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Optus submission

to the Productivity Commission

Review of the Radiocommunications Acts and the Role of the Australian Communications Authority

October 2001

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Introduction

This paper is written in response to the Productivity Commission's, (the Commission) issues paper for the review of the *Radiocommunications Act 1992* (Cth) "the Act" and the role of the Australian Communications Authority (ACA).

Optus' submission primarily addresses the two most important aspects of the Act, spectrum allocation and spectrum tenure. Optus also provides comment on aspects of satellite spectrum policy.

Spectrum allocation

The efficient allocation of spectrum is crucial to the development of radiocommunications markets. Spectrum allocation has a bearing on when new technology becomes available to Australians, whether spectrum will be used efficiently, the level of competition in the radiocommunications market, and arguably, the price that consumers will pay for services in that market.

Optus supports price based allocation of spectrum, as it is the most efficient way to allocate a scarce resource. Put simply, in a well designed auction process, the firms that value spectrum most highly acquire spectrum at auction. Society benefits because the firms that acquire spectrum are best placed to use that spectrum efficiently.

The revenue that is raised at auction is a side benefit of auctions, but should not be the primary driver of auctions. Auction design that seeks to maximise revenue does so at the expense of consumer welfare and allocative efficiency.

In particular, Optus does not support the setting of reserve prices in auctions that seek to guarantee revenue for Government. The purpose of setting reserve prices in this way runs counter to the primary objective of auctions, which is to satisfy allocative efficiency goals

Spectrum auctions are preferable to beauty contests, which are open to challenge and political interference.

Spectrum tenure

Once spectrum is allocated, it is important that spectrum tenure is as certain as possible. This ensures that the incentives to invest are preserved, encouraging both productive and dynamic efficiency gains.

Spectrum tenure has two elements — continued access to spectrum, and the price of that spectrum.

Continued access to spectrum

Optus acknowledges that certainty of tenure must be balanced against the need to allocate spectrum for new technologies that will enhance economic welfare.

Optus believes that unless a more valuable use is identified, continued access to spectrum for incumbents is of paramount importance. Where a more valuable spectrum use is identified, Optus supports the two year reallocation period as the best way to ensure that spectrum is made available for high value uses

A two-year reallocation period, combined with proper spectrum planning by the ACA, which involves advance warning being given to fixed link incumbents, balances the competing needs of different spectrum users.

Optus does not support the US system where incumbents must be compensated by new users, as this holds back efficient use of spectrum and encourages incumbents to hold new players to ransom.

Price of access to spectrum

An important aspect of spectrum tenure is the price of access to spectrum should remain constant over time, if the incentives to invest are to be preserved.

In a typical spectrum auction, the price of spectrum is identified through the auction process, and is paid upfront, so that the price of spectrum for the period of the spectrum licence (15 years maximum) is held constant. However, there are two cases where the price of spectrum can vary. First, is the case where a firm has an apparatus licence with a maximum term of only 5 years. That firm is open to changes in the price of spectrum, as Government can change the apparatus licence fees arbitrarily, as occurred in the case of the 900 MHz apparatus licences in May 2001. The second case is where a firm has come to the end of its apparatus or spectrum licence term. At this point, the price of access to spectrum is once again open to the vagaries of Government budgetary requirements.

In both of these cases, consideration should be given to ensuring that Government's powers to arbitrarily increase the price of spectrum are constrained, in the interests of preserving the incentives to invest in infrastructure.

1. Spectrum allocation

1.1 Government plays a central role in the allocation of spectrum in Australia. The principal role that Government assumes is as an auctioneer of spectrum, through the ACA. Within the scope of conducting auctions are the following powers:

(a) The ability to decide which spectrum should be auctioned;

(b) The ability to decide when spectrum should be auctioned;

(c) The ability to define competition rules for auctions — competition rules can pre-determine who bids for the spectrum (through incumbent exclusions, or special provisions for "new entrants"), as well as define the number of successful bidders;

(d) The ability to set minimum prices for spectrum, or "reserve prices"; and

(e) The ability to configure spectrum in terms of both geographical reach and minimum scale (measured in MHz).

1.2 As can be seen from the long list of powers outlined above, the Government is no ordinary auctioneer, in the sense that an auctioneer is usually one of many competing auctioneers in competitive markets. Rather, the Government is effectively the only auctioneer. That is, the Government is the monopoly supplier of spectrum, and can exercise control of the spectrum market accordingly.

Supply of spectrum

1.3 As stated above , Government is the monopoly supplier of spectrum. Spectrum is usually auctioned with reference to demand, so spectrum that has been designated for a potentially lucrative use such as 3G is unlikely to remain "fallow" for long.

1.4 Having said, this, as the monopoly supplier of spectrum, Government may have the incentive to restrict the supply of spectrum, in order to maximise the revenue it earns at auction.

Demand for spectrum

1.5 Spectrum usually needs to be identified for a certain use before it has a commercial value to firms in Australia.

1.6 The International Telecommunications Union (ITU) designates spectrum for different uses, and the ACA will, in most cases, follow the lead of the ITU. From a commercial standpoint, Australia is well served in adopting global standards, as the per unit price of vendor equipment is likely to be much lower if

produced on a global scale as opposed to producing for only the Australian market.

1.7 For example, the ITU designated 2GHz spectrum for 3G services, after which the Government auctioned this spectrum. While a spectrum licence does not specify use, the ITU designations inform what spectrum is marketable.

1.8 Once spectrum is designated for a certain use, potential users identify likely revenue streams associated with its use, and demand for spectrum is formed according to these expected revenues.

Market-based spectrum allocation

1.9 In the past, mobile licences have been awarded by so called "beauty contests". Successful operators have obtained valuable spectrum free of charge. This, together with the lack of transparency surrounding beauty contests, has led a number of jurisdictions (USA, UK, Australia, Germany, Holland, Italy, Austria, Denmark and Belgium) to auction spectrum licences.

1.10 Optus agrees with the move to utilising spectrum auctions, as they are preferable to beauty contests, which are open to challenge and political interference

1.11 Economists have long advocated spectrum auctions. They are seen as fairer, more transparent, result in a realistic commercial price for a valuable asset, and generate revenue for taxpayers. Price based auctions award spectrum to those users who place the highest value on the spectrum, which ensures that the spectrum is put to its most efficient use.

1.12 The primary objective of auctions is to efficiently allocate spectrum to the firm that will put that spectrum to its highest value use. It is important to realise that any revenue raised should be seen as an adjunct, or side benefit to any auction. Government cannot achieve both goals simultaneously — a revenue-raising goal could come at the cost of allocative efficiency.

1.13 The value of spectrum derives from their potential use in many telecommunications and broadcasting applications and their scarcity. A market-based approach to spectrum allocation yields substantial efficiency gains in rapidly changing telecommunications markets.

1.14 The benefits of a market based approach to allocating spectrum are summed up by NERA as follows:

> "If spectrum rights were tradable in some form through a market, then we would expect to see the transfer of spectrum from lower-valued to higher-valued uses. Through trading of rights, the use of spectrum could change in response to changes in technology and consumer demand. If the price of spectrum rose or was expected to rise, reflecting an increase in demand relative to supply, this would encourage the use of spectrum-saving technologies.

> For example, whether a channel would be of greater value if it is employed for FM sound broadcasting rather than land mobile communications can be difficult for an outside observer to assess. Individual users, however, will have a good idea of how much the channel is worth to them and will disclose that value through the price they are willing to pay for the right to use it. If FM sound broadcasting is the higher value use, broadcasters will displace land mobile users by bidding away the necessary spectrum rights."[1]

1.15 Decisions concerning which services should be allocated use of the radio frequency spectrum and which organisations should obtain the licences directly affect economic efficiency. Inefficient decisions concerning either the use or the user of particular frequencies impose a real cost on society.

1.16 Perhaps most important are the dynamic inefficiencies which may arise if spectrum cannot be readily reallocated in response to technological innovations and changes in consumer preferences. Dynamic efficiency requires the ability to adapt spectrum use rapidly to new (and unforeseeable) developments.

1.17 In summary, Optus supports spectrum auctions as the most efficient way to allocate a scare public resource. What is important however, is to ensure that auctions are run with this goal in mind, rather than loading additional goals on to auctions, such as revenue raising goals.

1.18 Care should also be taken not to determine an inefficient market make-up in the name of competition policy — as recent experience has shown, the market is the final arbiter of the optimal number of competitors in mobile markets, not Government.

The auction process

1.19 In its issues paper, the Commission raises a number of issues relating to the conduct of spectrum auctions. Optus would like to comment on the following auction related issues:

(a) When should auctions be used to sell spectrum?

(b) Should entry to the auction process be restricted in order to influence the shape of the industry that uses spectrum?

(c) Should the charge for spectrum licences consist of an upfront payment, annual payments or a combination of both?

When should auctions be used to sell spectrum?

1.20 Auctions should only be used as a means to allocate spectrum when the demand for that spectrum exceeds supply. If there is insufficient competitive tension in an auction, it will end in the first round, meaning that bidders effectively pay the

[1] NERA Topics, Marks, P, Radio spectrum management — time for a market-based approach, p. 4

reserve price for that spectrum. Optus will discuss the proper role of reserve prices in more detail later in the submission, but briefly, a reserve price should not be set with a view to guaranteeing a minimum amount of revenue for Government.

1.21 Given that an efficiently set reserve price would be a low value, where demand for spectrum does not exceed supply, the ACA should allocate spectrum directly to interested parties at a nominal price.

1.22 Optus does not believe that the ACA should leave spectrum fallow in an effort to wait until demand for spectrum exceeds supply, nor should the ACA artificially restrict the supply of spectrum to foster competitive tension for an auction.

Should entry to the auction process be restricted in order to influence the shape of the industry that uses spectrum?

1.23 Optus accepts that auctions play a key role in shaping the industry that uses spectrum, and that Government may have a role in ensuring a minimum degree of competition is fostered through spectrum auctions.

1.24 However, Government should resist the urge to be prescriptive in its view of how an industry should look, and should not seek to maximise the number of competitors in a market at all costs.

Government's starting point should be to allow the market to decide the optimal market structure, unless market failure can be identified

1.25 The starting point for any set of competition rules should be that the market is best placed to decide the optimal number of competitors in any market. Unless Government can identify a clear market failure, it should not use competition rules to shape the market.

1.26 In practical terms, this means that Government's starting point when considering competition rules is that no incumbents are excluded, and no special consideration for new entrants is provided.

1.27 For an incumbent to be excluded from an auction, Government must be sure that the acquisition of further spectrum would damage competition in the market, meaning that the incumbent would either have to already possess substantial market power (SMP), or be able to acquire SMP through the auction process. However, for this to be the case, Government must be sure to define the relevant market carefully.

1.28 For example, if Government is set to auction 1800 MHz spectrum, does it define the relevant market as the mobiles market broadly (ie. using 900MHz, 800 MHz and 1800 MHz spectrum to deliver mobile services) or does it define the market more narrowly, as operators who hold 1800 MHz spectrum? Depending on this

market definition, Government is likely to come up with very different answers as to whether it should intervene through using competition rules.

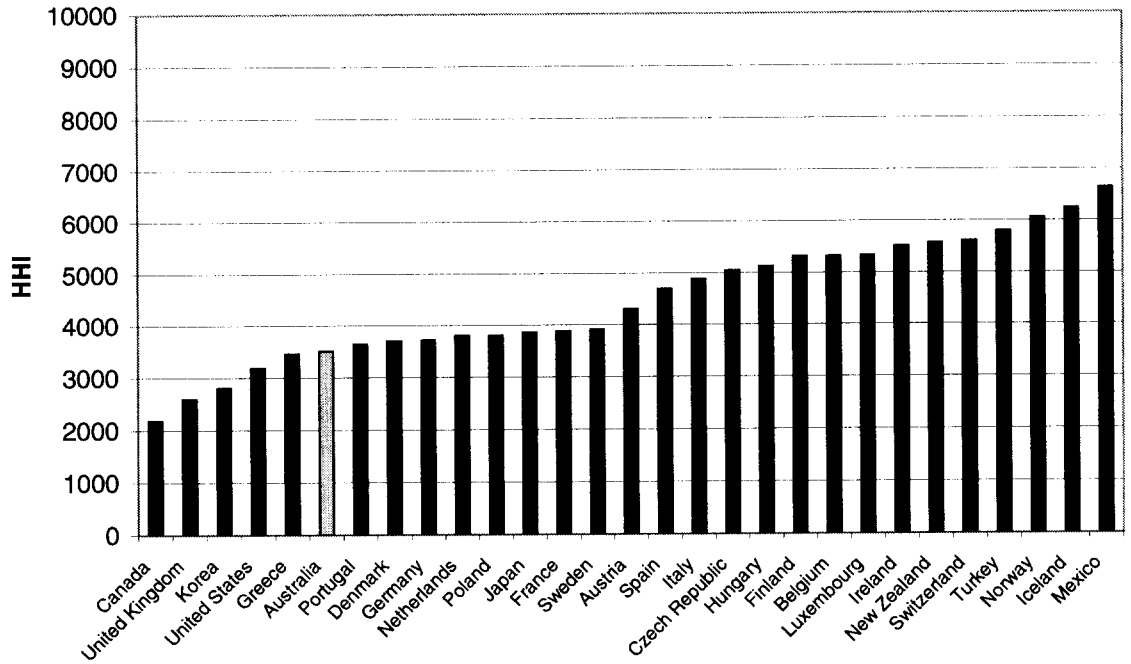
Government should not seek to maximise the number of competitors in a market

1.29 It is understandable that Government often seeks to foster competition wherever possible. Competition promises lower prices for consumers, and better services. However, Government is not in a position to know what the optimal level of competition is. Government should not seek to maximise the number of competitors in any market.

1.30 The long term economic welfare of consumers is not well served by a proliferation of sub-scale competitors, none of whom are viable. For example, in the mobile industry, which is characterised by large fixed costs, there is considerable debate over the optimal number of competitors in the market. The demise of One.Tel could well have been an indication that Australia had too many competitors in a small mobile market.

1.31 Indeed, the degree of competition in the mobiles market in Australia is very high when benchmarked across all OECD countries. Figure 1.1 shows the level of competition in the Australian mobile industry, as measured by the Herfindahl Herschler Index (HHI). The HHI index is a measure of competition, with perfect competition valued at 1, while full monopoly is valued at 10,000. It is calculated by summing the squares of each competitor's market share. Australia's HHI is 3506, one of the lowest in the world.

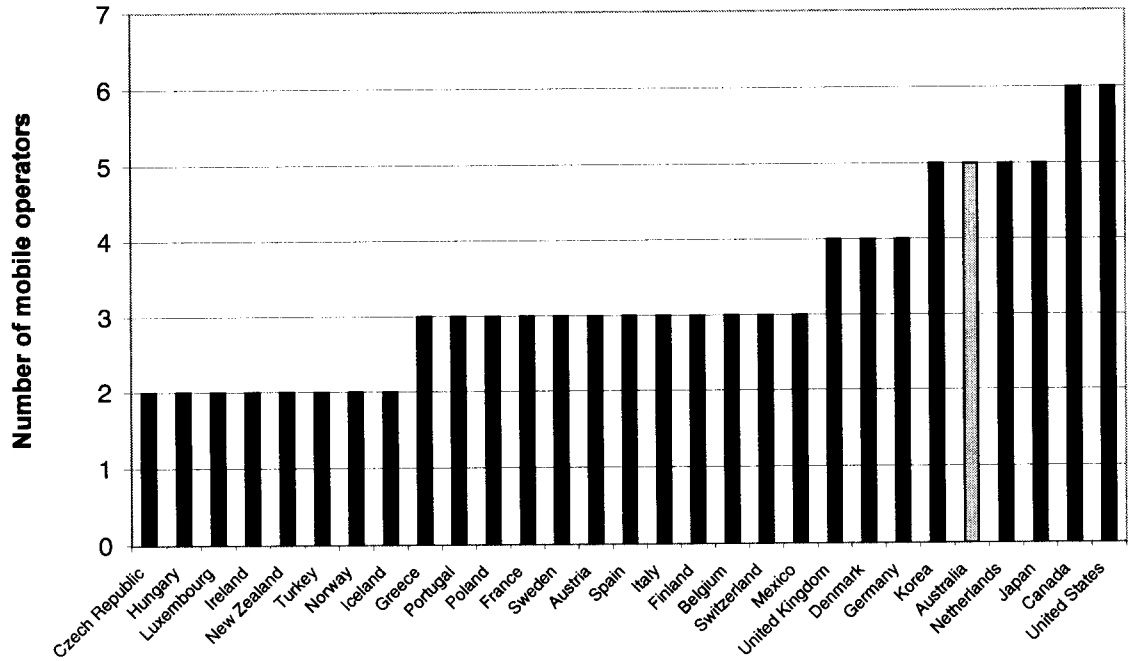
Figure 1.1: HHI index for the mobile sector across OECD countries



Source: OECD 2001, Communications Outlook 2001, p. 33

1.32 A slightly cruder measure of competition in the mobiles industry is shown in Figure 1.2. Figure 1.2 shows the number of mobile operators across OECD countries. Once again, Australia is found to have a high degree of competition when examined internationally. Australia was one of the few countries to have more than four competitors when the OECD report was produced. Even with the demise of One.Tel, Australia is still well above average.

Figure 1.2: Number of mobile operators across OECD countries



Source: OECD 2001, Communications Outlook 2001, p. 33

1.33 Both of these figures support the following contention — in an already competitive mobiles market, Government would need a very good reason to use auctions as a means to artificially foster further competition into the mobiles market. Using auctions in this way risks introducing inefficiently sub-scale competition into the mobiles market, which does not increase economic welfare in the medium term.

1.34 For this reason, Government should resist inefficiently constraining the maximum amount of spectrum any one firm can purchase at auction in the interests of fostering competition. Ideally, a degree of flexibility should be provided within auctions so that competition during the auction reveals the ideal market structure, rather than the structure being effectively determined by Government.

1.35 For example, in the 3G auction, Government had a total of 60 MHz to auction off. Now, Government had the power to determine that the 3G market should have six competitors through its competition rules — all it needed to do was to put a spectrum cap of 10 MHz per bidder. However, given the uncertain nature of 3G demand, Government decided to take a slightly more flexible approach and impose a spectrum cap of 15 MHz, which meant that competition during the

auction revealed the optimal number of competitors above the minimum of four. As it turned out, five bidders successfully acquired national or near national 3G spectrum, and can begin launching services from October 2002.

Should the charge for spectrum licences consist of an upfront payment, annual payments or a combination of both?

1.36 Optus believes that Government should be flexible in its approach to how payment for spectrum licences should be made. Optus is aware that Government's preference is usually for payment to be made upfront, so as to minimise the risks of default. However, particularly when large sums are involved, Optus believes that consideration should be given to staggering payments over time.

1.37 If payments were to be staggered over time, certainty would need to be provided that Government would not seek to increase the quantum of payments over the life of the licence. It is important for operators to have certainty of access to spectrum, and certainty of price of that access, as will be argued in more detail in section 2 of this submission.

1.38 In the following section, Optus provides detailed comment on the advantages and disadvantages of setting a reserve price.

Reserve prices do nothing to improve allocative efficiency

1.39 As outlined above, Optus supports the use of spectrum auctions to allocate spectrum to the firm who most highly values that spectrum. This is the proper role of auctions, as opposed to revenue raising objectives.

1.40 Governments auction spectrum in an effort to ensure that allocative efficiency is met — the firms that value spectrum most highly acquire spectrum at auction. Society benefits because the firms that acquire spectrum are best placed to maximise its efficient use. The revenue that is raised at auction is a side benefit of auctions, but should not be the primary driver of auctions. Auction design that seeks to maximise revenue does so at the expense of consumer welfare and allocative efficiency.

1.41 Unfortunately, the ACA, through its conduct of auctions, does seem to have a revenue-raising goal in mind. In particular, the ACA has used reserve prices to attempt to guarantee a minimum amount of revenue at auction.

1.42 In setting the starting bid for each lot, the ACA has stated it sets prices which "represent a value that provides a reasonable and fair return to the taxpayer for the use of the valuable public resource".

1.43 Optus believes that the reserve price in spectrum auctions should be set to ensure an efficient auction process. That is, if spectrum is expected to be sold for a high value, Optus accepts that bidding should not start at zero. Reserve prices can be useful in discouraging non bona fide bidders. However, we do not

believe that reserve prices should reflect any notion of a "value which provides a reasonable and fair return to the taxpayer for the use of a valuable public resource".

1.44 Optus does not agree that reserve prices have a role in ensuring taxpayers get an adequate return for spectrum sales. An adequate return is what the market is willing to pay for spectrum at a point in time.

1.45 Optus believes that reserve price should be set at the level consistent with an efficient auction process. We believe the ACA's role is to generate an efficient auction process, so that spectrum goes to bidders who most value it, and will be able to use it to improve consumer welfare.

Setting reserve prices with revenue targets in mind carries risks

1.46 Government, by setting reserve prices at levels that appropriates some sort of "value for Government", is assuming that it has superior knowledge to carriers in determining the market value of spectrum.

1.47 The problem with this approach is that the "value" of spectrum is not easily estimated, due to:

(a) Technological uncertainty;

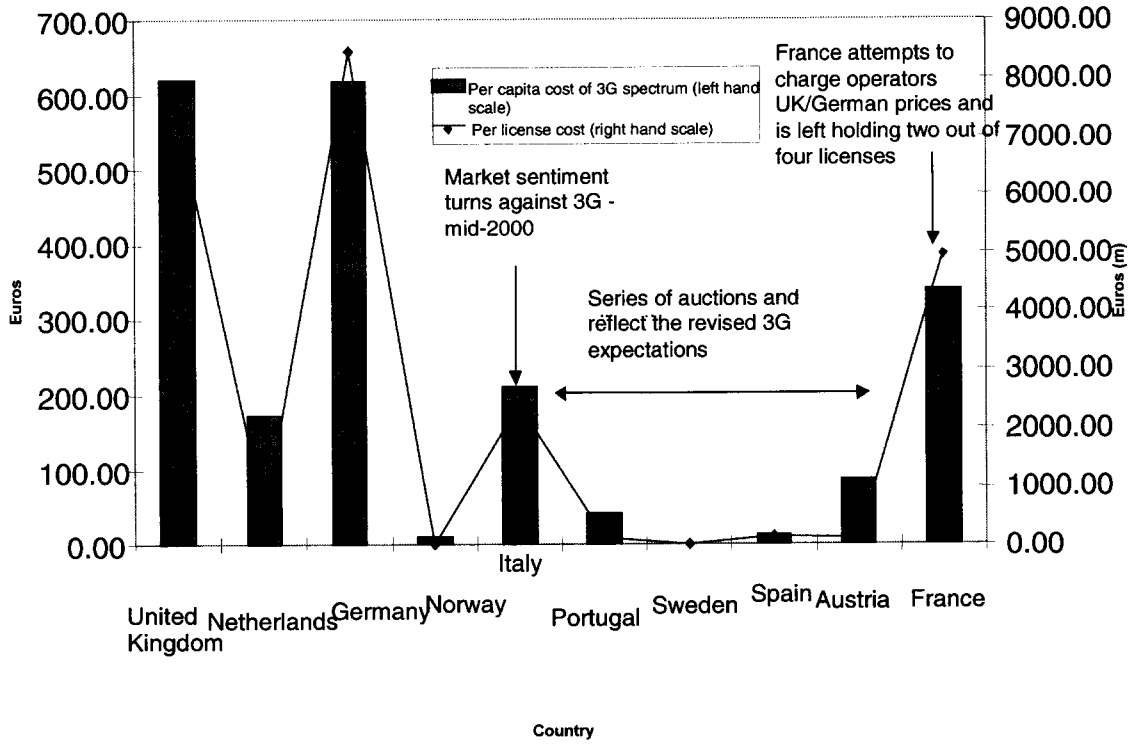
(b) Demand uncertainty; and

(c) Government information asymmetries — firms in the market place have better information than Government.

1.48 Governments are not appropriately placed to "value" spectrum. For example, the results from the 2000 mobile spectrum auctions were not anticipated. In addition, for the 3G auction, given the wide variation in prices paid internationally (see Figure 1.3), Government was not in a position to form a view on what the market value of the spectrum was. Put simply, the only true market value of spectrum is what a firm is willing to pay for the right to use that spectrum at auction. That value changes over time, so that the price paid at auction is only the market value at that particular point in time.

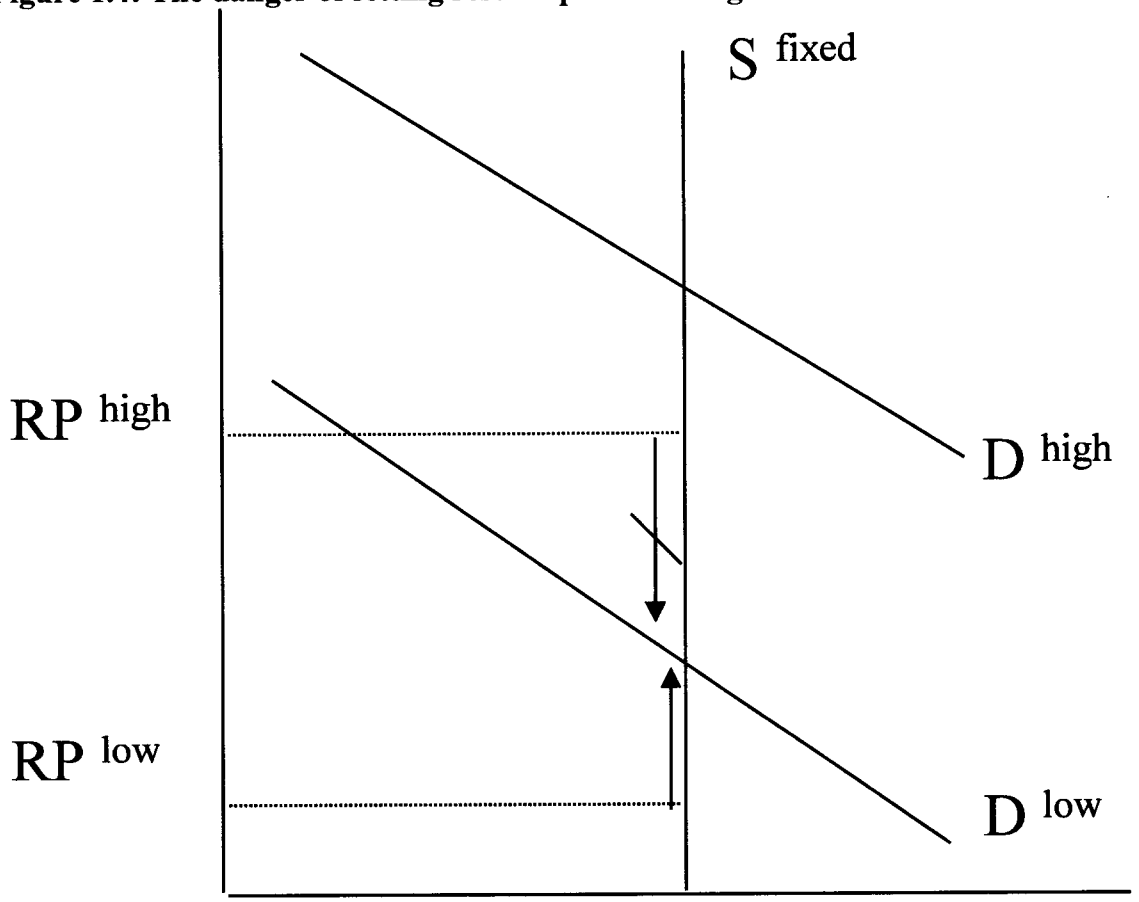
1.49 The wide range in valuations can be seen in the large discrepancies in prices paid in European auctions. Perceptions of spectrum value constantly change as new information comes to light — witness the reduction in auction prices since the UK and German auctions.

Figure 1.3: The variation in the value of 3G spectrum across jurisdictions



1.50 In an environment of uncertain demand, setting starting bids at a high price runs the very real risk that spectrum will remain unsold, to the detriment of consumers. Unsold spectrum is problematic, and ideally all spectrum should be sold at auction.

Figure 1.4: The danger of setting reserve prices too high



1.51 Figure 1.4 shows that setting reserve prices at levels aimed at raising revenue increases the risk of spectrum going unsold at auction. Assume that a Government is auctioning spectrum. The demand for that spectrum is uncertain. This demand uncertainty is represented by the two demand curves, Demand ^{low} and Demand ^{high}.

1.52 Government has two alternatives in setting the reserve price (RP). It can set RP at RP ^{high} or RP ^{low}:

(a) If Government sets the reserve price (RP) above the demand clearing price, spectrum goes unsold.

(b) If Government sets RP below the demand clearing price, the bidding process ensures the price reaches the efficient level.

1.53 The lesson is that raising the entry bar too high, whether through beauty contests, high entrance fees or high reserve prices, runs the risk that bidders that

otherwise would participate will pull out early, exposing consumers and the Government to a range of risks:

(a) less competition and lower consumer welfare;

(b) unsold spectrum; and

(c) lower overall revenue.

Setting reserve prices to raise revenue can significantly inflate operator's costs with no gain in allocative efficiency

1.54 Given that the proper objective of a spectrum auction is to allocate spectrum to the firms that most highly value the spectrum, the absolute price that firms pay has no bearing on the efficiency of the allocation process. If Government could somehow identify the firms who value spectrum highly, they should allocate that spectrum for zero cost to maximise economic welfare. The role of auctions is to identify the firm that will use spectrum most efficiently.

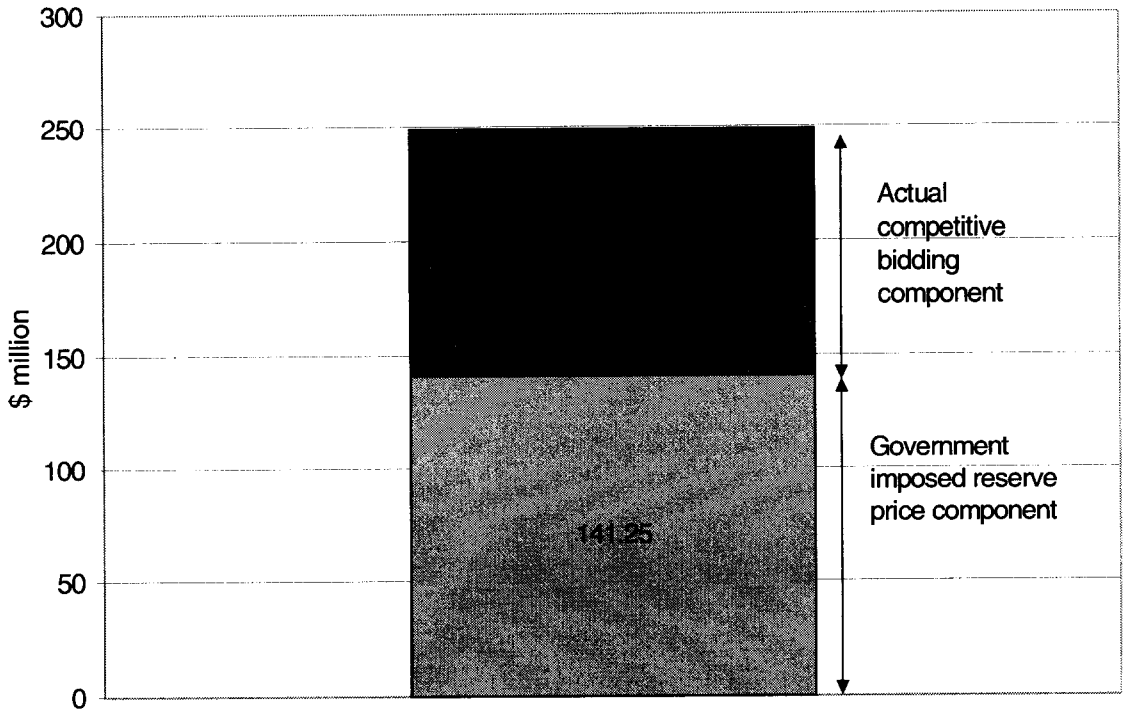
1.55 This means that assuming that reserve prices are not set so high that bidders exit the auction, the identity of the winning bidders will be the same with either a high reserve price or a low one. That is, the higher prices paid at auction do not increase efficiency at all. What high reserve prices can do however, is to increase the cost base of the winning bidder unnecessarily.

1.56 For example, in the Australian 3G auction, there were approximately the same number of bidders as slots of available spectrum, with most of the bidding centred around reserving the desired slots of spectrum, rather than outbidding a carrier in absolute terms. This meant that the auction ended soon after this sorting out period of bidding, with prices not far above the reserve price.

1.57 This also meant that a large portion of the $249 million Optus paid for 3G spectrum was due to Government set reserve prices, rather than the competition for spectrum during the auction.

1.58 In Figure 1.5, the price that Optus paid for 3G spectrum is split into its two components — the Government imposed reserve price, and the competitive bidding portion of the total price paid. Figure 1.5 shows that around 57 per cent of the eventual price paid for 3G spectrum was pre-determined by Government when it set its reserve prices. In fact, this calculation over-states the competitive bidding element, as the Government also set the minimum bid increments for the 3G auction, which further inflates the price paid for spectrum beyond the already high reserve price.

Figure 1.5: Over 50 per cent of the price paid by Optus for 3G spectrum was pre-determined by Government, rather than competitive bidding at auction



Increasing operator's cost base harms consumers

1.59 If reserve prices artificially increase the cost base of operators, consumers will be harmed. That is because operators will need to recoup both the fixed and variable costs of their mobile networks, including the cost of spectrum. Higher spectrum costs translate into higher prices to consumers.

1.60 This view has been challenged by auction advocates, as outlined in a recent paper by Veljanovski:

> "As EC Competition Commissioner Monti has stated there is a concern that "astronomic prices" paid for auctions will raise prices and lead to pressure for industry consolidation. These fears have been rubbished by the advocates of auctions as scare mongering and back to front economics. They argue that the auction price is a fixed/sunk cost that will not affect future mobile tariffs, which market forces will force down to long-run (incremental) costs. That is, future mobile prices determine the bids, and not the other way around! If the bidders have overbid, they will simply have to write off part of the costs, so that shareholders not consumers take

the loss. To argue otherwise, assumes that mobile operators can charge whatever price they want". [2]

1.61 However, it is by no means certain that this text book view of economics will hold in real world mobile markets. As Veljanovski continues:

> "It is in the area of impact of auctions on future 3G mobile markets that real contention emerges (and requires an excursion into some economics). The claim that high spectrum costs will not affect the working of future 3G markets is a simplistic response based on a textbook model of competition.
>
> If it is accepted that bidders have perfect foresight, that mobile markets operate frictionlessly and that a static market model adequately portrays the real world, then as a logical deduction lump sum licence fees will not have competitive or resource allocation effects. However, given that we are examining a small number of dynamic markets and that those who have designed the auctions find that their models of bidding behaviour have limited predictive power, it should not be surprising if 3G mobile markets do not behave like the textbook widget market.
>
> The basic reason they will not respond in this way is that widgets and mobile service operate in very different types of markets. 3G mobile services will be supplied by a small number of network operators in an industry with high (endogenously determined) fixed and sunk costs, network effects, demand inter-dependencies and large changing investment requirements, technological innovation, and risk and uncertainty...
>
> ...The assumption implicit in the "spectrum costs doesn't matter school" is that mobile retail and wholesale prices will (tend) instantaneously to adjust to forward looking efficient cost structures, which does not happen in practice and should not happen in theory where there is any necessity to set prices to create efficient investment incentives. The fact that a cost is fixed, lumpsum or sunk does not dispose of the question whether it will affect the operation of future 3G mobile markets (even in theory)." [3]

[2] Cento Veljanovski, "Competition and Spectrum Auctions", p. 5

3 Cento Veljanovski, "Competition and Spectrum Auctions", p. 5

2. Spectrum tenure

Introduction

2.1 Once spectrum is allocated, it is important that spectrum tenure is as certain as possible. This ensures that the incentives to invest are preserved, encouraging both productive and dynamic efficiency gains.

2.2 Spectrum tenure has two elements — continued access to spectrum, and the price of that spectrum.

Continued access to spectrum

2.3 Optus acknowledges that certainty of tenure must be balanced against the need to allocate spectrum for new technologies that will enhance economic welfare.

2.4 Optus believes that unless a more valuable use is identified, continued access to spectrum for incumbents is of paramount importance. Where a more valuable spectrum use is identified, Optus supports the two year reallocation period as the best way to ensure that spectrum is made available for high value uses

2.5 A two-year reallocation period, combined with proper spectrum planning by the ACA, which involves advance warning being given to fixed link incumbents, balances the competing needs of different spectrum users.

2.6 Optus does not support the US system where incumbents must be compensated by new users, as this holds back efficient use of spectrum and encourages incumbents to hold new players to ransom.

Price of access to spectrum

2.7 An important aspect of spectrum tenure is the price of access to spectrum should remain constant over time, if the incentives to invest are to be preserved.

2.8 In a typical spectrum auction, the price of spectrum is identified through the auction process, and is paid upfront, so that the price of spectrum for the period of the spectrum licence (15 years maximum) is held constant. However, there are two cases where the price of spectrum can vary. First, is the case where a firm has an apparatus licence with a maximum term of only 5 years. That firm is open to changes in the price of spectrum, as Government can change the apparatus licence fees arbitrarily, as occurred in the case of the 900 MHz apparatus licences in May 2001. The second case is where a firm has come to the end of its spectrum licence term. At this point, the price of access to spectrum is once again open to the vagaries of Government budgetary requirements.

2.9 In both of these cases, consideration should be given to ensuring that Government's powers to arbitrarily increase the price of spectrum are

constrained, in the interests of preserving the incentives to invest in infrastructure.

Continued access to spectrum

2.10 As stated above, continued access to spectrum is important in ensuring that the incentives to invest are preserved. Ideally, access to spectrum should be ongoing, at constant prices, so that firms are well placed to invest in infrastructure. Having said this, the ongoing access to spectrum does need to be balanced with the need to ensure that spectrum is available for use as new technologies are developed. For example, 3G spectrum is currently being used by fixed link incumbents for quite low value uses. From a societal standpoint, it would not be efficient to deny Australians access to 3G services because Government wishes to ensure fixed link incumbents are not harmed.

The spectrum reallocation process

2.11 The balance between ensuring access to spectrum is ongoing, and ensuring that spectrum can be used for new technologies, is struck through the reallocation process. Briefly, the reallocation process works as follows:

(a) The ITU designates a particular band of spectrum for a particular use. For example, the ITU designated 2GHz spectrum as suitable for the provision of 3G services;

(b) The ACA notifies spectrum incumbents directly that the spectrum they are currently using may be subject to reallocation. The ACA also publishes a band plan which notifies firms of likely upcoming spectrum auction;

(c) After extensive consultation, the ACA auctions off the spectrum;

(d) Once the spectrum is auctioned, spectrum incumbents have a minimum two-year reallocation period, before they must move to another band. Firms that purchase the spectrum in question purchase it unencumbered by spectrum incumbents, increasing its market value.

2.12 The reallocation process has two main advantages:

(a) Spectrum incumbents are given considerable warning about possible relocations – The time between the ITU designating spectrum for a particular use and the eventual relocation of a spectrum incumbent could often be in the vicinity of five years. Given that the ACA will not allocate spectrum in a band that it believes will be designated for another se, spectrum incumbents are given as much certainty as is possible;

(b) Purchasers of spectrum acquire spectrum unencumbered – This is particularly important. Some would argue that if prospective uses of spectrum are high value uses, then there is no reason why purchasers of spectrum could not buy spectrum directly from spectrum incumbents,

who will have the incentive to relocate to a lower value parcel of spectrum. However, this ignores a number of practical difficulties. First, spectrum, to be useful commercially, should ideally be contiguous, and available in certain size lots. If spectrum purchasers need to piece together a series of purchases before spectrum is configured for efficient use, the spectrum could remain inefficiently fragmented. In addition, given that spectrum needs to be configured in a certain way for commercial use, spectrum purchasers could be held to ransom by spectrum incumbents who realise they can hold out for an exorbitant price if they own the "last piece in the puzzle". Finally, many spectrum incumbents may not be commercially driven to bargain with spectrum purchasers. For example, if the spectrum incumbent is a Government Department, it is less likely to act on purely commercial grounds in negotiating with spectrum purchasers. Indeed, it is for this reason that the US has been unable to auction off 2GHz spectrum.

The spectrum conversion process

2.13 The spectrum conversion process is used when the Government wishes to convert apparatus licences to spectrum licences.

2.14 Under the conversion process, Government offers the apparatus licence holders a spectrum licence at a price determined by Government. If the apparatus licence holders do not accept the Government's offer, then Government must auction off the spectrum. In this way, the apparatus licences holders' tenure is threatened by Government's desire to convert to spectrum licences.

2.15 In practice, Government has not forced operators to convert apparatus licences if they do not wish to. However, under the Act, Government does have this power. It is not clear why Government needs to have such sweeping powers in any conversion process. Given that it can arbitrarily increase apparatus licence fees, it should not be overly concerned whether operators pay it annually or in an upfront conversion payment.

2.16 A better conversion process would constrain the price of conversion to the equivalent of the apparatus licence fees apparatus licence holders had previously paid over the life of their licences. Note that the relevant apparatus licence fee is not the most recent licence fee paid, but an average over the life of the licence. This guards against Government increasing the apparatus licence fee in preparation for a move to convert the licence, as it is presently doing with the 900 MHz licences.

2.17 The benefit of this conversion process is that it would maintain access to spectrum over time at constant prices. It would not allow Government to seek windfall revenue gains through firstly increasing apparatus licence fees and then insisting that those recently increased fees should form the basis for a conversion payment.

Length of spectrum licences

2.18 Spectrum licences are currently restricted to a maximum term of 15 years. The Government should have the flexibility to offer licences for time periods in line with the useful life of assets, and the period of time required to pay back the investment. This should not be artificially restricted to 15 years.

2.19 Optus supports longer terms for spectrum licences, as it gives Government the flexibility to sell spectrum on the most suitable basis. For example, in the UK, 3G licences were sold with a 20-year licence period.

2.20 In addition, thought needs to be given to the treatment of spectrum licence holders upon the expiry of their spectrum licence. The Act currently states that spectrum licences will only be re-issued to spectrum licensees in special circumstances. The default option is that the spectrum reverts to the Government, who can presumably auction off the spectrum once more.

2.21 Now, if the spectrum holders are still using spectrum productively, this default option is potentially very costly both to them and their subscribers. Optus would support a reform to the effect that the default option should be that spectrum licences are re-issued to the current spectrum holders unless there are special reasons why Government may want to re-acquire that spectrum. Special circumstances may be that the spectrum is likely to be designated for 4G services, for example.

Certainty of price of access to spectrum

2.22 As mentioned earlier, spectrum tenure has two elements – certainty of access, and the certainty of the price of that access. If firms are subjected to unforeseen changes in the price of access to spectrum, their investment decisions are necessarily distorted. If a firm's cost base may be materially increased without warning, its investment decision making process is impaired.

2.23 The clear reason for changing the price of access to spectrum during the apparatus licence fee period is that Government is using apparatus licence fees to raise revenue, rather than to encourage the efficient use of spectrum. As Optus has argued consistently, revenue raising should not be the goal of radiocommunications policy, particularly when that revenue is raised in a haphazard way that threatens the incentives to invest in infrastructure.

2.24 Changes to apparatus licence fees should only include an increase to take into account inflation. The real price of access to spectrum should remain constant over time. This is particularly the case where an auction is used to allocate the apparatus licence in the first instance.

2.25 Optus rejects the notion that apparatus licence fees should be used to generate "value for Government". This notion leads Government to observe whether investments have proven to be successful, and if so, to increase apparatus licence fees in order to "get a piece of the action". This begs the question of

why Government does not feel minded to refund spectrum payments for investments that do not turn out to be successful. Firms that bid for spectrum assume commercial risk, in the belief that the risk adjusted return will be positive. If the Government appropriates any returns an operator may expect to make, the decision to invest is clearly less attractive at the margin. For this reason, Government should resist the urge to use apparatus licence fees to "generate a return for Government".

2.26 In May 2001, the Government chose to use its powers to arbitrarily increase the price of access to 900 MHz spectrum. Three mobile operators, Telstra, Optus and Vodafone, all use 900 MHz spectrum to deliver GSM mobile services to their subscribers. Because these three mobile operators were granted their licences before spectrum licencing began in Australia, they all hold five year apparatus licences. These apparatus licences are paid for on an annual basis. The annual payment was constant in real terms since the granting of the apparatus licences, but in May 2001, Government altered this.

2.27 In May 2001, Government increased the 900 MHz spectrum fees by 2.5 times, plus a CPI increase.

2.28 At that time, Optus strongly objected to the increase in 900 MHz spectrum fees. We argued that it would result in increased prices to consumers, lower mobile penetration and less investment in competitive mobile infrastructure. Furthermore, we argued that the lack of consultation about the increase, and its significant size, would have a negative impact on the mobile industry's incentives to invest.

2.29 Attached to this submission is the correspondence sent by Optus to the Government following the increase. It sets out the arguments against arbitrary increases of this nature. This case study provides a useful example of the dangers of altering the price of access to spectrum.

Secondary trading of licences

2.30 As the Commission outlines in its issues paper, secondary trading of spectrum can play a useful role in facilitating the movement of spectrum towards its most valued applications.

2.31 Secondary trading can also be useful in moving spectrum holdings from non-contiguous to contiguous holdings. A prime example of the potential gains from secondary trading is the 1800 MHz spectrum band. 1800 MHz was auctioned by the ACA in two auctions, the first in 1998, the second in 2000. The spectrum sold in 1998 was sold in reasonably contiguous holdings to Telstra, Optus and Vodafone in the main. However, in 2000, the spectrum was very heavily contested by two spectrum incumbents, as well as Hutchison and One.Tel (Optus withdrew from the auction once the prices bid exceeded its own valuation of the spectrum). As a result of the heavy competition in 2000, the spectrum sold was non-contiguous and over priced.

2.32 Holding contiguous spectrum is important, as it negates the need to maintain guard bands at the boundary of each spectrum lot. In this way, a given parcel of spectrum can be used more efficiently, reaping capital efficiencies. Thus, moving from non-contiguous to contiguous spectrum could be a beneficial use of the secondary market for 1800 MHz spectrum holders.

2.33 As the Commission notes though, secondary trading of spectrum in Australia has been relatively limited. While part of the reason for this may be that operators are keen to maintain their current spectrum holdings, Optus believes that a large part of the reason for the depressed secondary market is the high transactions costs involved – mainly in the form of onerous taxation.

2.34 To return to the 1800 MHz example, no secondary trades have yet taken place, despite clear incentives to do so. Optus believes that the main barrier to trade is the effect of the stamp duty and capital gains taxes on any potential trade. Since spectrum is held to be an asset, any trade incurs both stamp duty and capital gains taxes. Since the 2000 spectrum was auctioned at unsustainably high prices, the taxes implicit in any trade are onerous. For this reason, the tax burden involved exceeds the capital efficiencies on offer, meaning that operators continue to hold non-contiguous spectrum parcels.

2.35 Optus understands that Telstra has recently written to the Australian Tax Office on behalf of industry to seek clarification on the tax treatment of secondary trading in spectrum. Optus supports the removal of barriers to secondary trading of spectrum.

3. Satellite spectrum policy

3.1 In its issues paper, the Commission asks a series of questions relating to satellite spectrum policy. In this section, Optus briefly responds to each question.

What allocation and charging arrangements should apply to spectrum for satellite operation?

3.2 Spectrum policy in the area of satellites is international in focus, and the Australian Government has less autonomy in forming its policy. In the main, satellite spectrum policy is driven through the ITU.

3.3 The current 'allocation' mechanism is a 'first come, first served' which comes from the ITU processes. Australia cannot unilaterally change those arrangements. Customers may access either Australian or foreign spacecraft and in the latter case must take out apparatus licences for their Earth Stations. The Apparatus licences (Optus holds some to access Intelsat) are charged in accordance with the standard Table for Apparatus Licence taxes.

3.4 There is no evidence that there is congestion in Australia for access to satellite services to date.

3.5 Optus considers that the current arrangements are adequate.

3.6 Specifically, Optus uses the 'Communication with Space Object' class licence to obviate the need for its customers to obtain separate earth station licences.

3.7 The usage of ten standard table of apparatus licence taxes also maintains the concept of 'technological neutrality'.

Do current charging arrangements affect competition between spectrum users?

3.8 Under current arrangements, users of the same frequencies are subject to the same tax regime. There may be a competition issue where there is a foreign satellite which has not applied the 'class licence' approach providing services in competition with an Australian satellite which has that status. Customers of the foreign satellite would have to obtain their own Earth Station licences. However, Optus does not consider the current regime to be anti-competitive as the opportunity exists for any foreign operator to take up the status as an 'Australian Space Object'.

Does International co-ordination through the ITU adequately protect Australia's interests in managing the Australian Radiofrequency spectrum and the allocation of orbital slots?

3.9 The current ITU processes are 'first come, first served'. This has evolved over many years. Unfortunately in recent times some countries have made very many satellite filings and created what is termed 'the backlog' in the ITU, such that it now takes three years to get a satellite filing published.

3.10 Australia has worked within the various ITU processes over the past decade on ways of addressing the problem, with some limited success. Indeed, Australia first formally raised the issue at the highest level ITU meeting (termed the Plenipotentiary Conference) in 1994.

3.11 Australia needs to continue to work (led by the ACA and supported by industry) within the ITU to improve the satellite co-ordination processes whilst holding in balance the protection of Australia's interests and the equitable treatment of all countries.

Chris Anderson
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6 June 2001

FAXED 7/6/01

Senator the Hon Richard Alston
Minister for Communications,
Information Technology and the Arts
Parliament House
CANBERRA ACT 2600

By facsimile: (02) 6273 4154

Dear Senator Alston, Richard,

The recent increase in 900 MHz apparatus licence fees

I refer to your recent decision to increase the 900 MHz spectrum fees by 2.5 times, plus a CPI increase.

Optus strongly objects to the increase in 900 MHz spectrum fees. It will result in increased prices to consumers, lower mobile penetration and less investment in competitive mobile infrastructure. Furthermore, the lack of consultation about the increase, and its significant size, will have a negative impact on the mobile industry's incentives to invest.

This letter describes in detail our concerns:

- Government did not consult with industry on the fee increase;
- The fee increase is very significant;
- The fee increase undermines the incentives to invest;
- The fee increase will increase prices to consumers;
- The fee increase violates the terms on which 900 MHz spectrum was allocated in 1992;
- It is difficult for the Government to estimate the market value of 900 MHz spectrum — and comparisons show that even if estimates are used, the recent increase in fees are unjustified; and
- The allocation of spectrum has already occurred, so increasing fees serves no allocational efficiency objective (the traditional argument in favour of auctions).

The Government did not consult with industry on the fee increase

The Australian Communications Authority (ACA) wrote to Optus on 7 May 2001 advising us that you had directed the ACA to increase fees for 900 MHz apparatus licences by 2.5 times, after taking into account a CPI increase of 4.3 per cent.

This increase in apparatus fees means that where Optus previously paid $6.93 million per annum for its 900 MHz apparatus licence, it must now pay the new proposed annual fee of $17.98 million. This is clearly a substantial sum of money, and a cause of concern to Optus.

There was no industry consultation process, or call for views on the costs and benefits of raising the 900 MHz apparatus fee. It is hard to avoid the conclusion that the Government increased the apparatus fees to meet a short term revenue raising target before the 2001–02 Budget was announced, rather than with any economic justification.

The fee increase is very significant

In defending your decision in the press, you argued that the increase in spectrum fees was modest compared to the revenues mobile operators earn. With respect, Optus does not agree.

Comparing the annual spectrum fee with the total revenues earned is not a particularly relevant measure. Comparing the fees with the profit made by mobile operators may be a more useful approach. In our recently released results, Optus reported a profit of $423.8 million. Our Mobile division's share of that profit (based on revenue weightings) would be $181.6 million. A fee increase of $11.1 million reduces that profit by 6 per cent — a substantial impact in any business.

The recently increased annual spectrum fee should also be thought of as a series of annual payments over the useful life of the spectrum. Assuming that 900 MHz continues to be used to provide mobile services for another 15 years, then the implicit price has increased from a net present value (NPV) of $75.3 million to $195.3 million — a very significant increase. [1] Differences in spectrum cost of this magnitude will clearly affect both investment and pricing decisions of mobile operators, just as the price paid at auction affects these decisions.

The fee increase undermines the incentives to invest

The arbitrary fee increase has done significant long-term damage to the incentives to invest in competitive infrastructure. Firms evaluate a range of commercial and regulatory risks in making investment decisions. In the past, spectrum fees were set in an orderly fashion, and were not factored into decision making as a major source of regulatory risk. However, with the Government's decision to arbitrarily increase the 900 MHz apparatus licence fees, a very real and significant regulatory risk has been introduced. In making investment decisions, firms must now attempt to ascertain what the Government's future budget needs are likely to be, and must accept that there is much greater variability in spectrum fees than has occurred in the past. This clearly reduces the risk-adjusted return for a variety of investments, and will result in less infrastructure investment in Australia.

[1] That is the NPV of 15 annual payments of $6.93 million is $75.3 million, and the NPV of 15 annual payments of $17.98 million is $195.3 million, assuming a discount rate of 5.05 per cent.

The fee increase will result in higher prices to consumers

High spectrum prices act as a hidden tax on mobile users, who end up paying more than they should. With less people able to afford these services, the Government risks threatening the viability of the whole mobile industry.

It is sometimes argued that upfront spectrum fees paid at auction are a sunk cost, and do not flow through to consumers in the form of higher prices, as pricing decisions are made independent of these sunk costs. This is not correct. To remain solvent in the long term, mobile operators must recover both their marginal and fixed costs such as licence fees. This means licence fees must be recovered through higher prices to consumers, or less investment in competitive infrastructure.

Where licence fees are arbitrarily increased throughout the life of the investment, the sunk cost argument cannot apply. These unforeseen, arbitrary imposts will necessarily flow through to consumers in the form of higher prices, and / or less investment in infrastructure and innovative services.

High spectrum fees will not be "absorbed" by industry and are not somehow insubstantial. An increase in the cost of supplying mobile services caused by the licence fees raises prices, harming both consumers and producers. They will necessarily flow through to consumers in the form of higher prices or reduced investment in infrastructure.

The fee increase violates the terms on which 900 MHz spectrum was allocated in 1992

Optus and Vodafone entered the telecommunications market in the early 1990s, when the Government awarded licences to provide mobile services. The Australian mobile market was contestable at this time, with a variety of telecommunications firms able to bid for the right to enter the mobile market. Implicit in this entry decision was the knowledge that operators would have continued access to 900 MHz spectrum to provide mobile services at the previously established apparatus licence price.

The decision to enter the market was therefore contestable, and was based on the premise that access to spectrum would be ongoing, and at per annum fees that would remain constant in real terms. On this basis, operators competed to enter the market via a bidding mechanism set up by Government. Optus paid the Government $800 million for the right to enter the telecommunications market (both the fixed and mobile segments). A portion of this payment represented the market value Optus put on entering the mobiles market. [2] This established the correct market price for 900 MHz spectrum. Had mobile operators known the apparatus fee would be increased by 2.5 times in 2001, they would have paid less upfront for their licences to enter the mobile market. Hence, the Government decision amounts to a re-appropriation of mobile operators' property after the market-based auction has occurred.

Since the entry of Optus and Vodafone into the mobile market, they have both worked to develop the market to the point where mobile penetration rates are among the highest in the world. Both operators have sought to innovate, and to challenge the fixed line networks' dominance in voice and data services.

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[2] The mobiles portion was likely to be approximately equal to the price Vodafone paid to enter the mobiles market only. Optus believes that Vodafone paid $130 million.

However, the appropriate response from Government is not to attempt to recoup the profits in the mobile industry, to the extent that they exist. If firms believe that any profitable investment will have its returns reduced through regulation, then their decision to invest in the first place will be negatively affected. At the margin, this means that previously profitable infrastructure investment will no longer proceed. This is not in the long-term interests of end users, as they enjoy less coverage, and higher prices.

It is difficult for the Government to estimate the market value of 900 MHz spectrum — and comparisons show that even if estimates are used, the recent increase in fees are unjustified

Some may argue that the recent increase in apparatus fees has ensured that operators pay "market rates" for access to the 900 MHz spectrum. In particular, Government has characterised the recent increase in apparatus licence fees as an attempt to move fees into line with its assessment of what it believes the "market value" of the spectrum is.

However, it is difficult for the Government to estimate the market value of spectrum, and the process is necessarily rough and ready at best. To the very limited extent it can be done, the comparison suggests that the recent fee increase is entirely without justification. On any view, attempts to justify this fee increase by reference to market value do not stand up to close analysis.

There is no clear "substitute spectrum" for 900 MHz spectrum that Government could use to make an assessment of its market value.

The two auctions that Government may be tempted to use as a proxy are the 1800 and 800 MHz auctions held in 1998. The 800 MHz spectrum is arguably the closest substitute spectrum for 900 MHz spectrum, followed by 1800 MHz spectrum, which has different characteristics. However, an examination of these two auctions finds that the market prices paid are much lower than the recently revised apparatus licence fees would suggest. As set out in Table 1, the 800 MHz licence fee, if converted to an annual apparatus licence equivalent, is only $5 million per annum, less than the amount Optus previously paid before the recent increase. The price paid for 1800 MHz spectrum at this time was even lower, at an equivalent price of $2.7 million.

Table 1 sets out the three most relevant mobile spectrum auction results, and adjusts these results on a MHz basis, before calculating what the equivalent annual payment would be if the prices bid at auction were recouped through annual payments over the 15-year licence period for the relevant spectrum. We find that for the 1998 1800 and 800 MHz spectrum auction and the 2001 3G auction, the implicit market valuation of the spectrum is far below the level recently set by the Minister.

Table 1: Mobile spectrum auction results

Auction	Total amount bid ($m)	Total MHz on offer (MHz)	Bid per MHz ($m)	Convert to 8.4 MHz to reflect 900 MHz equivalent ($m)	Annual payment equivalent ($m)	Adjusted value [a] ($m)
1800 MHz — 1998	155.0	45.0	4.6	38.9	2.7	2.7
800 MHz — 1998	192.4	30	6.4	53.9	5.0	5.0
1800 MHz — 2000	1327.0	30.0	44.2	371.6	34.2	34.2
3G — 2001	1169.0	60.0	19.5	163.7	15.1	9.1

a: The 3G auction result has been adjusted downward to reflect its expected data centric capabilities. That is, we have assumed that 40 per cent of the amount bid at auction was centred around 3G's data capabilities rather than voice, which is the substitute for 900 MHz spectrum. Even if this adjustment is not made, the value is still lower than the recently increased apparatus fees.

Only the 2000 1800 MHz auction would lend any credence to the view that the recent increase was a reflection of the market value of the 900 MHz spectrum. However, the wide disparity between three different auctions and the 1800 MHz auction in 2000 demonstrates that the 2000 auction should be treated as an outlier, and serves no useful purpose in determining market values for any spectrum. The 1800 MHz in 2000 resulted in extremely high spectrum valuations, and can be seen as the peak of spectrum valuation in Australia. [3]

The recent demise of One.Tel provides further support to the contention that the 1800 MHz spectrum acquired in 2000 was acquired at unsustainably high prices. The very high fixed cost base that One.Tel incurred in entering the mobiles market has undoubtedly had an impact on its ability to compete in the market.

The recent 3G auction may be another auction Government would look to in an effort to surmise the market value of 900 MHz spectrum. If Government were minded to do this, it would find that the recently increased apparatus licence fee is higher than the prices paid at the recent 3G auction on a per MHz basis, adjusted for the data centric nature of 3G spectrum. Again, care should be taken in analysing 3G auction results, as the Government set a very high reserve price which had more effect on the prices paid than the true market valuation of the 3G spectrum.

[3] The 1800 MHz auction in 2000 is not an indicator of the market value of 900 MHz for, amongst other reasons:

- 1800 MHz spectrum has different characteristics to 900 MHz spectrum, with different valuations;
- The 1800 MHz spectrum auction in 2000 occurred at the peak of the telecommunications market, which has since fallen significantly;
- The financial health of the operators who paid high prices for 1800 MHz spectrum is in question; and
- In the 1800 MHz auction, new entrants were the main buyers of spectrum and paid a premium to enter the market — 900 MHz does not have this "market entry" premium, as the relevant mobile operators have been established for some years.

The market price of 900 MHz has already been set when Optus and Vodafone entered the mobiles market

As discussed above, the true market price of 900 MHz spectrum was set when Optus and Vodafone entered the mobile market in the early 1990s. Any attempt to change the fee structure after this entry decision has been made represents an expropriation of mobile operator's property rights.

The solution is allowing operators continued access to 900 MHz spectrum at the price of their apparatus licences before the recent arbitrary increase

The recent increase in the 900 MHz licence fee was an arbitrary increase without any basis. It was not based on any obvious assessment of the market valuation of 900 MHz spectrum, as this valuation is difficult to make, and in any case, does not support such high fees. The unprecedented nature of the increase has worrying implications for the incentives of operators to invest in competitive infrastructure.

Therefore, Optus believes that the recent increase in apparatus fees should be a one off increase, and fees should revert to their former levels in the next financial year. This would ensure that increased fees did not flow through to consumers in the form of higher prices, and would preserve the incentives of operators to continue to invest. In setting the apparatus fees at their former levels, we believe certainty should be provided that fees would remain at this level.

Charging operators higher 900 MHz apparatus fees in the year after charging them between $250 million and $305 million for 3G licences threatens the financial viability of the Australian mobile sector. It would raise the cost base of mobile operators to unacceptable levels, and inevitably increase prices to consumers.

In short, Optus believes that the Government should reduce fees to their former levels, and provide certainty that the fees will remain at those levels. This is a vital pre-condition to ensuring that consumers continue to enjoy ever lower mobile prices, and access to innovative services.

Increasing fees serves no allocation purpose

Price based allocations are traditionally used to allocate scarce spectrum resources to satisfy allocative efficiency criteria — resources should go to those who will most efficiently use them if welfare is to be maximised. The firms that are likely to most efficiently use spectrum are those who can afford to bid most for the rights to the spectrum at auction.

There are two side benefits of auctions. First, Government earns revenue from the auctions, and is able to use this revenue to fulfill its budget priorities. Second, the market value of the spectrum at that point in time is revealed. However, it should be stressed that these two benefits are side benefits of the efficient allocation of spectrum, not the rationale for auctions.

It follows that once spectrum has been allocated to a firm, there is no allocative efficiency gain in charging further fees, let alone increasing fees so that the taxpayer can "share in the success" of an industry. The current Government decision amounts to changing the rules of the auction, and the price paid for the spectrum, after the auction has occurred. Your decision has dampened the incentives for mobile operators to invest further in infrastructure.

The appropriate way for taxpayers to "share in the success" of the mobile industry is through enjoying superior services at ever-lower prices, with constantly improving coverage and innovative services. Given the 54 per cent penetration of mobile phones, it is fair to assume that the great majority of taxpayers are also mobile phone users. [4]

Conclusion

Optus strongly objects to the recent fee increase. Increased fees will flow through to consumers in the form of higher prices, and stifle investment. Our proposed solution is that the recent increase in apparatus fees should be a one off increase, and fees should revert to their former levels in the next financial year. In addition, in setting the apparatus fees at their former levels, we believe certainty should be provided that fees will remain at this level.

I have asked our Director of Regulatory to make contact with your office to arrange a meeting to discuss our proposal.

Please do not hesitate to contact me if you have any queries.

Yours sincerely

Chris Anderson

[4] Reported by the Productivity Commission, 2001, Telecommunications Competition Regulation, p. 3.9. Figure was for December 2000. More recent reports put the mobile penetration rate in Australia at close to 60 per cent.