p. 3).

There are a number of strategies that a new network can follow in sourcing pay TV content. They can:

- persuade an existing pay TV operator to distribute its own branded retail service on the new network, with the pay TV operator marketing and selling direct to customers (or for the network owner to act as an agent for an existing pay TV company, with the network owner selling to the customer);
- set up their own pay TV service and obtain individual channels from a range of sources by:
 - sub-licensing channels from the licensee (generally an existing pay TV company); or
 - purchasing channels direct from other program suppliers in Australia or overseas.⁴

For the smaller regional networks, the preferred approach appears to be one of accessing the pay TV services or key channels from the service of existing pay TV

⁴ The Commission uses the term ‘sub-licensing’ where channels are sourced from another pay TV company (such as Foxtel) which has the sub-licensing rights (and which is also retailing those same channels to its own customers). This is different to sourcing channels from a program supplier (such as Fox Sports, C7, Disney or CNN) which is not a pay TV company. Hence, the provision by Foxtel of channels to Neighborhood Cable is described as sub-licensing, but the provision of *NRL on Optus* from Fox Sports to Optus is described as sourcing direct from a program supplier.

companies. Purchasing channels direct from program suppliers appears to impose additional fixed costs which would be difficult to offset against their small subscriber base and thus may represent a significant barrier to them. As noted earlier, another difficulty arises from the existence of exclusive distribution arrangements for some key content. These issues are discussed below.

Accessing direct from program suppliers

For some channels, typically premium channels, there are fixed costs involved if a network owner wishes to source direct from a program supplier (box 17.3).

Box 17.3 The cost of sourcing content direct from program suppliers

The Commission does not have extensive information on the cost of sourcing content direct from program suppliers, much of which is commercial-in-confidence. But some things are clear.

The costs of obtaining channels can vary significantly. The main components of cost appear to be payments to the channel provider for content (typically on a per subscriber basis, with minimum subscriber guarantees); payments for any channel preparation (if needed); and the cost of accessing the channel feed. Some channels can be obtained for not much more than the cost of accessing the channel feed, but for the premium channels, the total cost can be substantial.

Where the pay TV operator is able to take channels 'as is' off a satellite feed, there will be no need to incur any costs of special channel preparation. But if needed, these alone can be of the order of one hundred thousand dollars or so per channel per year, with additional up-front costs of perhaps a million dollars or so to prepare more tailor-made channels, according to the needs of the pay TV company.

A significant feature of channel costs is the widespread practice of program providers requiring minimum subscriber guarantees (MSGs). These are the minimum numbers of customers that the pay TV company must pay for, irrespective of the number of customers it has.

MSGs however, can vary considerably. There are very high MSGs for the premium recent release movie channels. MSGs for second tier content are lower. Other channels may have none.

It has been widely reported that MSG deals entered into in the early days of pay TV in Australia continue to have significant cost implications for the industry. Paul Budde noted that, prior to renegotiating its content contracts in 1999, Optus, which currently has about 200 000 subscribers:

... was contracted to pay \$10 a month per subscriber for a minimum 750 000 subscribers. The new deal resulted in a 40% reduction in these payments (Budde 2001a, p. 1).

MSGs are typically higher if there is an exclusive supply arrangement (where the pay TV company may well have the rights to sub-license to other pay TV companies).

This is not to say that small pay TV operators cannot access channels, even a large number of channels. Much content can be obtained on an ‘as is’ basis, sometimes at relatively low cost, but these are typically not the channels that, it is agreed, a pay TV operator must have if it wishes to be attractive to a large audience.

As a report commissioned by Optus observed:

Most of the contracts for the provision of programming include fixed annual charges or minimum subscriber guarantee obligations that require payments of guaranteed amounts regardless of actual subscriber numbers. The effect of these obligations has been to create fixed programming costs. Under revised arrangements adopted in August 1999 provision was made for content to be supplied on a non-exclusive basis and the minimum subscriber guarantees have been reduced. However, they still represent the most significant cost of the pay TV business (Grant Samuel & Associates 2001, p. 41).

The importance of minimum subscriber guarantees (MSGs) appears to vary widely. Many channels do not have MSGs associated with them. They are more common for more popular channels, and very high MSGs are typically associated with exclusive distribution arrangements.

Exclusive distribution arrangements

An additional hurdle for new networks is that much of the premium content is tied up by Foxtel through exclusive contracts or with vertically integrated company structures, in particular with PMP and Fox Sports (appendix H). The behaviour of related companies can be difficult to untangle. At the hearings Fox Sports said:

If there was another operator [other than Foxtel] who came to us with a particular model, that would be something — as I say — if it made economic sense to us on a medium to long-term basis we'd look at it (trans., p. 442).

However, the Financial Review reported:

At the same time, News and PBL have also been talking of dissolving ‘non-compete’ conditions in the Foxtel partnership that prevent them from setting up rival pay-TV services on competing networks. This would allow them to sell Fox Sports to, say, a rival such as Optus ... (24 July 2001, p. 56).

In this regard, the Commission notes that the Fox Sports channels are only available on Foxtel and Austar and have not been made available to any other pay TV companies. (A separate channel covering NRL is supplied to Optus Television.)

In areas where the existing pay TV operator already provides a service (such as in Canberra, and in the potential SaskTel service area in Newcastle), there may be some reluctance to sub-license key channels to a competing pay TV operator. However, this differs from the situation where the pay TV company would be

distributing itself over a new (perhaps open access) network, which provides the potential to increase its customer numbers.

In areas where a pay TV operator does not provide a service, sub-licensing would be expected, and does occur, notably from Foxtel and Optus Television to Austar, and from Foxtel to Neighborhood Cable (for two channels for its Mildura network).

However, contracts with program suppliers may contain limits on the ability of pay TV operators to distribute on new regional cable networks. For example, an otherwise non-exclusive contract may preclude a pay TV company from sub-licensing to another pay TV company, without first seeking to renegotiate the contract. The program supplier may prefer to be able to negotiate directly with the other pay TV company. In addition, contracts may be platform-specific, that is, for distribution only over a particular platform or platforms owned by the pay TV company. This would require these contracts to be renegotiated before being able to use open access networks owned by unrelated companies.

For the larger operators, Optus and Austar, and smaller players who may have wider ambitions, the fixed costs associated with accessing content direct from program suppliers may be worth bearing. But in order to be able to offer 'full service' pay TV (that is, one that offers premium movie and sports channels) to increase the attractiveness of connection to their networks, small cable owners are likely to depend upon either obtaining individual channels from an existing pay TV company, or persuading an existing pay TV company to operate a full retail service on their network.

Accessing content from existing pay TV operators

New regional network owners are having little success in obtaining content from existing pay TV operators.

Possible influences on the decisions of the pay TV operators include any contractual limitations imposed by content providers⁵ (some of which may involve 'rule of thumb' decision-making for small markets such as Australia), switching costs⁶ (if any) and their managements' preoccupation with the key metropolitan markets. Indeed, the regional cables can account for no more than a tiny percentage of the

⁵ For example, requirements that the distribution only over networks owned by the pay TV company.

⁶ Some delivery platforms distribute via proprietary hardware, such as set top boxes, which could be used to increase switching costs and 'lock in' customers. To the extent that this is significant, pay TV operators may be reluctant to translate to an open access network. For a discussion of the impact of switching costs, see Klemperer 1987, 1995.

total Australian market for the foreseeable future. The new operators are small (for example, Neighborhood Cable), have barely started their rollouts (for example, in Canberra and Cooma), or are only on the drawing board (for example, SaskTel). And experience has shown how networks can fail or how plans can come to nothing.

Austar confirmed that there are contractual arrangements which may preclude some pay TV operators from distributing their pay TV product over alternative delivery platforms:

The licensing agreements that AUSTAR holds for the channels it provides generally specify a licence area in which it may show the programming, and also the types of technology by which the content may be broadcast under the licence (sub. DR110, p. 3).

The above considerations may cause pay TV operators to be cautious in committing to a new regional network, particularly where the cable is not yet — or not fully — rolled out. However, where the cable is operating, it may be presumed that, were the cable network provider to fail, it would be purchased by another operator, which in all likelihood would continue to seek to have pay TV services provided.

Indeed, other things being equal, it would be reasonable to expect that an independent pay TV operator would be indifferent as to the ownership or technology of the delivery platform over which its channels are shown, being driven instead by such considerations as price, quality and reach. (For example, in the ACT a pay TV operator should be indifferent as to whether it distributes over satellite or cable.) Importantly:

- because of economies of scope, new cable networks may be able to offer a lower cost way of accessing pay TV customers;
- with the bundling of other services, a larger number of customers may sign up to pay TV than would otherwise (ie broadband augments the total demand for pay TV);
- to the extent that there are high fixed costs (typically minimum subscriber numbers), there would be a strong incentive for a pay TV operator to spread these costs across as many subscribers as possible; and
- pay TV operators can expand their customer base without bearing the costs or taking the risks of building the delivery system themselves.

Consequently, it would be reasonable to expect to see some of the existing pay TV operators distributing via the new platforms. However, with the exception of two channels sub-licensed to Neighborhood Cable, this is not occurring.

Optus Television said that there are three reasons why it is unlikely to distribute over the new regional networks.

Although we continue to recommend the regional operators negotiate directly with the channel providers themselves, we are simultaneously reviewing the alternative model of providing our pay TV service over other platforms. There are however, three significant reasons why such a model is unlikely to be economically viable or commercially attractive:

- duplication of channels;
- inability to exploit economies of scope; and
- customer relationships (sub. DR111, p. 4).

In relation to the duplication of channels, Optus added that:

If Optus were to supply its full suite pay TV offering to the customer, commercial viability would require the regional pay TV operator to discontinue its current retail supply of pay TV services to the customer. This may be unattractive to the regional operator (sub. DR111, p. 5).

In relation to the inability to exploit economies of scope, the question is essentially one of who exploits these economies, the network owner or the pay TV company. Optus commented that:

There would also be scope economies from having a single retail provider of these multiple services [pay TV, telephony and internet] to the consumer (sub. DR111, p. 6).

In relation to customer relationships, Optus commented that there would need to be a substantial investment in local sales and marketing as well as billing, call centres and maintenance, and that these would involve a high up-front cost for small regional distribution systems. Austar also referred to such costs as being a barrier to its use of regional networks, adding that:

... while the up front costs are significantly reduced by using an established network, the cost of providing the operational infrastructure is still an important factor in deciding to expand service areas (sub. DR110, p. 3).

Austar also referred to the uncertainties involved in distributing in a way to which the industry is not accustomed. Apart from questions about compatibility of hardware and software, and how to guarantee coverage and transmission quality of the product if a second party is the provider (sub. DR110, p. 4), Austar said:

In regard to open access networks, it is difficult to see how such an arrangement would work in terms of the interface with the customer. Which pay TV operator, for example, would have ownership of the customer, the set top box and the billing rights, and who would perform the installations? At present, the technical systems including the conditional access systems are not commonly set up to allow for such an arrangement.

The operational issues also would need to be fully canvassed. A definite consideration, however, is the economic terms for the provision of access (sub. DR110, p. 5).

Austar's conclusion is that:

The opportunities provided by small cable networks to develop new service areas for the delivery of pay TV services have been considered ... however, it is AUSTAR's experience to date that no viable option has emerged (sub. DR110, pp. 2–3).

Could these difficulties arise from anti-competitive behaviour?

Some participants⁷ argue that existing pay TV companies, particularly Foxtel and related entities, are withholding pay TV content from competitors, significantly limiting the scope for competition in both the pay TV and in related telecommunications markets.

Certainly, new network developers are facing difficulties in obtaining pay TV content, particularly premium content. But for anti-competitive behaviour to be an explanation of what is observed, a number of market characteristics must first be in place in the pay TV market, or in related telecommunications markets. In particular, there needs to be:

- market characteristics that provide the possibility that sustainably higher (expected) monopoly prices can be obtained in the longer term, that is, there needs to be some degree of market power;
- links between the relevant markets such that behaviour in one is relevant to competition in another; and
- the means by which anti-competitive action can be taken (in particular control over key content).

Market characteristics

Firms typically have incentives to benefit at the expense of their competitors. But their ability to act anti-competitively depends upon market conditions. And as withholding pay TV content for anti-competitive reasons would not be a costless exercise — as well as loss of revenue there is also a risk of breach of the TPA — there needs to be an expectation of a gain in the future, or in another market, to compensate for the costs of that action. In markets which are reasonably competitive, firms cannot realistically expect such gains. However, the pay TV,

⁷ See Optus, sub. 54, p. 18; AAPT, sub. 58, p. 16; and SaskTel, sub. DR90, p. 16.

delivery platform and other telecommunications markets fall short of effective competition.

In the pay TV market, for example:

- there is limited competition in retail services. In some metropolitan markets there are two suppliers (Foxtel and Optus), but other markets have only one (Foxtel or Austar);⁸
- entry costs for a new pay TV company that seeks to be ‘full service’ provider are high and irreversible;
- there are very few suppliers of key content. There are only two suppliers of recent release movies (PMP and the Movie Network), and of premium sport (Fox Sports and C7). In addition, Foxtel has long term exclusive contracts with PMP and common ownership links with Fox Sports; and
- while new options for providing content (such as video on demand and internet video streaming) are emerging, these are not yet sufficiently developed to provide a viable alternative to conventional pay TV.

Nevertheless, industry practices which release movies to cinemas and video stores well ahead of pay TV, and the ready availability of free to air TV channels (which also benefit from anti-siphoning rules — section 17.5), limit the extent of market power available in the pay TV industry.

In respect of delivery platforms, while there is the potential for market power, different considerations apply. Because Australia’s two largest cable networks were constructed essentially in parallel (‘overbuilt’ in the US jargon), it is unlikely that they have the same market power as was evident in the US.⁹ Broadly, in Australia market power appears to rest with pay TV companies, rather than with infrastructure owners, although there are strong ownership links between the two. In the US, by comparison, market power appears to be in the hands of the infrastructure owners, rather than the pay TV companies, and this is reflected in the structure of their regulation of pay TV content.

While the nature and ownership of delivery systems do not appear to have resulted in market power in the hands of pay TV platform owners in Australia, because of

⁸ In some markets, only one supply of bundled services may be able to survive in the long term, because of economies of scale.

⁹ In the US, regulations on exclusive contracts were introduced in 1992, in response to regional cable companies who were defending local monopolies from new competition from satellite or overbuilt cable networks. These cable networks enjoyed monopoly profits, protected initially by exclusive franchise arrangements and, over the longer term, by the high barriers to entry associated with the costs of new investment, and the high cost of exit if the investment failed.

Australia's unique history of cable construction, the fundamental characteristics of infrastructure investment are the same as in other countries, namely, the existence of significant entry and exit costs.¹⁰ Thus the potential exists for market power in delivery platforms to influence behaviour in the Australian market in the future, or in particular regions where facilities-based competition is limited.

In the Australian telecommunications market, Telstra has 'extensive and continuing market power for the foreseeable future' (ACCC, sub. 16, p. 6). The telecommunications market is subject to a specific regulatory regime. Earlier chapters discuss this in some detail.

Thus, each of the key markets has characteristics (in particular, the limited number of firms and high entry and exit costs) that mean that market power can exist, and that if competition were to be foreclosed, there would be realistic prospects of sustainably higher prices in the future.

This conclusion is not negated by the losses being incurred in this industry. The existence of market power does not of itself guarantee profits, but it does allow the entity with market power to generate higher revenues than otherwise, which may mean only lower losses than would otherwise prevail.

Links between the markets

There are essentially two key types of links between the markets. The first is that developments in one market can have an influence on the state of competition in another. The second relates to the range of ownership and contractual links that exist between the firms in the different markets.

The new and proposed regional cable networks, by bundling pay TV, data and telephony, have the potential to introduce facilities-based competition for Telstra in the telephony market and in the emerging data market. They offer the possibility of telephony at lower cost than is being provided by the current infrastructure. If pay TV content were to be successfully withheld from new networks, this could make the investment unviable, and could deter potential new entrants. In this way, competition in telecommunications markets would be reduced. As AAPT observed,

¹⁰ High exit costs apply to cable infrastructure, as it has very limited alternative uses. This means that, if the investment fails, the investor would face considerable difficulty in recovering the costs involved in building that infrastructure. Essentially, it could be sold for no other use. The impact of exit costs is apparent in the US where new competition with established cable companies is coming from satellite distribution (with lower exit costs), rather than overbuilt cable, even where that cable (in the absence of these exit costs) would have been the lowest cost option (see Hazlett 1995).

there are incentives to use the control of content to lever market power over other services:

With the advent of digital convergence and the consequent bundling of communications services, certain cable networks are capable of supporting a mix of data, voice and television services. If incumbent pay TV operators render it difficult or impossible for these new cable entrants to gain access to pay TV channels, market power in the pay TV market could be leveraged to maintain or gain dominance in markets for telephony and data services in rural and regional Australia (sub. 58, p. 16).

Pay TV companies have a range of ownership and contractual links with delivery platforms, telecommunications companies and program suppliers that would enable firms in one market to influence competition in another:

- most pay TV companies have ownership links with the delivery platform on which they operate, and thus they may not be completely impartial in decisions on which delivery platform they use;
- Foxtel and Optus Television are owned or partly owned by telecommunications companies, which are facing or could face competition in their telecommunications markets from new infrastructure (particularly bundled services over cable networks); and
- Foxtel, in particular, also has ownership links with program suppliers and exclusive contracts over a range of key content, and thus has the means to control the availability of key content to other pay TV companies.

Several participants attributed their difficulties in obtaining pay TV content to, in part, the link between Foxtel and Telstra, saying that content is being withheld to protect Telstra's revenues from future competition over new competing networks in regional areas. For example, SaskTel said it:

... cannot take the risk of building a network that will rely to a large degree on Telstra, its main competitor ... Telstra as one FoxTel shareholder ... would be motivated by a desire to see [SaskTel's] market activities fail, especially where FoxTel has satellite as an alternative distribution technology (sub. DR90, p. 16).

In relation to obtaining content from Foxtel to on-sell to customers itself, SaskTel said:

... FoxTel has indicated that due to contractual commitments between its shareholders that give one of them a veto over certain of its content, it cannot make this content available to a competitive access network provider. It appears that the shareholder that would be reluctant to make the content available is Telstra (sub. DR90, p. 16).

The regional network owners have also been unable to obtain content from Optus and Austar.¹¹

Cable & Wireless Optus also expressed concern that there is an incentive to use the control of pay TV content to limit competition in metropolitan telecommunications markets, particularly where Optus is providing facilities-based competition through its cable. Optus provided considerable evidence on its experience in attempting to access premium content from Foxtel and Fox Sports. In its view, Telstra has an incentive to dominate both pay TV and telecommunications markets by restricting access to critical content:

... there is a clear incentive for Telstra to use Foxtel's exclusive content arrangements to foreclose entry into the pay TV market to protect its dominant position in the market for fixed telephony services (sub. 54, p. 18).

Foxtel denied this, saying that:

FOXTEL is not controlled by Telstra, and its non-Telstra partners have different interests from that of Telstra. The arrangement between FOXTEL and Telstra as to FOXTEL's use of the broadband cable is a separate arrangement at arm's length. ... The relationship between FOXTEL and Telstra does not impact on programming arrangements (sub. DR92, p. 17).

The ACCC concluded that Telstra's market power in the telecommunications market:

... derives from the fact that Telstra controls critical inputs for almost all providers of almost all services to almost all of their customers (sub. 16, p. 6).

It is clear that the markets are closely linked through ownership and contractual arrangements, such that behaviour in one market will have clear implications for the other. More specifically, control of pay TV content can have implications for the future delivery of telecommunications services. These consequences are discussed in more detail in a later section.

Means

The means by which firms can act to limit competition in the pay TV market and thus in related telecommunications markets, are through exclusive contracts over key content and vertical ownership links with program suppliers. Of the major pay TV companies, Foxtel has the most extensive links to program suppliers, and was the firm most often criticised for its behaviour towards competitors.

¹¹ As noted earlier, some of this may relate to contractual restrictions on sub-licensing or distribution over unrelated delivery networks.

Exclusive contracts are not, of themselves, necessarily anti-competitive. In competitive markets, they can provide a range of benefits, particularly reducing transactions costs between firms. While they do reduce contracts between exclusive distributors, they can increase competition between different groups of exclusive distribution systems. This is particularly evident, for example, in fast food marketing, where there is strong competition between rival exclusive franchising chains. However, in markets where there is little competition between the major players, exclusive contracts can be used to foreclose competition. Hence, it is the characteristics of the market in which they exist, and the use firms make of such contracts in such a market that would be the issue. Foxtel's views on the benefits of exclusive contracts in the pay TV industry are contained in box 17.4.

Box 17.4 Foxtel's arguments for exclusive contracts

Foxtel said that:

Even where there is traditional exclusivity in the form of common ownership, this is generally because the pay TV provider is investing in the programming being produced by the vertically integrated programming supplier and needs the exclusive rights to the product to build brand equity and assist in recouping its investment and production costs. Production companies will also typically try to share the start-up risk of new channels by getting pay TV companies to invest in the channel ... In some cases, channels may not have been launched without a pay TV company's investment. Ultimately, it increases the choice to subscribers of quality pay TV. This incentive would be greatly reduced if supply was not exclusive.

Foxtel argued that the existence of pay TV exclusivity is pro-competitive:

Exclusive program content arrangements promote diversity and differentiation between pay TV providers. Exclusivity is a crucial area of competition between pay TV providers, particularly in metropolitan areas where there is a substantial degree of overbuild ...

Exclusivity enables pay TV providers to promote a particular channel without promoting a competitor, which is essential to the creation and promotion of their brand. With exclusive programming arrangements, consumers are offered more choice and diversity of programming, rather than duplication. Without diversity of programming and the ability of pay TV providers to market themselves on the basis of 'exclusive' programming, the only basis upon which pay TV operators would be able to compete is price. This is particularly problematic in the current environment where retail prices are already low as a result of the competitive pressures already exerted on pay TV providers from free-to-air, videos, cinemas and on-line services and where no pay TV provider has yet made a return on its investment.

Source: Sub. DR92, pp. 11, 16.

Telstra said that exclusivity arrangements for content are 'uncontroversial':

These are an historically-observable and widely-spread phenomenon of content-driven markets due to the need to secure adequate numbers of subscribers in order to make economic the costs of the content which attracts those subscribers in the first instance

and retains them. Without a level of exclusivity arrangements, network viability can be threatened.

The existence of such exclusivity arrangements does not, of itself, establish either an anti-competitive purpose or effect. Indeed, it can be said that the securing of particular content with subscriber appeal through the mechanism of exclusivity arrangements produces positive effects on competition, in the sense of driving platform competition. (sub. DR71, pp. 29–30).

The AFL has argued that exclusive contracts are necessary to protect the revenue that it receives from the broadcasting rights to its code. This is discussed in more detail in appendix H.

This situation is reflected in existing trade practices legislation, which does not prohibit exclusive contracts unless they substantially lessen competition. In markets with limited competition or where a firm has market power, they can be used to foreclose competition and reinforce that market power.

The ACCC's view

The ACCC believes that refusal to supply pay TV content can be anti-competitive, and can — and has been — used to foreclose competition:

... on occasions, vertical integration has been used to hinder or foreclose competition in regional pay TV and related telecommunications markets (ACCC 2000o, pt. 2, p. 4).

Control of pay TV programming by vertically integrated companies with extensive telecommunications interests can be used by these companies to prevent small regional competing telecommunications providers from attaining the revenue streams from pay TV necessary to justify their investment (ACCC 2000o, pt. 2, paper 3, p. 2).

An outline of the ACCC's concerns is in box 17.5. The ACCC estimated that:

... the costs of foreclosure of content in this market could be substantial, with an estimated welfare loss of \$56 million if service provision was delayed for 2 years, and up to \$750 million for a delay of 10 years. In addition, it is necessary to factor in welfare losses from the lower level of competition in the provision of other telecommunications services, although the ACCC agrees that these benefits may not be substantial. While these estimates are preliminary, the ACCC believes that this analysis supports the view that denial of pay TV content can have substantial consequences in telecommunications markets, particularly if it results in the delay of infrastructure provision for a number of years (sub. DR113, pp. 4–5).

Box 17.5 The ACCC's view of the nature of the problem

Through digitalisation and technical convergence, broadband cable networks are capable of providing a range of voice, data and video services such as telephony, high-speed Internet connections, e-commerce and pay TV.

Accordingly, these facilities-based competitors have the potential to greatly enhance the delivery of telecommunications services in the regional areas where their cable roll-outs are occurring or are planned.

Because of technical convergence, a regional operator's competitive position in telecommunications can also be promoted by quality pay TV programming through the following links:

- the range of services that can be carried over broadband networks can be offered as bundled services;
- pay TV programming quality is a key factor in attracting customers to a bundle of services and, thus, increasing the overall up-take of services; and
- higher revenues per subscriber and economies of scope from bundling can be critical to funding the costs of network roll-out.

Without access to quality programming, the necessary revenues may not be available to fund cable investment. Without this investment, an important source of facilities-based competition may be foreclosed from both telecommunications and pay TV markets ...

While a number of companies have commenced, or are proposing to commence, the roll out of cable infrastructure, several companies have also indicated to the ACCC (and to the Productivity Commission) that without access to pay TV programming, their roll out will either be delayed or will not happen at all.

Source: ACCC sub. DR113, pp. 3–4.

Overseas experience

The situation facing Australia in the pay TV industry is not unique. Similar issues have appeared in other countries, and in the US and the UK in particular, they have led to intervention by government to prohibit a range of exclusive arrangements over pay TV content (box 17.6), as well as introduce restrictions on cross-ownership links between telecommunications and pay TV companies.

Also, in the US and the UK, the focus was on providing content to new delivery platforms being set up in competition with the dominant pay TV incumbents. The presumption was that the new delivery platforms and pay TV companies are one and the same. Where the market is big enough, this is a reasonable presumption as

the new delivery platform owners can establish their own pay TV companies and source content direct from program suppliers.

However, in Australia, the scale appears to be much smaller. The presumption that a delivery platform equates to a viable pay TV company is not so clear. In addition, even a grouping of new platforms in Australia would not appear to offer enough customers to warrant setting up a new ‘full service’ pay TV company. Thus, it is understandable that some of the new regional network owners have sought to set up open access networks, drawing on the pay TV content of established pay TV companies being distributed elsewhere in Australia.

Box 17.6 Experience in the United States and the United Kingdom

In 1992, the US prohibited exclusive contracts for 10 years, requiring program suppliers to provide content to any delivery platform that requested it on non-discriminatory terms and conditions. This was because of concerns that dominant regional cable companies (and national groupings of cable companies) were tying up content by exclusive contracts or vertical ownership relations and withholding content from new rival delivery platforms (particularly satellite) so as to maintain their platform monopolies.

In the UK, the concern was that the dominant pay TV company (BSkyB) had control of content by exclusive contracts and ownership relationships, and was withholding that content from potential rival pay TV companies (local cables), so as to maintain its dominant position in the UK pay TV market. After threatening formal government action against BSkyB, the Office of Fair Trading accepted undertakings that BSkyB would provide key programming to other pay TV companies on equivalent terms and conditions as it provides to itself.

In both cases, the concern related to competition in the pay TV market, rather than with competition in telecommunications markets. In the US, there were (until 1999) restrictions on telephone companies owning cable networks, and in the UK, British Telecom (the incumbent) is unrelated to BSkyB.

Source: Chamberlain 2001; Waterman and Weiss 1997.

What is the likely impact of content foreclosure?

Facilities-based competition

The ACCC (2000o) has said that what is at stake is facilities-based competition in regional Australia, with expected benefits being competition in telephony and the provision of broadband services. However, as emphasised throughout this report, competition is not a goal in itself, but a means to an end, and particular forms of

competition (the duplication of facilities) are not necessarily better than others (such as service competition through an access regime). If access regimes produce sufficient downstream competition, then duplication of facilities may have little economic benefit.

Certainly, it would be undesirable to encourage the inefficient duplication of distribution networks. Economies of scale — which are particularly relevant for some facilities, particularly copper wire and cable — may mean that, in many markets, there will be only one facility in any one place at any one time. This means that some facilities-based competition will be temporary as newer networks replace older ones, and the effect of encouraging new networks may mean this happens sooner rather than later.

While in the longer term there may be only one network in any one area, competition between the potential networks (cable, satellite or MMDS) can itself encourage innovation, price reduction and service improvement.

Reinforcing the market power of incumbents

The pay TV and telecommunications markets are characterised by high levels of concentration — a few firms dominate both markets. Foreclosure of competition by withholding content could reinforce the market power of incumbents. If new entrants are unable to obtain content, new investments in the industry are likely to be undertaken predominantly by the incumbents, thereby continuing their market power.

Because of barriers to entry and exit in both the pay TV and infrastructure markets, market power once established would be hard to reverse, and consumers could face long-term higher prices.

Potentially lower cost provision is forgone

In addition, the introduction of new technologies could be significantly delayed. New cable networks, in particular, offer the potential to provide telephony and pay TV at lower cost.

Where cable networks are built, they also provide the scope to unbundle channels to the benefit of consumers. While the potential to unbundle appears to be a particular feature of cable systems, bundling is still a universal marketing practice in the pay TV industry, even in the US where most distribution is via cable systems. Austar argued that it is not possible to recover costs under an unbundled arrangement:

Consumers focus on a value proposition, while the offering of individual services would not create sufficient revenue ... (sub. DR110, p. 4).

Moreover:

... channel providers often dictate the positioning of their programs in the channel supply agreements and it is not within the scope of these agreements for a pay TV operator to ‘unbundle’ and individually price them (sub. DR110, p. 4).

More broadly, however, the Communications Law Centre argued that pay TV and internet access are likely to be supplied to regional Australia by satellite, but voice telephony ‘is not well served at present by satellite’. In its view:

Instead of further bundling of these services, the interests of regional telecommunications users could be better served by improving the existing copper wire network and terrestrial mobile phone coverage in regional areas (sub. DR116, p. 14).

A particular impact on high bandwidth services

It is likely that the effects of driving out new cable infrastructure development would mainly be experienced in high bandwidth services. Here, Telstra provides an alternative national high bandwidth service (of up to 400 Kbps downstream only) using satellite, albeit at costs that are relatively high compared to that which a cable network could probably achieve. While there is scope for much higher bandwidth and two-way services over satellite systems, these remain a higher cost option.

An alternative high bandwidth service — xDSL using the local loop — is a regulated open access alternative for high bandwidth services in metropolitan Australia. However, xDSL based on the existing copper wire loop does not provide very high bandwidth.¹² That said, telecommunications technology and markets are also moving fast, so that there may be other competing technologies to pay TV networks or other sources of content that emerge in the future.

In this context, it seems likely that the major consequence of content foreclosure is the *delayed* availability of very high bandwidth facilities in regional Australia. The advantage conferred by controlling content is that the incumbent can choose the timing of investment in high bandwidth services, rather than being induced to invest at the point that the return is just marginal — as it would if investment were contestable (chapter 8). This does not mean that the potential costs of foreclosure are small. The economic cost of delay is the forgone consumer benefit of possibly many years without a service.

¹² And bandwidth deteriorates with distance from the fibre. This is a particular problem for many parts of regional Australia.

The consequences could be hard to reverse

Pay TV operators and developers of new infrastructure are vulnerable because the fixed costs they face mean that high subscriber numbers are particularly important to the viability of the business. If a competitor can limit an operator's ability to reach the necessary scale to cover these fixed costs, the alternative may be complete closure rather than continuation as a smaller entity (box 17.7).

Box 17.7 The importance of pay TV content for regional rollouts

Neighborhood Cable, which has had a history of difficulties in obtaining pay TV content for its networks, argued that:

While pay TV income is denied broadband service operators, broadband infrastructure will not be deployed (2000, p. 6).

Access to pay TV content is an issue for SaskTel, a subsidiary of the government-owned incumbent telecommunications provider in Saskatchewan. SaskTel believes that facilities-based competition is dependent on new entrants being able to develop networks at a reasonable cost and with multiple services:

... the new entrant must be able to offer more than one service over its network so that it is able to achieve economies of scope on its investment — deriving revenues from more than one line of business (sub. DR90, p. 15).

The ACCC agrees. In its view, if content is inadequate then insufficient people will subscribe to pay TV, the network revenues will fall and average prices per remaining subscribers will rise, prompting a further cut in subscribers and a vicious cycle that may make the network financially unviable (ACCC 2000o, pt. 2, p. 2). It added that:

In the absence of a pay TV revenue stream, the capital investment in cable which could provide new and competitive telecommunications products to non metropolitan Australia is unlikely to be forthcoming (ACCC 2000o, pt. 2, paper 3, p. 2).

Foxtel disputed this, arguing that pay TV content is neither essential nor crucial to investment in broadband infrastructure:

It is not clear ... why only pay TV can generate the revenue necessary to invest in the infrastructure necessary to provide non-pay TV services like high speed Internet. ... many potential investors see pay TV as an 'add on' service once the data or internet side of the business is developed (sub. DR92, p. 21).

These barriers to entry and exit also mean that, once a network has been established by the incumbents, it would be difficult to reverse this dominance.

Conclusion

The Commission concludes that:

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- there are incentives for pay TV companies to use control of content to foreclose competition in the pay TV market;
 - there are incentives for telecommunications companies to use control of pay TV content (through vertical integration or ownership links) to foreclose competition in telecommunications markets;
 - there is limited competition in both the pay TV and telecommunications markets such that a strategy of withholding content could be successful; and
 - exclusive contracts and ownership links between Telstra, Foxtel and some key program suppliers provide the means by which key content can be withheld.

These characteristics do not necessarily imply that anti-competitive behaviour is occurring, simply that the necessary prerequisites are in place, and that there are strong incentives to act in this way.

Even where exclusive marketing arrangements and refusal to supply new entrants are based on reasonable commercial grounds, or on marketing arrangements entered into in the past when the industry had different characteristics, the current state of the market is such that control of content now has the potential to significantly reduce competition in the pay TV market and in some parts of the telecommunications market.

The Commission considers that, on balance, the characteristics of the pay TV industry, and some observed behaviour, fall short of effective competition. However, the presence of some market power and the absence of convincing argument by the relevant firms for the observed exclusionary behaviours provides circumstantial, rather than conclusive, evidence of anti-competitive behaviour. It is possible that other explanations — such as the use of ‘rule of thumb’ business strategies, confidential knowledge by players about commercial risks and unmeasured transactions costs — could explain some of the observed exclusionary behaviours.

However, even if the control of content may not have had an anti-competitive purpose, it appears likely that it has had an anti-competitive effect. This provides a rationale for possible regulation, but only if the regulation is well-targeted and does not itself produce costs beyond its benefits — which is by no means a foregone conclusion.

The next section looks at options for addressing the issue of the control of pay TV content and its effect on competition in the pay TV and telecommunications markets.

17.4 Options for access to pay TV content

This section looks at five possible approaches to the regulation of access to pay TV content:

- use of the general provisions of the TPA to address anti-competitive behaviour;
- modification of the telecommunications-specific anti-competitive provisions contained in Part XIB of the TPA;
- a prohibition on pay TV operators holding exclusive rights to pay TV programming content (the ACCC proposal);
- prohibition of exclusive distribution arrangements between pay TV companies and delivery platforms; and
- monitoring of future developments with the Government signalling a clear intent to act if the case for intervention becomes stronger.

Use of the general anti-competitive provisions of the TPA (Part IV)

The ACCC asserted that control of content has been used to hinder or foreclose competition in regional pay TV and related telecommunications markets. Some participants supported this position. However, before options for new regulation are considered, the scope for the existing regulation of anti-competitive behaviour to address the problem needs to be considered.

The ACCC advised that the most relevant provisions of the TPA which cover anti-competitive behaviour are:

Section 45, which prohibits agreements between businesses that have the purpose or effect of substantially lessening competition in a market. An example that may fall within the section would be market-sharing agreements between competitors.

Section 47, which prohibits exclusive dealing that has the purpose or effect of substantially lessening competition in a market. Exclusive dealing broadly involves a business imposing restrictions on another's freedom to deal with others. An example would be a programmer supplying to a pay TV operator on condition that the pay TV operator not acquire programming from another supplier.

Section 46, which prohibits a company from the misuse of any market power for the purpose of eliminating or damaging a competitor, preventing market entry, or deterring or preventing competitive conduct. The company must have market power and must take advantage of that power. An example could be a vertically-integrated programmer with a substantial degree of power in a programming market denying access to its programming to eliminate a competitor in a downstream pay TV market (ACCC 2000o, pt. 3, paper 3, p. 3).

Sections 45 and 47

With respect to sections 45 and 47, the central issue is whether or not there has been a substantial lessening of competition in the relevant market as a result of the exclusive arrangements.

On the surface, there would appear to be difficulties in proving that exclusive contracts or agreements are substantially lessening competition in the market, in part because:

- there are two suppliers of (albeit different) recent release movies (one of which is non-exclusive), as well as some additional smaller channels available; and
- in respect of premium Australian sport, arrangements are in place to require the content to be provided to Optus and Austar, in addition to being distributed on Foxtel.

Further, the ACCC said that:

As the achievement of market power in antitrust analysis is equated with a substantial lessening of competition, the mere maintenance of this programming balance is therefore unlikely to lead to a substantial lessening of competition in terms of [sections] 45 or 47.

Whether the courts will interpret this in the way the ACCC suggests is unclear. Indeed, Smithers J in *Dandy Power Equipment Pty Ltd v Mercury Marine Pty Ltd* (1982) employed a broader interpretation, saying:

To apply the concept of substantial lessening competition in a market, it is necessary to assess the nature and extent of the market, the probable nature and extent of competition which would exist therein but for the conduct in question, the way the market operates and the nature and extent of the contemplated lessening ... [one must ask] how and to what extent there would have been competition therein but for the conduct, assess what is left and determine whether what has been lost in relation to what would have been, is seen to be a substantial lessening of competition (quoted in Miller 2000, p. 266).

If the relevant market is interpreted as a regional market, something that the TPA does allow, then it would appear harder to argue that competition is not being lessened by these exclusive arrangements. For example, the smaller pay TV companies do not appear to be covered by the requirement to distribute the AFL to other pay TV companies. In addition, in regional markets, there are effectively only one or two potential suppliers of content to the smaller companies — the existing major pay TV operators. Thus, while action by a small player under Part IV might be more successful in the context of a regional market in overturning an exclusive contract between a program supplier and a pay TV company, the high fixed costs

associated with dealing directly with program suppliers may well mean that such success is of little benefit to the regional company.

Section 46

For section 46 to be invoked, it needs to be shown that market power exists, and that it is being used for a proscribed (anti-competitive) purpose (in contrast, sections 45 and 47 refer to purpose or effect).

The ACCC does not consider that any program supplier currently has the necessary market power in pay TV to trigger section 46 (which relates to the misuse of market power), particularly in relation to the key programming of popular sports and Hollywood movies:

Generally under competition law, market power must be found before the law can be effectively invoked ... In Australia ... market power has not been found to exist in program supply sufficient to invoke competition law (ACCC 2000o, pt. 3, paper 3, p. 3).

However, in earlier sections, the Commission has concluded that the pay TV industry has a number of characteristics that give rise to market power. In brief, these are:

- the small number of pay TV companies in any given local market;
- high entry costs for competitors; and
- the control of significant elements of content through vertical integration and exclusive contracts.

Participants in this inquiry have said that competitors in the pay TV market are unable to obtain content held under exclusive marketing arrangements and that this is damaging their ability to compete and preventing or delaying market entry.

There still remains the question of establishing that the refusal to supply content held under exclusive marketing arrangements was for the purpose of damaging a competitor, or deterring or preventing competitive conduct. While purpose can sometimes be inferred from effect, it is nevertheless a relatively demanding test. ATUG, while referring to matters other than pay TV (comparing Part IV with Part XIB), noted the difficulties to be faced in successfully taking action under Part IV:

... proof of purpose is rarely an easy or straightforward process. Indeed, most cases in which there has been a finding of a contravention of section 46 have involved either an admission of a proscribed purpose, or tangible evidence of one ... The landmark case on section 46, *Queensland Wire Industries v BHP*, was one in which a proscribed purpose was inferred but, even then, the High Court held that the test to be used was whether there was any plausible explanation of a legitimate purpose that was behind the conduct

in question. Such an approach clearly creates a high threshold of proof, and one that would rarely be discharged in a practical context. (sub. DR87, pp. 1–2.)

Some other factors complicate the issue:

- it can be difficult to prove that market power has been abused or competition lessened if the effect of market power is expected delay in the provision of facilities and there are no broadly comparable facilities currently owned by an incumbent; and
- the impact of prime concern is in a telecommunications market. It is likely to be even more difficult to establish how market power may be created in a specific segment of telecommunications through another market — the pay TV market.

Moreover, even if action could be taken successfully, it may not allow for the timely provision of access to content to all relevant parties. For example, action under section 46 may involve case-by-case action in relation to each individual incident in relation to each competitor. The same factors that limit Part IV as an alternative to an access regime for telecommunications may make it ill-suited for dealing with foreclosure of content or its monopoly pricing (chapters 2 and 5).

The problems posed by the pay TV content issue highlight problems with Part IV in addressing behaviour that seem to be anti-competitive. This inquiry is, however, not in a position to recommend potentially significant changes to Part IV.

The following section looks at the option of including pay TV content under Part XIB.

The inclusion of pay TV content under Part XIB of the TPA

In discussions with participants following the release of the draft report, the option of including behaviour in relation to pay TV content under Part XIB was raised. As outlined in chapter 5, Part XIB establishes an anti-competitive conduct regime for telecommunications markets additional to that applying generally to all markets under Part IV. There are two central differences:

- Part XIB makes use of an effect (or likely effect) test, whereas Part IV uses a purpose test;
 - the *effects* test under Part XIB refers to a carrier or carriage service provider which has a substantial degree of market power in telecommunications markets taking advantage of that power with the effect or likely effect of substantially lessening competition in that or any other telecommunications market;

-
- the *purpose* test under Part IV prohibits a company from taking advantage of market power for the purpose of eliminating or damaging a competitor, preventing market entry, or deterring or preventing competitive conduct.
 - Part XIB allows the ACCC to issue competition notices to firms it alleges are engaged in anti-competitive conduct. Such notices can reverse the onus of proof.

The inclusion of pay TV under Part XIB would be expected to have the same advantages and disadvantages that have been identified in chapter 5. In addition, Part XIB is one of the transitional Parts of the TPA, the continuation of which is dependent upon the development of competition in telecommunications markets. To the extent that the concern about behaviour in the pay TV markets relates to its effect on competition in telecommunications markets, it can be argued that any industry-specific anti-competitive regulation relating to the pay TV industry should have the same review and sunseting requirements.

The following modifications would be required to Part XIB if pay TV were to be included:

- currently Part XIB refers to actions by carriers or carriage service providers only; this would need to be changed to include action by pay TV operators and content providers;
- currently Part XIB refers to actions in a telecommunications markets only; this would need to be changed to include action in pay TV markets.

However, to the extent that the ACCC is correct in its assessment of the problems of establishing market power and of establishing that particular behaviour is substantially lessening competition in relation to Part IV, Part XIB would not make action any easier as it relies on many of the same requirements.

On balance, the Commission considers that modification to Part XIB would assist action against anti-competitive conduct in the pay TV industry, but there are other options which have the potential to better address this problem. These are discussed below.

The ACCC's proposed regime

The ACCC has proposed industry-specific regulations prohibiting (except in limited circumstances) exclusive contracts over pay TV content between program suppliers and pay TV operators. The ACCC said that its objective is to eliminate the incentive to deny access to pay TV programming (sub. DR113, p. 5).

To this end, the ACCC has proposed:

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- a prohibition on exclusive contracts in areas served by the pay TV operator, unless it can be shown to be in the public interest;
 - an absolute prohibition on exclusive contracts in areas not served by the pay TV operator;
 - a prohibition on exclusive sub-licensing in unserved areas; and
 - a prohibition on discrimination by a program supplier between competing pay TV operators on terms and condition of supply.

The ACCC amended its original proposal to remove its limitation to vertically integrated pay TV companies and program suppliers (box 17.8). Box 17.9 provides more details on how the ACCC proposes that these rules be specified, while box 17.10 defines some key terms.

In essence, the ACCC's proposal is intended to allow any pay TV company (including the new network owners) to purchase pay TV content from any program supplier, and this content could not be withheld on the grounds of exclusive distribution arrangements with another pay TV company. To the extent that a pay TV company produces channels itself, or is the local distributor for particular channels (for example, if it holds the sub-licensing rights), it would be a program supplier for the purposes of the proposed regulations, and thus would be required to make available those channels to other pay TV companies on non-discriminatory terms and conditions.

The proposed regulations do not seek to prohibit all exclusive marketing arrangements for pay TV content in Australia. They do not seek to prohibit their marketing through a single agent, or the pricing of such content to recover the value of intellectual property, so long as the local marketing agent is prepared to make the content available to any pay TV operator on non-discriminatory terms and conditions.

To implement its proposals, the ACCC elaborated on a number of particular aspects of its regime.

A public interest authorisation process

The ACCC has proposed that exclusive contracts could be permitted in areas served by a pay TV operator if it can be demonstrated that such exclusive arrangements are in the public interest. The ACCC said:

It is submitted that an authorisation process similar to the process under Division 1 of Part VII of the TPA would be suitable for determining whether an exclusive licence would be in the public interest. This is a transparent, well understood process that

provides for substantial public and stakeholder input and has been used extensively by the ACCC over the life of the TPA for balancing public interests against anti-competitive detriments (sub. DR113, p. 12).

The public interest is not defined in the TPA, but there is an extensive case history surrounding the application of 'public benefit' (see Miller 2000, pp. 637–40). The Commission considers that an authorisation process similar to that under Division 1 of part VII of the TPA would be appropriate.

Box 17.8 ACCC's proposal no longer restricted to vertically integrated pay TV operators

In the Commission's draft report, the ACCC's original proposal was to restrict the regulations to 'vertically integrated pay TV operators and program suppliers' (chapter 16, p. 25). The draft report argued that any pay TV operator may have an incentive to withhold content from competitors, and it may be able to negotiate exclusive supply arrangements whether it is vertically integrated or not. It is difficult to see that this outcome would be any less anti-competitive than similar arrangements negotiated by vertically integrated entities.

Similar conclusions have been drawn from the experience with the US legislation which also targets vertically related firms. Waterman and Weiss 1997, commented:

... both integrated and non-integrated firms have engaged in the same potentially anticompetitive behaviour ... Its basic source, however, must again be horizontal market power at the cable system or MSO¹³ level in the market for programming. ... Foreclosure of alternative MVPDS can be accomplished [by other strategies such as exclusive programming contracts] either in the presence or absence of vertical ownership ties (p. 129).

They concluded that:

... the FCC's program-access regulations should not, as they currently do, apply only to vertically integrated program suppliers. While an economic case can be made in favour of non-discriminatory access provisions in general, the lack of evidence that vertical integration is decisive in any discrimination that may take place indicates that any such regulations should apply equally to integrated and non-integrated program suppliers (p. 8).

In its submission following the draft report, the ACCC said:

... foreclosure of access to pay TV content is primarily a problem where program suppliers, pay TV operators, and/or network operators are characterised by vertical (and in some cases horizontal) integration. That said, it is important that any program access rules should not be susceptible to avoidance by the adoption of different structures or arrangements that generate incentives to withhold content without involving vertical integration in terms of ownership. Having regard to this, the ACCC submits that the proposed program access rules should not be confined to entities which are vertically related (sub. DR113, p. 1).

¹³ MSOs are nationwide groupings of regional cable companies.

Box 17.9 The ACCC's specific proposals

In areas served by the pay TV operator

The proposed rule should prohibit:

- (a) any contract, arrangement or understanding between a program supplier and pay TV operator;
- (b) under which the pay TV operator has an exclusive right:
 - (i) to broadcast a program via a pay TV service; or
 - (ii) to license another person to broadcast a pay TV program via a pay TV service;
- (c) in an area that is:
 - (i) served by the pay TV operator by cable; or
 - (ii) about to be served by the pay TV operator by cable;
- (d) unless it has been authorised on the basis that is justified in the public interest.

In areas not served by the pay TV operator

The proposed rule should prohibit:

- (a) any contract, arrangement or understanding between a program supplier and pay TV operator;
- (b) under which the pay TV operator has an exclusive right to broadcast a program via a pay TV service;
- (c) in an area that is:
 - (i) not served by the pay TV operator by cable; or
 - (ii) not about to be served by the pay TV operator by cable.

Sub-licensing in unserved areas

In light of the above, the ACCC submits that the proposed rule should prohibit:

- (a) any contract, arrangement or understanding between a program supplier and pay TV operator;
- (b) under which the pay TV operator has an exclusive right to license another person to broadcast a pay TV program via a pay TV service;
- (c) in an area not served by the pay TV operator by cable.

Terms and conditions of supply

The ACCC submits that the proposed rule should prohibit program suppliers from discriminating between competing pay TV operators on the price and non-price terms and conditions for the supply of pay TV programs for broadcast via a pay TV service.

Source: ACCC sub. DR113, various pages.

Box 17.10 Defining some key terms

The ACCC described some key terms as follows:

Program supplier

While no attempt is made to comprehensively define this term in this paper, the ACCC envisages that this would encompass entities which have the right to licence pay TV programming to pay TV operators. Some flexibility is essential in this area, since pay TV programming may be supplied by programming houses as a bundle or 'channel' of programs ... but could also be supplied directly for distribution by the person who produces the program.

Pay TV operator

In Australia there is a high degree of integration between 'cable operators' and 'pay TV operators' (eg. Telstra/Foxtel, Optus). Pay TV programming that is broadcast in Australia on an exclusive basis is generally broadcast by pay TV operators over a cable network that is owned or operated either by a related entity or partner ... If the program access rules proposed by the ACCC are to have any effect, it is necessary to focus on the exclusive arrangement between the person who can license a pay TV operator to broadcast a program over cable on an exclusive basis (ie. the program supplier) and the licensee (ie. the pay TV operator).

Pay TV programs

Again, while no detailed definition is attempted in this paper, the ACCC's intention is for the proposed rules to capture arrangements for the licensing of any program or package of programs to a pay TV operator. This concept is intended to be sufficiently broad to encompass both a single program and a bundled or branded product that is supplied to a pay TV operator for broadcast by a program supplier. It is not proposed that the rules be applied to specific pay TV programs or categories of programs, whether identified in legislation or by subsequent regulatory instrument. While it is possible that a specific program may not be particularly important to the viability of a broadband network, such a program is less likely to be licensed on an exclusive basis in the first place, and therefore less likely to be affected by the proposed rules. If the program is sufficiently valuable or sought after to be licensed on an exclusive basis, then the regulatory regime would be deficient if an exclusive licence was not subject to the rules due to an omission in the identification of the pay TV programming to which the rules apply.

Source: Sub. DR113, pp. 7–8.

Non-discrimination and access

The final clause of the ACCC's proposal calls for:

... a prohibition on the discrimination by a program supplier between competing pay TV operators on the terms and conditions of supply (sub. DR113, p. 10).

In essence, this means that any pay TV operator would be able to approach any program supplier and be able to obtain access on the same terms and conditions as

the content is supplied to other pay TV companies, including those related to the program supplier. It would not, however, limit the program supplier from discriminating between pay TV operators on the basis of reasonable conditions such as volume and different costs of supply.

However, there is scope for vertically related program suppliers and pay TV companies to price content at transfer prices. This could result in artificially high content prices for their pay TV competitors, even if supplied on the same terms and conditions as supplied to the related pay TV company. Thus, regulation governing discrimination between pay TV operators would need to provide for the issue of transfer pricing between related entities, as well as to ensure non-discrimination in price and terms and conditions. In addition, there may well be other means by which prices could be structured to block competition from small entrants. The regulator needs to be aware of these strategies and to have the powers to deal with them in setting terms and conditions.

The ACCC does not envisage the restriction on discrimination as being equivalent to a positive requirement to supply, that is, a form of access regime. Nonetheless, there may be some circumstances where refusal of supply could amount to discrimination between pay TV operators (box 17.11).

Some implications of the ACCC's proposals

The additional terms of reference to the Commission refer to the impact of pay TV content arrangements on telecommunications competition in regional Australia. The ACCC's proposals have a wider scope. They target behaviour in the wider Australian pay TV market, not just regional markets, and they target behaviour in the pay TV content market whether this has an impact on competition in a telecommunications market or not. As the ACCC said:

While the consequences of a lack of access to pay TV programming may be more acute in rural and regional areas ... it has the potential to hinder competition for the supply of broadband services in metropolitan areas as well (particularly suburban and outer metropolitan areas) (sub. DR113, p. 6).

The ACCC's proposal would be likely to have significant impacts in metropolitan pay TV markets, in addition to any effect it would have on competition in rural and regional Australia. It would have particular impact on opening up access to content now exclusively distributed on Foxtel, which has the most extensive range of exclusive supply arrangements. It would likely be of benefit to the other major pay TV companies and possibly to new pay TV companies which aspire to a larger nationwide customer base. However, the benefit to the smaller regional networks

may be limited because of their small customer base and the cost of accessing direct from program suppliers.

Box 17.11 Non-discrimination and access

The ACCC's view on the extent to which refusal to supply would be covered by the prohibition on discrimination by pay TV operators

This fourth rule [non-discrimination between pay TV operators] was not intended to effectively impose an access regime. A rule that prevents a person discriminating between customers does not necessarily equate to a positive obligation to supply on demand ...

In relation to whether a refusal to supply would amount to a breach of the U.S. non-discrimination rule, the FCC has stated that:

... we believe that one form of non-price discrimination could occur through a vendor's 'unreasonable refusal to sell', including refusing to sell programming to a class of distributors, or refusing to initiate discussions with a particular distributor when the vendor has sold its programming to that distributor's competitor. We believe that the Commission should distinguish 'unreasonable' refusals to sell from certain legitimate reasons that could prevent a contract between a vendor and a particular distributor, including (i) the possibility of parties reaching an impasse on particular terms, (ii) the distributor's history of defaulting on other programming contracts, or (iii) the vendor's preference not to sell a program package in a particular area for reasons unrelated to an existing exclusive arrangement of a specific distributor (*First Report and Order*, FCC 93-178, paragraph 116).

While the ACCC did not intend to introduce an access regime, it accepts that there may be some situations where a refusal to supply could amount to an act of discrimination. However, this alone does not elevate the non-discrimination rule to the status of an 'access regime'.

...The task of the dispute resolution body ... is not to determine the price at which the program should be supplied by any reference to cost or rate of return (as might be the case under an access regime). Rather, the sole function of the dispute resolution body is to ensure that the price is not discriminatory. Similarly, if a refusal to negotiate amounted to an act of discrimination, the role of the dispute resolution body is to prevent the discrimination by ordering the program supplier to negotiate. These functions are narrower than the functions that would ordinarily be conferred under an access regime.

... the prohibition on discrimination in relation to terms that include price does not mean that an identical price must be charged to each pay TV operator to whom a program is supplied.

Source: Sub. DR113, pp. 16–17.

However, it would be difficult to limit the regulations to rural and regional Australia, and, as the problem is not a regional-specific one, there is a case for

addressing the problem of the use of pay TV content to limit competition on a national basis.

Restricting exclusive supply arrangements would represent a significant shift in the way the Australian pay TV industry operates. It may help to break down the barriers to entry faced by new pay TV operators, including those in regional areas, allowing them to compete more easily with incumbents. This competition should encourage the incumbents to be more flexible in their distribution arrangements, and should mean that new platforms would find it easier to attract an existing pay TV operator to their platform without having to set up their own pay TV operation.

Such industry-specific regulation would represent a particular limitation on the normal right to enter into certain types of contracts. Any need for such restrictions on contracting results from particular characteristics of the pay TV and telecommunications markets at the current time. Were these conditions to change, such regulations may no longer be necessary, and the standard restrictions on anti-competitive contractual arrangements included in the TPA may be sufficient. If the Government were to introduce a regime such as that proposed by the ACCC, the Commission considers that any regulations should have clear sunset provisions, with a review towards the end of the period to determine whether industry-specific restrictions on certain types of contracts continued to be necessary.¹⁴

Concluding comments

The Commission sees merit in the ACCC's proposed regime, but it has some reservations.

- The ACCC's proposal may not effectively address the problems faced by the regional networks, which was the primary focus of the additional terms of reference in this inquiry, because of the cost for small players of accessing directly from program suppliers (although it may, in time, indirectly benefit them by changing the relationship between the larger players in the industry).
- The primary impact of the ACCC's proposal would be on the main pay TV markets, in particular, in the metropolitan markets, significantly changing the competitive relationship between the major operators. These matters are not the prime focus of the Commission's reference.

In addition, the impact on the current firms in the industry (especially those not operating in regional areas) could be very large and are difficult to predict:

¹⁴ A similar view as to the temporary or unusual nature of such restrictions is also reflected in the US regulation of exclusive contracts for pay TV content.

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- Much of the current industry structure, in terms of where particular pay TV companies distribute their product, is the result of arrangements underpinned by the exclusive control of content. The removal of exclusivity may well change the existing arrangements for market coverage, with uncertain results.¹⁵
 - Many of the exclusive contractual arrangements over key content are long term, up to 25 years, and the holders of these rights have paid, and are continuing to pay, significant premiums for this exclusivity. Were prices to fall as a result of abrogation of exclusive contracts, their loss could have an influence on the commercial viability of existing pay TV companies, all of which are yet to make profits.

This is not to say that the impact in regional Australia could not be equally dramatic. Currently, Austar is the major provider and it is not facing competition from the other two major pay TV companies. Changes to contractual arrangements could well see the other major pay TV companies seeking to provide pay TV services in direct competition with Austar.

While the ACCC's proposal might solve the content access problems of regional networks, it is actually targeted at a wider problem — with associated wider implications and uncertainties.

Consequently, the Commission also assesses a policy option that is more targeted at the narrower matter of access to retail pay TV services by new telecommunications networks.

An option to prohibit exclusive distribution arrangements between pay TV companies and delivery platforms

New regional network owners have sought to persuade the existing pay TV companies to distribute their retail pay TV service via their networks, rather than becoming pay TV operators in their own right. It is difficult to understand why this is not occurring.

An option to prohibit exclusive distribution arrangements between pay TV companies and delivery platforms would address the market power of the existing pay TV companies in relation to delivery networks. It would also address the incentives generated by the ownership links between the major pay TV companies and telecommunications companies to foreclose facilities-based competition.

¹⁵ The Communications Law Centre, for example, expressed concern about possible effects on other areas of the film and TV sector (sub. DR116, p. 14).

The option would involve prohibiting a pay TV operator from withholding its services from a rival delivery platform. It would also seek to prohibit pay TV companies discriminating between competing delivery platforms on terms and conditions of distribution, except insofar as the costs of distribution varied.

As noted earlier, Optus and Austar provided some information on the commercial problems and costs associated with distributing on the small regional cable networks. Legitimate costs would be included in the negotiated or arbitrated terms and conditions of supply. If this were in some cases to make sourcing content in this way an uncommercial proposition for the new cable networks, this would not represent any form of market failure.

This option would not require a pay TV operator to provide its retail channels to another pay TV operator distributing on another delivery platform. Individual pay TV operators could continue to maintain product differentiation, the individual brand name of their product, and their individual relationship with their customers. But in principle, it could mean that any pay TV operator could end up distributing its pay TV services over any delivery platform.

There are a number of particular matters that would be important in ensuring that such a regime functioned effectively.

First, to the extent that the pay TV operator retained control over retail prices and terms and conditions to customers, there may be an incentive to set these factors in such a way as to make the service unattractive at the retail level over a particular platform even in a situation where the terms and conditions for the platform owner have been set at reasonable levels. One way of handling this possibility would be to empower the regulator to arbitrate on terms and conditions to customers if a dispute between the pay TV company and the platform owner arose over this issue. Another way would be to establish a pricing regime which reduces the incentive for such behaviour (box 17.12).

Second, there appear to exist contractual arrangements which may have precluded some pay TV operators from distributing their pay TV product over alternative delivery platforms. It is not immediately clear as to the extent to which, under this option, new regulations should override pre-existing contracts. Indeed, the provisions of Part XIC, for example, are cautious about the circumstances in which pre-existing contracts can be overridden (chapter 11).

The Commission considers that such a regime, if implemented, should be administered by the ACCC, as it has considerable expertise in administering similar

regulations.¹⁶ In particular, the ACCC should be given the role of arbitrating disputes over allegations of discrimination by pay TV companies between platform owners, but that this should occur after reasonable attempts have been made to reach commercial agreement between the parties involved. The Commission further considers that appeal rights to the Australian Competition Tribunal should be included, and that there be sunset provisions.

Box 17.12 A possible pricing principle for retail pay TV

One possible access pricing method would be to use ECPR. This would involve setting the access price as follows.

$$A = P - R$$

where:

P = price of the pay TV service to customers on the new delivery platform.

R = notional return to the pay TV company from distribution via the existing delivery platform.

$$R = P_e - C_e$$

where:

P_e = price of the pay TV service to customers on the existing delivery platform.

C_e = avoidable costs on the existing delivery platform.

In the case of existing satellite distribution for example, avoidable costs would be the cost of the set top box, the satellite dish, installation and billing.

If the new delivery platform is lower cost, then it would benefit from this pricing regime, but if it was higher cost, the pricing formula would not underwrite these higher costs. Further, if the pay TV operator sought to 'overprice' to customers on the new network, the higher price would effectively go to the system operator in a higher access charge, and the system operator could use this to refund the customer.

This option would have the advantage of more directly targeting the market power of the pay TV operators in relation to delivery platforms, and could be of more benefit to regional players than the ACCC's proposal. But it would have some of the same disadvantages as that proposal, namely, that its main impact would be in areas outside of regional Australia, and that its implementation could have a significant effect outside of that part of the industry which is under reference.

¹⁶ AAPT suggested that, if needed, pay TV content could be included in the Part XIC access regime. However, this report is recommending significant changes to Part XIC, which would have the effect of focusing the procedures and criteria much more tightly on telecommunications markets and their particular characteristics.

A watching brief — the possible role of monitoring

The previous options involve heavy-handed regulation, with the potential for that regulation to grow in response to the subsequent strategies of participants in the industry. In addition, they could have significant outcomes which are difficult to predict.

This may suggest that an appropriate policy response would be to monitor conditions in the industry, while signalling a clear intent to legislate if there is evidence of a sustained threat to effective competition in either the pay TV or a telecommunications market as a result of the control of pay TV content. Indicators of a continuing problem could include:

- continuing inability of competing networks to access premium content;
- an increase in the concentration of control of key content;
- the emergence of impediments to the development of competing sources of premium content (such as video on demand); and
- a significant increase in cross-ownership links between pay TV and telecommunications companies.

This could be achieved by requiring the ACCC to monitor the industry and report publicly to the Government on the state of play of competition in the pay TV and related telecommunications markets. To the extent that wider circumstances increase competition in the pay TV industry, these should also be taken account in assessments sent to the Government.

For example, emerging services are likely to increase the range of available content services, and this may reduce the scope for particular entities to use control of content to reduce competition.¹⁷ While pay TV is a relatively young industry in Australia, and largely unprofitable, other services may develop and provide some competition for ‘traditional’ pay TV. These new services may provide alternative revenue sources that would enable broadband networks to develop without pay TV (although it is possible that rival sources of content might also be subject to the risk of foreclosure).

Indeed, pay TV may only be a transitional means of delivering content, particularly as the internet’s capacity to deliver video services improves. Digitisation of networks adds impetus to this service development.

¹⁷ Cleevely 2000 provides a speculative analysis of how market power in a convergent world can both arise and disappear rapidly with new technological developments.

Early examples include TV webcasting (an internet-based service), interactive TV and video on demand. Video on demand, whereby movies released on video may be viewed on a pay per view basis via a subscriber's set top box, can provide recent release and other movies direct to subscribers.¹⁸ Under current arrangements, this occurs ahead of both pay TV companies and free to air channels. VOD Pty Ltd is now offering video on demand on the TransACT cable network. In addition, several major US film studios have recently announced that they are creating a movie-on-demand service for delivery on a pay-per-view basis to consumers via broadband networks.¹⁹ Trials are also being undertaken in Australia to deliver video on demand over the local loop via ADSL.²⁰

The FCC has also advocated a 'watch and see' approach in the United States:

What we need to remember is that no one could have predicted these innovations [broadband internet on cable systems]. We cannot regulate against problems that have yet to materialize in a market that has yet to develop ... [The] FCC has decided not to intervene in this nascent broadband market. In doing so, we are following advice as old as Western civilization itself: First, do no harm – a high-tech Hippocratic Oath. Instead we are taking steps to ensure that there are many competitors in the market place, not just cable ... [We've] decided to allow the cable companies to go ahead with their efforts to deploy broadband access without pre-emptive regulation, even as we closely monitor the marketplace for anticompetitive behaviour (quoted in Little et al. 1999, p. 6).

However, there are risks involved in adopting a wait and see option:

- to the extent that anti-competitive behaviour is occurring and not being adequately addressed by current regulations, a wait and see approach allows this to continue;
- the industry (particularly the related telecommunications market) is rapidly changing;
- entry costs are very high, and thus the costs of exiting are very high — if competition is foreclosed, the effect in the telecommunications market, in particular, may be difficult to reverse; and

¹⁸ Subscribers will have the ability to pause, rewind and fast forward, as with a videotape player.

¹⁹ www.cnn.com/2001/TECH/internet/08/17/video.on.demand.ap/index.html. And in the UK, broadband provider Video Networks has reportedly signed a deal with Premier League football for VOD rights to archives of matches as well as games over the next three seasons (www.vnunet.com/News/1124729).

²⁰ In the UK, Yes Television is using BT's wholesale DSL service to stream over 1000 Hollywood films to subscribers. It considers that the film quality is acceptable, and will improve as carriers offer higher speed DSL. But even now it sees its service as highly competitive with video stores (Baines 2001, p. 21–22).

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- there can be high costs of delay in obtaining access to broadband in regional areas.

Which option is best?

Of the options considered in this section:

- Part IV of the TPA would probably not suffice as an instrument to tackle the impact of the control of pay TV content on the development of telecommunications in regional Australia because of the time, cost and uncertainty involved, and changes to Part IV would not be appropriate in the context of this inquiry;
- including pay TV content under Part XIB would solve some of the problems identified with respect to Part IV. It would increase the likelihood of identifying anti-competitive behaviour and would constitute a speedier response, but to the extent that the ACCC's analysis of the source of the problems in Part IV are correct, Part XIB would not suffice;
- the ACCC's proposal to prohibit certain exclusive contracts between pay TV companies and program suppliers has merit in addressing wider problems in the pay TV market, but there are reservations about its effectiveness in solving the problem for the smaller regional networks and about its very wide implications;
- a regime to prohibit exclusive distribution arrangements between pay TV companies and delivery platforms would reduce the scope for pay TV services to be withheld from competing networks; and
- a wait and see approach involves some risks in view of the rapidly changing nature of the industry.

There are advantages in some of the options discussed, and some risks in not acting. The Commission does not consider that a strong enough case has been made for additional regulation. However, it does have some concerns about the structure and behaviour of the pay TV market, and thus it considers that the industry should be subject to closer monitoring.

RECOMMENDATION 17.1

The Commission recommends that the ACCC be required to:

- ***report publicly and annually to the Government on the state of competition in the pay TV and related telecommunications markets; and***
- ***investigate and report on instances where it is aware that proposed or new networks are having difficulty accessing content or pay TV services.***

The Commission recommends that the Government signal a clear intent to legislate if there is evidence from the ACCC's reports of a sustained threat to effective competition in either the pay TV or a telecommunications market as a result of the control of pay TV content.

The Commission considers that the ACCC's investigations should encompass a range of indicators that would assist the Government in deciding whether there was a need to regulate. These have been mentioned earlier in the report.

The need for this additional role for the ACCC should be subject to review, and therefore the requirement to report on these matters should be subject to sunset provisions. A period of five years would seem reasonable.

17.5 Anti-siphoning and digitisation

There are two other sets of regulatory arrangements that influence the incentives to invest in delivery platforms which include the provision of pay TV services. These are anti-siphoning regulations, and regulations surrounding the digitisation of free to air television.

As the Commission's broadcasting report pointed out, free to air broadcasting is favoured over pay TV operators, by anti-siphoning rules in particular (Productivity Commission 2000, ch. 12). Anti-siphoning, by limiting the extent to which pay TV can compete with free to air services, has an effect on the demand for pay TV services and thus on the incentives for pay TV operators to set up new networks. But conversely, the restrictions on multichannelling imposed on the free to air broadcasting, as part of the shift to digital TV, benefit current pay TV providers.

Restrictions on broadcast activities: the anti-siphoning rules

Pay TV operators see the anti-siphoning rules as providing undue competitive advantage to the free to air broadcasters. The Commission, in its broadcasting report (Productivity Commission 2000), also took this view and saw the restrictions on multi-channelling as a quid pro quo for anti-siphoning.

The anti-siphoning provisions empower the Government to determine which sporting events should be available on free to air television for viewing by the general public. The objective is to prevent these events from being 'siphoned off' by pay TV to the detriment of free to air viewers. The relevant sports are regarded

by pay TV operators as key drivers of pay TV uptake. But the rules are quite restrictive on pay TV operators. For example:

- a pay TV licensee may not acquire the rights to televise an event on the anti-siphoning list (appendix H) unless a national broadcaster, or a commercial broadcaster with coverage of more than 50 per cent of the Australian population, has the right to televise the event;
- a pay TV operator wishing to televise a listed event must wait to see whether a free to air broadcaster acquires it. If a free to air broadcaster acquires exclusive rights to the event, the pay TV broadcaster is excluded altogether from live coverage, unless the free to air broadcaster permits it;
- alternatively, the sporting organisation that owns the rights to an event may have sold only the free to air rights, allowing a pay TV operator to acquire its own rights separately. If no free to air broadcaster has acquired the rights to a listed event, a pay TV operator can acquire them only if the event is removed from the anti-siphoning list;
- events are automatically delisted one week after the event has occurred. An event can also be delisted at the Minister's discretion if:

the national broadcasters and commercial television broadcasting licensees have had a real opportunity to acquire the right to televise an event, but none of them has acquired the right within a reasonable time (Broadcasting Services Act, s. 115 (2)).

In its submission to the broadcasting inquiry, the Australian Subscription Television and Radio Association claimed this is a 'cumbersome and lengthy process' and can be difficult to resolve in time to allow a scheduled event to be broadcast live by a subscription service (ASTRA 1999, p. 25).

The current anti-siphoning list was introduced in 1994 and is to expire at the end of 2004. In December 2000, the Government directed the ABA to report on which events should be removed from, or added to, the list, and when protection should expire for listed events. The ABA was directed to recommend an event for inclusion only if it had been consistently broadcast on free to air TV during the past five years. The ABA recommended a revised list in June 2001, and proposed that it should operate until the end of 2006, with a prior review (appendix H and ABA 2001).

Submissions to this inquiry raised concerns about anti-siphoning. Paul Budde said they are:

... limiting the opportunities for regional operators to build viable businesses. Most of the programs that are on the list will never reach regional Australia. Pay TV at least provides regional users with a choice, which they don't have under the current system. The free to air broadcasters are the only ones who would benefit from having an

extensive anti-siphoning list, since that would make competing services less attractive to the users, and less commercially viable as a result (sub. 49, p. 2).

Fox Sports, in a submission to the Commission's broadcasting inquiry, argued on similar grounds for abolition of the list:

... because of the inherent competitive inequality the system has created between the free to air broadcasters and pay TV broadcasters (1999, pp. 1, 3).

It reiterated those views to this inquiry, arguing that anti-siphoning rules have inhibited the development of the pay TV industry (sub. DR77, p. 5).

The AFL argued that anti-siphoning provisions prevent sporting organisations maximising revenue (and for the AFL, broadcasting rights comprise the major single source of revenue):

By preventing sporting organisations dealing exclusively with pay television operators, the anti-siphoning provisions create a competitive advantage for [free to air] television broadcasters in negotiating the rights to listed sporting events. The effect of this for the AFL is that it is unable to maximise revenue from the sale of its broadcast rights. This in turn affects distributions to AFL Clubs and funding for game development and capital works (sub. DR83, p. 6).

In its broadcasting report, the Commission noted that the provisions impose a significant competitive disadvantage on pay TV broadcasters. It also:

- found that the anti-siphoning rules are anti-competitive and that, in their current form, the costs to sporting organisations, the broadcasting industry and the community as a whole exceed their benefits; and
- recommended that the anti-siphoning list should be tightly restricted to events of high social or cultural significance and that for sports on this list neither pay TV nor free to air TV should be able to acquire rights that exclude the other form of broadcasting (Productivity Commission 2000, pp. 29–30).

The Government is yet to respond to the report's recommendations.

Multi-channelling

Digital transmission of television, introduced in January 2001, makes possible the transmission of more than one discrete stream of programming over the spectrum space previously used for a single analogue TV channel and allocated for digital television. Indeed, the compression techniques employed for digital transmission would allow a broadcaster to transmit three or more standard definition signals in that spectrum space.

Regulatory impediments currently limit the use of the spectrum and the number of broadcasters. In the absence of these, broadcasters could use some spectrum for more free to air channels or for broadcast pay TV services, and there could be more broadcasters.

The greater number of channels, including pay TV channels that could have been provided would have increased competition with the existing pay TV delivery platforms, including regional cable networks. In many areas this would have weakened the scope for such platforms to compete in telecommunications services, but in other areas not well covered by free to air services, cable systems could have access to larger range of free to air channels to redistribute to customers.

Conclusions

The Commission reiterates the findings of its broadcasting report that there are major flaws in the regulation of multichannelling and anti-siphoning, with effects that flow on to telecommunications in regional and other areas. In particular, it reiterates its recommendations 7.4 on the adoption of digital television and 12.2 on the criteria for a new and much shorter anti-siphoning list.

18 Universal service arrangements

Box 18.1 Key messages

The nature and extent of universal service arrangements, and their funding, can affect services and competition, particularly in rural and regional areas.

The Government has recently established a framework for greater competition in the supply of universal service. In the past, Telstra has been the sole universal service provider.

The costs of universal service provision are shared among telecommunications providers in proportion to their eligible revenue. The calculation of the net costs of provision and the method of allocation among providers affect both efficiency and competitive neutrality.

Discrepancies between the basis of determining access prices by the ACCC and the net costs of universal service provision by the ACA can give rise to inefficient competition and magnify the competitive impact on Telstra of any shortfall in universal service subsidy.

Efficient longer term competition between providers of universal services is unlikely to develop under current arrangements unless the universal service levy is increased. However, this would increase what is, in effect, a tax on most telecommunications consumers. It would also bring the danger of inducing inefficient investment in telecommunications facilities.

Competition would be enhanced if a process were designed that provided incentives for potential suppliers to reveal their true costs of supply and that rewarded the lower cost suppliers. Carefully designed contestable tenders held periodically could provide an appropriate mechanism.

Evaluation of the current contestability pilot schemes in meeting their objectives should be based on the criteria of efficiency and competitive neutrality. That evaluation should also give consideration to the advantages and disadvantages, and practicality, of a market-based tendering process for universal service provision.

The power to determine the aggregate universal service levy should lie with the ACA, rather than the Minister, and provision should be made for full merit review of determinations by the Australian Competition Tribunal.

Australia has had informal or formal universal service arrangements for many years. These aim to give residents of relatively sparsely populated areas of Australia, and people with disabilities, access to standard telecommunication services at prices

comparable to those available to the rest of the population. Although the nature and extent of these arrangements, and their funding, is not central to the inquiry, they can affect competition, particularly in regional areas. This chapter considers the likely effect of universal service regulation on competition and efficiency, the possible effects of recent developments in that regulation and some possible alternatives.

Prior to the introduction of (limited) competition in 1991, the costs arising from universal service were met by cross subsidies internal to Telstra (and its predecessors). Explicit requirements concerning universal service were introduced in the *Telecommunications Act 1991*, which defined the universal service obligation (USO). This was funded by the universal service levy (USL), the intention being to distribute the net costs associated with the USO amongst all telecommunications carriers on an efficient and equitable basis.

Some significant changes have been made since then. These include variations in the basis of cost and levy calculation and the provision of power to the Minister to designate separate providers for separate aspects of service, such as the standard telephone service and payphones. During 2000, legislative amendments were passed to encourage greater competition in the provision of universal service — these are being implemented during 2001 as outlined below.

After setting out relevant background information, the chapter covers some issues relating to competition and universal service. Finally, issues relating to the customer service guarantee and the provision of facilities to people with disabilities is considered.

18.1 Universal service regime

The current universal service regime is defined in the *Telecommunications (Consumer Protection and Service Standards) Act 1999* (TCPSS Act). It comprises:

- the USO;
- the digital data service obligation (DDSO);
- arrangements for selecting universal service providers, including contestability arrangements;
- provisions for the regulation of universal service and digital data service charges; and
- arrangements for the collection and distribution of the universal service levy.

The TCPSS Act also includes other aspects of social regulation of telecommunications, some of which are drawn on in the provision of universal service as well as in the provision of telecommunications services generally. These include:

- access to the National Relay Service (essentially a translation service between voice and non voice telephone users for the speech and hearing impaired);
- continued access to untimed local calls;
- the Customer Service Guarantee;
- the Telecommunication Industry Ombudsman scheme;
- protection of customers against the failure of carriage service providers (CSPs);
- access to emergency call services;
- price control arrangements for Telstra; and
- regulation of telephone sex services.

The universal service obligation

According to the TCPSS Act (s. 9), the USO is the obligation to ensure that standard telephone services, payphones and prescribed carriage services are ‘reasonably accessible to all people in Australia on an equitable basis, wherever they reside or carry on business’. To date, no carriage service has been prescribed.

The standard telephone service, a key concept in the TCPSS Act, generally involves the provision of a voice grade telecommunications service, or the equivalent for people with disabilities (in accordance with the *Disability Discrimination Act 1992*). The standard service incorporates aspects of social regulation such as continued access to untimed local calls and the customer service guarantee.

To date, no specific determinations have been made by the Minister in relation to universal service charges or digital data charges. However, service prices have been effectively controlled through the general price controls applying to Telstra.

Telstra has been, and remains, the only declared provider of the universal service obligation. However, as noted above and further discussed below, contestability and tendering arrangements are in the process of being implemented.

Universal service providers (USPs) have the responsibility to provide service on request to anyone in the areas for which they are declared. Some of the net cost of provision is reclaimed through the industry-funded universal service levy mechanism.

USPs must submit policy statements and marketing plans (covering the standard telephone service and/or alternative telecommunications services) for ministerial approval. These statements and plans set out the provider's arrangements for fulfilling its universal service obligations and provide a basis for monitoring by the Australian Communications Authority (ACA). The requirements for marketing plans and policy statements replace the formerly required universal service plan — as a transitional measure, Telstra's universal service plan is recognised as its marketing plan and policy statement.

Digital data service obligation

The digital data service obligation came into effect on 1 July 1999. It is being funded through the same universal levy mechanism as the USO.

The DDSO aims to ensure that digital data services are 'reasonably accessible to all people in Australia on an equitable basis, wherever they reside or carry on business' (TCPSS Act, s. 10). The obligation is currently divided into the general DDSO and the special DDSO:

- The general DDSO requires that a data channel with a data transfer rate of 64 kbps be available to all residents of a general digital data service area on the basis of Telstra's basic rate ISDN service in place on 1 July 1997.
- The special DDSO specifies that a capability of delivery (asymmetric) of 64 kbps be available to all end-users.

About 96 per cent of the population is covered by the general DDSO, with the remainder covered by the special DDSO (ACA 2000b, p. 75). According to the ACA:

If the customer's connection utilises subscriber line conditioning equipment or a pair gain system, that connection is determined not to be in a general digital data service area. A service area that is not a general digital data service area is by default in a special digital data service area (2000b, p. 75).

Currently, Telstra is the national general DDSO provider. It also provides special DDSO services nationally. In June 2000, Cable & Wireless Optus was also declared by the Minister as a special DDSO service provider (ACA 2000b, p. 74). Both Telstra and Cable & Wireless Optus fulfil the special DDSO by using satellite downlink.

Universal service levy

Regulatory oversight of the universal service regime, including the calculation of the universal service levy and its sharing among telecommunications providers is the responsibility of the ACA.

Methodologies have been contentious and have been changed several times since 1991. In particular, there have been disputes about the calculation of Telstra's net loss in the provision of universal services. These disputes have been far from trivial. For example, in respect of 1997-98, the first year in which the net universal service cost (NUSC) model was applied (see below):

- Telstra initially claimed a NUSC of over \$1.8 billion;
- the Minister introduced legislation to cap it at \$253.32 million;
- the ACA subsequently assessed it at over \$548 million; but
- the legislative cap prevailed.

Similarly, after some disagreement — Telstra had suggested the NUSC for 1998-99 and 1999-00 be based on the ACA's assessment for 1997-98 of \$548 million (ACA 2000d, p. 86) — the NUSC for both 1998-99 and 1999-00 was set by the Minister at about \$280 million.

Net cost calculations have generally been undertaken in retrospect. However, in November 2000, the ACA announced that it was moving to determine the NUSC in advance 'in order to provide greater certainty to the industry and to assist with cash flow management and investment planning' (ACCC 2000b, p. 80). It noted that the Government had requested it to advise on the NUSC for the 2000-01 to 2002-03 financial years. Only the NUSC for 2000-01 was subsequently determined by the Minister, however, at \$298.9 million. A review of the process of determining USO subsidies for 2001-02 and 2002-03 was announced — this review is to be finalised by 30 April 2002 (Alston 2001g).

The core element of the NUSC model is costs minus revenue attributable to universal service provision or, as it is termed, the *avoidable costs minus revenue forgone* formula. 'Avoidable costs' are calculated on the basis of long run incremental costs, somewhat similarly to the use of TSLRIC costing under some access pricing. In essence, avoidable costs are those costs incurred by a USP that it would not have incurred if it had not supplied services to high cost areas. In order to set incentives for cost minimisation, the cost calculations are based on assumptions about technology that is deemed to be industry best practice (on a forward looking basis), rather than actual costs incurred by operators.

Although the provision of universal service is essentially loss making, providers obtain revenue from those services. ‘Revenue forgone’ is designed to measure the loss of revenue to a provider were it not to be supplying universal service.

Until the end of 1996-97, the net cost of universal service provision was shared among carriers on the basis of timed telecommunications traffic. From 1997-98 the basis was changed to one of sharing in proportion to eligible telecommunications revenue. Hence, for example if a carrier were to earn 20 per cent of total eligible revenue, it would be liable to pay 20 per cent of the total universal service levy.

In November 2000, the ACA noted that the Government had announced that the burden of paying for the net cost of universal service provision will be extended to CSPs (ACA 2000b, p. 77). The rationale appears to be to bring USO funding to a more consistent basis and to spread the revenue basis more widely. To avoid double counting, CSPs will be able to deduct payments to other carriers and CSPs from their eligible revenue, just as carriers are allowed to deduct payments to other carriers. This extension of payment has not yet been implemented, however.

Similarly, although it had been intended that a threshold minimum could be determined to apply to carriers and CSPs alike (ACA 2000b, p. 80), such a threshold has not been applied. According to the ACA, the rationale for the threshold is ‘to prevent the USO levy being a barrier to market entry’ (ACA 2000d, p. 89). Depending on the precise nature of the relevant regulations, such an exemption limit could reduce transactions costs for smaller providers.

Contestability arrangements

Recent amendments to the TCPSS Act have established a framework for greater competition in the supply of universal services. As a result, a contestability pilot project and, in addition, a ‘competitive tender’ arrangement (the extended zones tender) are currently being implemented. The motivation for these amendments was to ‘encourage greater competition [in] the provision of rural and regional telecommunication services and promote better quality of service delivery, innovation and a wider range of services, lower prices and wider consumer choice’ (ACA 2000b, p. 77). As outlined below, neither the pilot project nor the tender involve competition on the basis of the net cost or the price required for provision of universal service.

Under the contestability arrangements, one carrier will be designated to be the primary USP in each contestable area with the obligation to provide universal service — this will be Telstra in the pilot project. As well, one or more other carriers may be designated as competing USPs. A primary USP will not have the

option to exit the relevant market and stop providing universal service. By contrast, competing USPs will be able to enter and exit the market at their discretion (with some requirements for smooth transition).

In order to qualify for a universal service subsidy, a competing USP needs to apply for approval from the ACA. Approval relies on the adequacy of policy statements and marketing plans, which require carriers to set out how they would fulfil their USO obligations. Part of the rationale for these arrangements is to minimise the incidence of default by providers, protect quality standards and prevent ‘cherry picking’ (ie the offering of services only to the most profitable customers) by ensuring that providers undertake to service any customer in the contestable area on request (ACA 2000e, p. 23).

The three-year pilot project for the contestability arrangements will cover two broad areas:

- the Greater Green Triangle of south-west Victoria and south-east South Australia, expanded to include the Central Goldfields and Greater Bendigo regions; and
- north-east New South Wales and the Queensland Downs, stretching from Kempsey in NSW, inland, to Caloundra Shire in Qld (Alston 2000b).

Local government areas will provide the boundaries for the universal service areas, in contrast to the previous practice of structuring them according to the location of Telstra’s facilities.

The total universal service subsidy for these two areas is about \$50 million per annum (Alston 2001e). The subsidies range from \$150 to \$1920 per service in 2001-02 and from \$130 to \$1610 per service in 2002-03. The per service subsidies are payable to the retail service provider that fulfils the USO in any particular universal service area, whether it is a primary or a competing USP. If there is no competing USP in a particular universal service area, a primary USP may elect to receive a lump sum subsidy for that area (ACA 2001e, p 35).

The USO contestability regime commenced from 1 July 2001. At this stage, no competing USPs for the pilot areas have been announced. Indeed, at least to end-August 2001, no provider has offered policy statements and marketing plans for public comment — this is a requirement which must be met before an application to the ACA for approval as a competing USP can be submitted.

If the three-year pilot project is successful, the contestability arrangements are expected to be implemented more widely.

Extended zones tender

In October 2000, the Government invited seven companies to ‘tender’ for the provision of calls in the ‘extended zones’. The tender required the provision of untimed local call rates, local call rates to at least one internet service provider, preferential rates to the relevant ‘community service town’, and other services at capped prices. The extended zones are call charging zones that lie outside Telstra’s standard local calls charging zones. The Government will provide \$150 million to the successful tenderer, set aside from the second tier sale of Telstra, for the infrastructure upgrade necessary for these services. The successful tenderer must also consent to becoming the sole universal service provider, at least initially, for the extended zones (ACA 2000b, p. 77).

The successful tenderer will be bound to provide the tendered services for a period of ten years. It will have exclusive access to the universal service subsidy for a period of three years, after which these areas may become subject to contestability.

The successful tenderer was to be chosen on the basis of ‘best value for money consistent with Commonwealth purchasing policies’ (DCITA 2000c, p. 34). On 14 February 2001, the Government announced Telstra as the preferred tenderer — the Government announced that if successful negotiations could not be concluded with Telstra, then negotiations would be commenced with Cable & Wireless Optus. According to the Minister for Communications, Information Technology and the Arts, ‘this package is far better for consumers than the Government’s minimum requirements’ (Alston 2001b). Successful negotiations were concluded with Telstra (Alston 2001f).

18.2 Competition and USOs

USOs affect competition, particularly in rural and regional areas and in the provision of facilities for people with disabilities. Although the nature and extent of USOs, and their funding, is not central to the inquiry, some relevant issues relating to competition are discussed below. These include the possible effects of the levy calculation and sharing methodology on competitive neutrality and efficiency, and whether universal service arrangements themselves can be used to encourage greater competition in telecommunications in rural and regional areas.

It can be argued that the provision of universal service should be funded by the community as a whole, rather than the telecommunications industry and consumers of telecommunications services. R. S. Gilbert, for example, suggested that ‘if [the Government] judges something should be done in the public or community interest, the public or the community ... should pay for it’ (sub. 51, p. 2). Optus also

considered that universal service subsidies should be funded out of consolidated revenue (sub. DR95, p. 54). However, an assessment of that proposition is beyond the scope of the current reference — for the purposes of the following discussion, it is assumed that the provision of universal service will continue to be industry funded.

Competitive neutrality and efficiency

The method and accuracy of calculation of the aggregate USL and its method of allocation among telecommunications providers can affect both competitive neutrality and efficiency. A sound objective is to choose a methodology that is:

- as competitively neutral as possible, in that it distorts the relative costs and relative prices of different suppliers as little as possible; and
- most efficient, in that it is least distorting of final demand.

Estimating costs

The universal service regime requires a USP to supply particular high cost services to consumers at prices that do not recover the full cost of their provision. Because, in the past, only Telstra has been directed to provide universal service and has been eligible to receive some subsidy for shortfalls in revenue, generally Telstra has been the sole supplier of those particular services.

In itself, however, this does not indicate a departure from competitive neutrality as the shortfall is shared among telecommunications suppliers. However, if the avoidable cost assessment is inaccurate, competitive neutrality can be affected, possibly quite markedly. With a high cost estimate the total levy increases; with a low cost base the levy falls. Nevertheless, a high estimate advantages Telstra if it exceeds Telstra's 'true' costs — Telstra's contribution to the higher levy is more than offset by contributions it receives from other providers which, in effect, 'subsidise' costs it does not bear. Hence, Telstra gains a competitive advantage over other suppliers if the cost estimate is too high — to make up the levy shortfall it needs to adjust its prices relatively less than those of other suppliers and could attract customers from them. Conversely, if the cost estimate is too low, the levy will not cover the actual costs of providing universal service. In this case, Telstra has to make up for the shortfall from other parts of its operations and is disadvantaged competitively.

The change in revenue shares will, in turn, have an effect on the future distribution of contributions to the USL by moderating slightly the initial effect of the 'incorrect' cost estimate.

The above discussion illustrates the importance of an appropriate basis for assessing the USO levy for competitive neutrality. Similarly, an ‘incorrect’ levy estimate can affect efficiency:

- The main effect of USO funding might be one of distribution from carriers to universal service beneficiaries rather than one of efficiency. Nevertheless, given that carriers will pass on the ‘tax’ to consumers, thereby potentially distorting their consumption decisions, there is a genuine community interest in ensuring that the levy is set no higher than is required for efficient and effective USO provision.
- On the other hand, given that Telstra is required by regulation to supply loss making services that it might not choose to supply given the choice, it is also important to ensure that the levy meets its legitimate (additional) costs. Apart from any equity considerations, underestimation of avoidable costs could affect investment decisions.

In the past (as noted above), there has been significant disagreement between Telstra and regulators about how universal service costs should be estimated and about their magnitude.

In considering the basis of such costings, it is helpful to draw an analogy between universal service provision and the access provisions under Part XIC of the TPA. In each case, Telstra is required to provide services, in one case to consumers in rural areas and in the other to access seekers, which it might not itself have chosen to supply at the prices on offer. In broad terms, to the extent that price setting in the Part XIC access context is appropriate — and the Commission is making some recommendations for improvement in that regard — then the same methodology should be appropriate in the universal service context, recognising that it might need to be more regionally differentiated.

In practice a supplier competing with Telstra in the provision of services in universal service areas will need to interconnect with Telstra and have access to other Telstra services and facilities. The available information suggests there are discrepancies in the basis of determining access prices by the ACCC and the net costs of universal service provision by the ACA. Such discrepancies can give rise to inefficient competition:

- If access prices exceed the assessed universal service costs for the same segment of the network, entry of competitors (that is, competitors relying on Telstra’s services) will be deterred.
- However, if access prices are set below those universal service costs, and universal service subsidy is made available to Telstra’s competitors, competitors which enter would in effect enjoy a subsidy from Telstra related to the difference

between assessed universal service costs and the access prices. Thus, even if the assessed universal service cost for the service in question is set below the ‘true’ cost of supply, it can be profitable for a competitor to enter.

Based on publicly available information, NECG has estimated that:

- the ACA’s cost estimates indicate that the total efficient, forward-looking CAN costs associated with the supply of 493 867 USO services in operation (SIO) is \$624 million; whereas
- the ACCC’s cost estimates indicate that the total efficient, forward-looking CAN costs associated with the supply of all 1.17 million rural SIOs, including the 493 867 USO SIOs, is \$552 million.

The NECG estimates indicates that access prices may be set significantly below the comparable universal service costs. The entry of competitors to Telstra on the basis of such discrepancies can add to the competitive impact on Telstra of any shortfall in the universal service subsidy itself.

While competition on the basis of such ‘arbitrage’, resulting from disparities in ACA and ACCC cost assessments, can benefit consumers in universal service areas somewhat by opening up alternative sources of supply, it is not competitively neutral and is inefficient from the point of view of the community as a whole.

Ideally, as noted above, the same methodology should be used in the determination of access prices and universal service costs. This would serve to minimise the gap between the two, thus reducing the likelihood of inefficient competition and the extent of any competitive disadvantage imposed on Telstra.

As noted above, the ACA has been directed to review the process of determining USO subsidies by 30 April 2002. This review provides an opportunity for the ACA to work with the ACCC to minimise discrepancies in assessment methodology and outcomes.

In the longer term if, as discussed below, market-based contestability is introduced into universal service supply, any need for assessing avoidable costs for universal service might become redundant.

Sharing costs

Since July 1997, the costs of universal service provision by Telstra have been borne by all telecommunications carriers in proportion to their eligible telecommunications-based revenue earned from carriage services. Other ways of sharing the cost are possible — for some earlier years, the cost was shared in

proportion to timed traffic, for example. Because of its size, Telstra itself bears the largest share of the net cost under either of these arrangements. Optus suggested that there could be merit in requiring Telstra to bear the entire cost (sub. DR95, p. 52).

Sharing the net cost among carriers on the basis of revenue could be quite sound in regard to efficiency. The reason is that most of the net cost is paid for by the larger telecommunications carriers — the five largest contributed over 98 per cent of the total USL in 1998-99 (ACA 2000b, p. 80) — and they have scope, within the bounds of other social regulation such as price caps, to pass the costs on to consumers in an efficient way. Even some of the carriers making up the other two per cent may have scope to pass on the levy cost to areas of inelastic demand.

However, the basis of sharing among carriers could impinge on competitive neutrality. This is because some revenue entering the calculation base is taken effectively at the wholesale level — that is, where a carrier sells to a CSP — and some at the retail level — that is, where a carrier sells retail to final consumers. As a result, the provision of services by separate CSPs is advantaged relative to the provision of similar services by vertically integrated carriers.

It has been announced that provision for contribution to the USL may be extended to CSPs, and an exemption limit may be set:

- Extending the levy to CSPs should enhance competitive neutrality as the basis of revenue overall would be brought more closely to a common level (ie retail). The effect on efficiency would be problematic. There could be some adverse effect if some CSPs only supply a range of relatively price elastic services. But the precise effect would depend on substitution between different services as well as demand elasticities.
- The exemption could improve efficiency if smaller, newer, carriers and CSPs have more restricted product ranges possibly with relatively high elasticities of demand. On the other hand, the exemption could distort competition. There could be some significant savings in transactions costs if the regulations exempted providers below the exemption limit from the necessity to provide lengthy and complicated annual returns to the ACA.

Alternative ways of sharing the net cost, such as a tax on the provision of access, or on value added or, as suggested by Optus, a tax on profits (sub. DR95, p. 51) might distort overall consumer demand less than the revenue basis of sharing. However, such alternatives have not been explored further in the current inquiry.

Promoting efficient competition

As noted above, two trials are underway to introduce competition into the provision of USO services. One trial involves the extension of subsidy to competing suppliers; the other involves a single supplier for extended zones with the industry-funded subsidy supplemented by additional funding of some \$150 million, intended for facilities investment, direct from government. Other alternatives that may promote competition would be to mandate other USPs in particular regions, or to provide higher industry-funded subsidy to new competing suppliers.

In general, ignoring the possibility of arbitrage between determined access prices and USO subsidies (which, as discussed above, can result in inefficient competition), sustainable simultaneous competition between two or more suppliers for the provision of universal service in particular regions is unlikely without government mandate, a continuing differential levy and/or an assessed levy that is high relative to the actual costs of potential suppliers. Even if simultaneous competition is unlikely, however, the introduction of contestability has the potential to benefit regional consumers, reduce funding costs and improve competitive neutrality over time.

Costs of supply exceed assessed levy

One possibility is that Telstra's costs of supply are above those allowed for in levy calculations, as would be those of any potential competing supplier. In this case, ignoring scale effects, the aggregate 'loss' from universal service supply increases as the volume of supply increases. As a result, each USO supplier would prefer to supply less rather than more.

To ensure universal service provision, government would have to mandate at least one supplier (as at present). However, if more than one supplier were mandated, each would have a strong incentive *not* to compete — service standards could decline, repair delays lengthen, and so on.

R. S. Gilbert summarised the incentives faced by providers when the assessed cost base is low relative to actual costs:

... there is a distinct possibility that each carrier will quote a high price, in the hope that he will *not* win the contract, that another carrier will 'win' the contract, or that Telstra will continue to be the nominated USO provider and that they will be able to continue pressing the ACA in one way or another to minimise what they pay Telstra (sub. 51, p. 3).

KPMG Consulting agreed that ‘there must be a very high probability of failure by service providers entering into competition for provision of the USO on the basis of subsidies calculated in [the present] way’ (sub. 50, p. 1).

A fundamental problem with the mandated approach is that the competing supplier would presumably need to incur at least some capital cost, even allowing for the possibility of its purchase of services from Telstra. But, assuming access prices are ‘correct’, it would be difficult to mandate supply from a new carrier that was reluctant to invest in the facilities needed to provide service, even if that carrier were inherently lower cost than Telstra.

Levy exceeds cost of supply of some providers, but not all

Assume that there are two suppliers, that the assessed cost exceeds the ‘true’ cost of one supplier, but not of the other. In this situation the first has an incentive to compete to obtain the entire USO market while, ignoring possible scale effects, the other has an incentive not to supply. (The margin between actual cost and assessed cost for the first supplier needs to be sufficient to offset the increase in its levy share as its market share expands.) Both suppliers could benefit by allowing the supplier with the lower cost base to expand to obtain the full market. The result will be the continuation of universal service provision by just one supplier.

This case also illustrates that providing a differential subsidy to attract a competing supplier does not ensure longer term competition. In effect, the higher subsidy would be equivalent to establishing a lower cost base for the new supplier. The additional subsidy to the new supplier could be funded either by the industry or by taxpayers generally, possibly capped to prevent cost blowouts as the new provider expands supply. To encourage a new entrant, the subsidy would need to be sufficiently large to balance up the additional levy cost to the newcomer arising from its increased revenue share and the positive or negative difference between its actual costs (after subsidy) and the cost used in the assessment base.

As both suppliers would now benefit if the new entrant were to provide the full market, to ensure competition it might be necessary to continue to mandate supply of USO services by Telstra. Even so, the subsidy to the new supplier would increase Telstra’s incentives not to supply (ignoring scale effects). In the longer term, assuming the higher subsidy were to continue, the new supplier might obtain almost all the market. If then, the additional subsidy were eliminated, the new supplier may or may not find continued supply profitable, and Telstra may or may not seek higher market share. This depends on factors such as the actual costs of each supplier relative to the assessed cost base and scale economy effects. In any case, in the longer term, it is likely that only one supplier would remain.

Levy exceeds costs of supply

Finally, suppose that there are two suppliers and each supplier's actual cost is below that used in the levy calculation. As a result, each will want to supply the entire market — assuming the cost margin is sufficient to offset the levy share increase that arises from increased market share — and competition will prevail. The extent to which this will be manifested in benefits at the consumer level is difficult to predict. However, as an expansion in supply reduces the net loss for each supplier and may, as well, bring economies of scale, there may be some price effect at the consumer level — certainly, there could be some significant improvements in non-price service as each supplier sought to expand.

Contestability

The above cases show that competition can be induced, even in the provision of inherently loss making USO services, if the total levy is high enough. However, this would increase the overall level of the tax on consumers in general. It could also distort competitive neutrality by overcompensating USPs for costs incurred and induce inefficient investment in facilities by suppliers attempting to increase market share. Nevertheless, it might be argued that there is some merit in tolerating a small levy margin above cost, in the short to medium term, if this were to ensure efficient supply or encourage competition between suppliers leading to efficiency gains in the longer term.

Further, continuing with present arrangements, where regulators construct an assessed cost base that could be well below actual costs, might continue to encourage suppliers *not* to compete. This would also be unsatisfactory in terms of competitive neutrality. (Competition might, however, be stimulated by the possibility of arbitrage between the ACA and ACCC determined costs and prices — as discussed above, such competition would not be efficient and would add to competitive distortions.)

As noted above, Telstra has claimed that the assessed costs are significantly below its actual costs. In contrast, Macquarie Corporate Telecommunications considered that 'Telstra is able to apply the USO in order to subsidise its retail prices' (sub. 34, p. 9). If that were true, however, all that might be required to promote competition would be to make the USO subsidy available to competing suppliers.

Macquarie Corporate Telecommunications suggested that competition in the provision of USO services could be enhanced if a voucher system were implemented (sub. 34, p. 10). Although such a system has potential to give choice to consumers about services and providers, it would not remove the need to

determine an appropriate basis on which to set the voucher value. To this extent, a voucher system could continue the problems inherent in present arrangements. Further, a voucher high enough in value to induce competition could also induce inefficient investment in regions where just one supplier is inherently most efficient.

Leaving aside the problem of arbitrage, the current problems spring essentially from the lack of incentive for telecommunications carriers and CSPs to reveal their true costs of service provision to regulators. Consequently, incentives for competition in the provision of universal service are stifled.

If a process can be designed that would encourage potential suppliers to indicate their true costs to regulators and which would reward the lowest cost suppliers for doing so, the prospects of competition would be much enhanced.

A series of periodic tenders might enhance competition overall while controlling the size of the USL:

- Every five years (say), provision of universal service could be put out to tender. Suppliers would be asked to nominate the unit cost at which they would be prepared to supply in the region(s) in question. (Alternatively, they could nominate the unit net subsidy they would require.) In one approach, only the winner would be eligible for USO subsidy, although others could supply if they wished but without subsidy. In that case, the winning tenderer would be the carrier that tendered lowest, but the levy could be based on the *second lowest* tendered cost as this would provide greater incentive for tenderers to reveal their true costs in the tendering process (see below). An alternative approach would be to allow (say) the two lowest tenderers access to USO levy at a cost slightly higher than the second lowest tendered cost — in this approach, the slightly higher general consumer tax would be set against the possible benefits to regional consumers from simultaneous competition in USO supply.
- As a safeguard, regulators would retain the option to set the USL on the basis of an assessed cost, as now, if the outcome of the tendering process were likely to increase levy costs unacceptably, or if collusion were suspected.

The form of tender suggested above would provide the same incentive effects for providers to reveal their true costs as an open outcry auction, with the same final tender outcome (see Lucking-Reiley 2000, for example). However, it would have some advantages in terms of dealing with commercial in confidence information — only the accepted tender ‘price’ would need to be made known, rather than the ‘price’ of each bidder. Another possibility would be to adapt some of the auction methodology currently used with auctions of spectrum.

All carriers with, or with access to, appropriate facilities would be encouraged to tender. At any given time, there would probably be only one or two universal service suppliers in each region. Even if there were only one, however, this process of serial competition could bring, over time, several benefits: it would give providers other than Telstra the opportunity to supply services in USO regions; it would set the USL at levels accepted by carriers, without the need for regulatory determination; and it would improve competitive neutrality. A tendering arrangement would facilitate the recognition of economies of scale — at present, the levy is calculated on the basis of constant costs. KPMG Consulting considered that it is essential that such recognition be given when introducing competition (sub. 50, p. 2). A final advantage is that a tendering arrangement is equally applicable where the levy is funded by government, rather than industry.

In practice, in many regions alternative suppliers would need to rely on services and facilities purchased from Telstra. Duplication of facilities could be uneconomic, as it often is in urban areas. As the Institute of Public Affairs noted:

... there are obviously bottleneck facilities in the regions by virtue of the fact that, despite all the interventions by government to encourage competition, it has not been worthwhile any operator duplicating the Telstra local loop (sub. 48, p. 2).

Thus, a market-based approach to universal service provision would not detract from the importance of appropriate determination of access prices under Part XIC of the TPA. In particular, greater emphasis might be needed in access pricing on cost variations between regions.

Of course, there would be many practical issues that would need to be considered before such a process of tendering could be adopted. These would include such matters as defining services, determining universal service areas, specification of cost or subsidy required and guarding against ‘cherry picking’. Some providers may wish to supply USO services in just one or two areas, others in more and some, possibly, in all — appropriate tender procedures would need to be developed to facilitate acceptance and evaluation of all such variations.

Little specific comment on these ideas was provided to the Commission. PowerTel supported market-based tendering but had ‘no strong view’ on the implementation details (sub. DR102, p. 18). Vodafone considered that opening up the issue at this stage was not appropriate and that time should be given for the Government’s model to be properly tested (sub. DR70, p. 28). The ACA indicated that the present pilot program should be evaluated before consideration was given to its extension:

The present contestability arrangements have been put in place as a pilot program to allow both the entry of competitors, and allow for the arrangements to be evaluated and extended where appropriate (sub. DR99, p. 6).

The Commission does not suggest that market-based tendering be introduced in the near future. There is merit in allowing time for proper evaluation of the contestability arrangements just coming into effect. In such evaluation, however, it will be important to examine the extent to which competition is based on inefficient ‘arbitrage’ (as discussed above) rather than the fundamentals.

Nevertheless, if the practical issues can be adequately resolved, a tender process would have advantages over the current contestability pilot where, in essence, competition might only result through arbitrage or if the USL is set too high relative to actual costs. In particular, market-based tendering arrangements could bring greater chance of efficient competition — thus benefiting consumers in the bush — while improving competitive neutrality.

RECOMMENDATION 18.1

The Commission recommends that the evaluation of the contestability pilot program be based on the criteria of efficiency and competitive neutrality. As part of the evaluation, consideration should be given to the possible advantages and disadvantages, and practicality, of a market-based tendering process for encouraging efficient competition in the provision of universal service.

18.3 Process issues

Pending the introduction of such a market-based approach as discussed above, it is important that the universal service levy be struck at an amount that at least approximates, in aggregate, the actual net costs of universal service provision. Otherwise, as illustrated above, both competitive neutrality and efficiency can be adversely affected. Further, an estimate of net costs that is too low relative to actual costs reduces the prospects for competition.

In the past, there have been wide divergences in net cost estimates, with the levy for at least some years being determined at amounts significantly below those considered appropriate by Telstra. Some past amounts have been specified directly in legislation. Under current procedures, the Minister determines the relevant amount, after seeking advice from the ACA. Reasons for departing from the ACA’s advice must be given. There are no provisions for appealing the Minister’s determination, either by universal service providers such as Telstra or by other service providers that contribute to the levy.

The ACA commented that ‘it is confident that the reasoning behind [its] calculation is comprehensive and justifiable’ (sub. DR99, p. 6). However, it did not want the

final responsibility for determining the USO quantum, as it is ‘very much a public policy issue’:

The current arrangements allow the Minister to take account of social policy considerations, as well as costing advice from the ACA, in finally determining a USO amount for any given financial year. If the ACA were to have final responsibility for determining the universal service cost it would not be able to take due account of the Government’s social policy views and other Government policy considerations unless directed to do so by the Minister.

Additionally, the imposition of the cost of funding the USO on all licensed carriers is best characterised as a tax. As such, determination of USO costs should be a matter for the Government rather than the ACA (sub. DR99, p. 6).

Little comment was provided by other participants on these process issues. The Communications Law Centre (sub. DR116, p. 17) supported the Commission’s draft report proposal (as set out in the terms of the following recommendation.) Present arrangements were supported by SPAN, ATUG, Primus, Vodafone and AAPT. The cited grounds for support of Ministerial determination included preventing delay, providing a circuit breaker and being a matter for government policy. However, it is arguable that the present arrangements have added to delay and uncertainty, rather than reduced it. Further, the lack of an appeal mechanism could be thought unjust given that the outcomes can have very significant financial effects on service providers.

As with the ability of the Minister to make binding pricing determinations under the access regime of Part XIC, the provisions for the Minister to determine the universal service levy fail to meet good regulatory design criteria. In the Commission’s view, the determination of the quantum of universal service levy is essentially a technical matter which should be progressed according to transparent methodology. It is difficult to see how the present procedure can be superior to one that allows the ACA to determine an appropriate cost-based levy, taking into account competitive neutrality and efficiency, after appropriate consultation and disclosure of the reasons for its decisions, and permits full merit review by an appropriate body. This could be the Australian Competition Tribunal — the Commission will recommend appeal to this tribunal in regard to access pricing determinations and, as discussed above, the determination of universal service levy involves similar issues to access pricing.

RECOMMENDATION 18.2

The Commission recommends that power to determine the aggregate universal service levy lie with the ACA, rather than the Minister, with provision made for full merit review of determinations by the Australian Competition Tribunal.

18.4 Customer service guarantee

Optus considered that the customer service guarantee (CSG) should not apply to new entrant networks. The CSG includes minimum fault repair and connection timeframes and the requirement to meet appointment commitments for the provision of local fixed network access. If these requirements are not met, providers can incur monetary penalties (ACA 2000g).

Optus contended that the CSG biased the design quality features of new entrants, differentially affects them because fault rates are initially higher in new networks, and increases competitors costs. Further, it considered that as Telstra was required to comply with the CSG 'if a customer is not satisfied with the quality of service provided by a new entrant they could choose Telstra for service' (sub. DR95, p. 45).

The object of the CSG is to encourage improvements in service and to guard against poor service by requiring phone companies to meet minimum standards (ACA 2000g). In effect, the CSG is a consumer protection measure. Such a measure might not be required if telecommunications markets were fully competitive, with vigorous competition on the basis of both price and quality of service. However, competition is not yet fully developed, particularly in rural and regional areas. Given the judgment that consumer protection is required, there would be little merit in exempting new entrants. Care should be taken however to ensure that the CSG does not discriminate on the basis of technology.

18.5 TTY equipment

The universal service arrangements also cover the provision of the standard telephone service to people with disabilities, irrespective of location. This includes the provision of appropriate equipment, such as teletypewriter (TTY) equipment for people with hearing or speaking difficulties. As noted above, currently Telstra is the sole universal service provider.

One participant, Ms Deidre Windham, whose son is hearing- and visually-impaired, indicated that she wished 'to take advantage of competition within the telecommunications industry' by transferring to Dingo Blue (sub. 26, p. 1). However, she could not obtain rental TTY equipment from Dingo Blue. Although this was available from Telstra, it was bundled with line access. Ms Windham commented that:

It seems my son faces discrimination in that he must belong to a household with Telstra as the service provider to enjoy access to a TTY. In fact, as if he doesn't have enough problems with his sensory disabilities, my son is being denied a right that most people

take for granted: the ability to communicate with other people on the telephone (sub. 26, p. 1).

Telstra supplies TTY equipment to customers at the same price as it supplies standard handsets. However, under present arrangements, the additional net cost to Telstra is not subsidised through the universal service levy arrangements. First, the levy only recovers universal service provision costs in universal service areas and these exclude urban areas. Second, the levy does not factor in the additional cost of supplying equipment to people with disabilities in universal service areas.

Thus, it cannot be concluded that Telstra's practice of bundling rental TTY equipment with line access is discriminatory. Rather, the discrimination arises from the apparent failure of other carriers to provide such equipment on a rental basis. The Commission notes that, under the *Disability Discrimination Act 1992*, it is unlawful to discriminate against a person in the provision of goods or services on the grounds of disability unless it would impose an unjustifiable hardship on the provider of the goods or services.

In a more general context, the Australian Communication Exchange, a major national provider of communications access products and services for Australians with a disability, proposed a review of the Disability Discrimination Act and the TCPSS Act. The purpose would be to 'devise and implement an effective and inclusive Disability Telecommunications Equipment Program' (sub. 61, pp. 1–2). This would be separated from the general USO arrangements and managed independently of carriers and CSPs. TEDICORE, which represents the interests of telecommunications consumers with disabilities and promotes equity and accessibility, also supported the development of a new Telecommunications Disability Program (sub. DR82). The Government has recently announced a training initiative for users of TTY machines (Alston 2001d).