



**Australian
Broadcasting
Authority**

**Submission by the Australian Broadcasting Authority to the
Productivity Commission Review of the Radiocommunications Acts
and the Role of the Australian Communications Authority**

25 October 2001

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INTRODUCTION

This submission principally addresses the questions set out in Section 2.7 of the Commission's Issues Paper.

The ABA agrees with the ACA that differences in the way in which the two organisations plan and allocate spectrum are primarily a function of:

- (a) the nature of the services being planned; and
- (b) the legislative differences between the *Broadcasting Services Act 1992* and the *Radiocommunications Act 1992*.

It is difficult to assess the immediate benefits of transferring complete responsibility for spectrum management to the ACA. However, it may be desirable in the longer term to merge the spectrum management functions of the ABA and the ACA, particularly having regard to expected improvements in spectrum productivity arising from digitisation. Those improvements clearly raise questions about the use of newly available spectrum that exceed the traditional focus of a broadcasting regulator. Further, to the extent that the planning of broadcasting services bands continues to raise industry-specific regulatory issues, there may also be arguments for a more general merger of bodies that regulate the broadcasting and electronic media industries.

The ABA would argue, however, that any new scheme for managing the planning and licensing of the broadcasting services bands should form part of a coherent approach to the promotion of media policy objectives, including objectives of the kind articulated by the Commission in its Broadcasting Inquiry Report (2000).

NON-BROADCASTING USES FOR THE BROADCASTING SERVICE BANDS

The broadcasting service bands are those parts of the radiofrequency spectrum designated for broadcasting uses and are reproduced in Table 1. As a general principle, spectrum that is currently designated for broadcasting licences can be used for a number of other purposes. Conversely, there are parts of the spectrum not currently designated for broadcasting that can be used for broadcasting purposes.

Table 1: Broadcasting services bands (BSB)

Band	Use
526.5-1606.5 kHz (inclusive)	MF-AM radio
45-52 MHz (inclusive)	VHF television band I (channel 0)
56-70 MHz (inclusive)	VHF television band I (channels 1 and 2)
85-108 MHz (inclusive)	The VHF-FM radio band in 87.5-108 MHz. The assignment covers 85-108MHz to cater for existing VHF television band II (channels 3, 4 and 5)
137-144 MHz (inclusive)	VHF television band III (channel 5)
174-230 MHz (inclusive)	VHF television band III (channels 6, 7, 8, 9, 9A, 10, 11 and 12)
520-820 MHz (inclusive)	UHF television band IV and V (channels 28-69)

International arrangements provide a framework for spectrum planning by establishing spectrum uses for each part of the radiofrequency spectrum, although there are some regional differences in those uses.

There are good commercial reasons for conformity with internationally agreed spectrum arrangements, especially in a small market like Australia. Australia is an importer of equipment for reception of broadcasting services. Non-conventional uses of the radiofrequency spectrum would require the manufacture of equipment compatible with the non-conventional uses.

The broadcasting services bands are already used for a variety of non-broadcasting purposes. Many of these are authorised by means of a class licence made available by the ACA. Other usages can be authorised by means of a determination by the ABA under section 34 of the *Broadcasting Services Act*, or through an agreement between the ABA and ACA made under subsection 31(2) of the *Radiocommunications Act*. Tables 2 and 3 illustrate the current non-broadcasting use of the broadcasting services bands through class licences and through section 34 determinations. There is only one subsection 31(2) agreement currently in place, covering datacasting.

As the tables illustrate, the ABA has conducted its planning process for analog radio and television based on the following assumptions:

- that VHF channel 5A is required for non-broadcasting services; and
- that the part of VHF channel 3 not used by VHF FM radio in Australia (85-87.5 MHz) will be required for non-broadcasting services in all markets.

The ABA considers that the greatest scope for non-broadcasting use of the broadcasting services bands resides within the television bands. VHF Band I (Channels 0, 1 and 2) are not favoured for analog broadcasting due to poor reception caused by man made electrical sources. For the same reason, these channels are not suited for digital television. There is already some scope for non-broadcasting use of this band, and when analog television services cease operation at the end of the simulcast period (the period when analog and digital television services operate concurrently) this band will be clear of broadcasting services. Proposed changes to the Australian Radiofrequency Spectrum Plan may result in this spectrum being used primarily for defence purposes.

Table 2: ACA Radiocommunications Class Licences authorising use of broadcasting services bands

Purpose/Class of transmitters	Part of BSB	Maximum EIRP	Class Licence
All transmitters	225–230 MHz	10 µW	Low Interference Potential Devices Class Licence
Wireless audio transmitters and auditory assistance transmitters	88–108 MHz	10 µW	Low Interference Potential Devices Class Licence
Wireless audio transmitters	174–230 MHz 520–820 MHz	3 mW	Low Interference Potential Devices Class Licence
Biomedical telemetry transmitters	174–230 MHz	10 µW	Low Interference Potential Devices Class Licence
Biomedical telemetry transmitters	520–668 MHz	3 mW	Low Interference Potential Devices Class Licence
Transmitters used for underground communications	0.5265–1.605 MHz 87.5–108 MHz	10 µW	Low Interference Potential Devices Class Licence
Wireless Video Transmitters	533–806 MHz	Ministerial Standard 315	Miscellaneous Devices Class Licence

Prior to the closure of analog television services the ABA intends to conduct a re-planning exercise to identify these potential productivity gains and to consult on the best alternative uses of the spectrum. Potential alternative uses will include additional digital broadcasting services, improved or mobile reception of existing digital broadcasting services, services ancillary to broadcasting (such as return channels from consumer to broadcaster to provide for interactivity), and non broadcasting uses such as land mobiles, satellites and cordless microphones.

Possible changes to spectrum usage for other bands are possible. In Europe, parts of VHF Band III are used for digital radio services. In Europe, this band extends up to 240 MHz and digital radio receivers are available in the market place that can operate on such frequencies. Accordingly, if it were sought to facilitate the introduction of digital radio services, consideration could be given to re-allocating the band 230-240 MHz for broadcasting. Currently this band is one of many that are designated in the Australian Radiofrequency Spectrum Plan as principally for purposes of defence.

Table 3: Details of Apparatus Licences issued by ACA in Broadcasting Services Bands

Frequency Bands	Purpose	Area of Australia	Period
526.5 - 532.5 kHz (AM Channel 531 kHz) AM Channel 540 kHz also included because stations operating in 526.5 - 532.5 kHz have potential to interfere with reception of broadcasting stations operating on 540 kHz (bandwidth 18 kHz)	For scientific purposes	Only existing services. No new licences to be issued unless permission is granted from the ABA.	9 September 2008
526.5 - 532.5 kHz (AM Radio)	For land mobile services	Nickel complex (WA) Oak Creek Mine (QLD)	12 August 2008
45 - 52 MHz (VHF television channel 0)	For radiocommunications purposes as specified in the <u>Australian Radiofrequency Spectrum Plan</u>	Only existing services. No new licences to be issued unless permission is granted from the ABA.	9 September 2008
56 - 70 MHz (VHF television channels 1 and 2)	For radiocommunications purposes as specified in the <u>Australian Radiofrequency Spectrum Plan</u>	Only existing services. No new licences to be issued unless permission is granted from the ABA.	9 September 2008
85 - 87.5 MHz (VHF television channel 3)	For land mobile services	All areas except where television programs are received on VHF television channel 3.	19 April 2003
87.5 - 88 MHz (VHF television channel 3)	For <u>low power open narrowcasting services</u>	All areas except where television programs are received on VHF television channel 3.	31 December 2013
137-144 MHz (VHF television channel 5A)	For radiocommunications purposes as specified in the <u>Australian Radiofrequency Spectrum Plan</u>	All areas except where television programs are received on VHF television channel 5A.	31 December 2006
93 - 107 MHz (VHF television channels 4 and 5)	For radio determination	Australian antarctic territories.	19 April 2003
174-181MHz (VHF television channel 6)	For radiocommunications purposes as specified in the <u>Australian Radiofrequency Spectrum Plan</u>	Only existing services. No new licences to be issued unless	19 April 2003

575 - 582 MHz (UHF television channel 35)	For amateur television	permission is granted from the ABA.	31 December 2001
813 - 820 MHz (UHF television channel 69)	For BHP Iron Ore Pty Ltd	Only in: Spring Hill (QLD) O'Halloran Hill (SA)	
816 - 820 MHz (UHF television channel 69)	for land mobile services	No new licences to be issued.	
		Newman (WA)	28 July 2002
		Within five kilometres of: 1 Farrer Place, Sydney, NSW; Lot 69 Border Road, Horsley Park, NSW; 525 Collins St, Melbourne, VIC; 10 Wesley Court, Burwood, VIC	28 February 2002

Source: ACA web site 15 October 2001.

In the United States, 408 MHz of bandwidth has been allocated for television use. This allows the use of 68 channels each 6 MHz wide. As part of the transition to digital television, 60 MHz has been re-allocated for other purposes (once vacated) and it is proposed to reallocate a further 48 MHz. Both of these band segments are in the UHF bands, which in the United States extend from 470 to 806 MHz and comprise 56 channels. Following the re-allocations the US will have a total of 50 channels (38 in the UHF band(s)).

In comparison, Australia currently has a total of 54 television channels. This figure excludes channels 3, 4 and 5 which coincide with the FM radio band and are planned to be cleared from that band. In the UHF band, which extends from 520-820 MHz, there are 42 useable 7 MHz wide channels. It is already proposed that there be no further broadcasting use of channels 0, 1, 2 and 5A. Any reallocation of UHF television spectrum would result in there being fewer channels available for television broadcasting than in the United States, unless other parts of the spectrum were made available for broadcasting television.

Reallocation of any band can result in significant costs and disruption to existing users. For example, if Australia were to adopt the United States band plan for spectrum usage above 746 MHz, then Australian television channels 59-69 would be affected. Currently there are a total of 1533 transmitters licensed on these channels.

COMPARING ABA AND ACA APPROACHES TO THE ALLOCATION OF SPECTRUM

The ABA agrees with the ACA that differences in the way that the two organisations plan and allocate spectrum primarily relate to the nature of the services being planned and are a direct result of the differences between the *Broadcasting Services Act* and the *Radiocommunications Act*.

Spectrum planning is defined by the degree of protection from interference built into the regime or, in other words, the assumptions that are made about the acceptable level of interference between services. The ABA has adopted protection ratios that accord broadcasting services a high level of protection from interference, in line with general expectations that broadcasting services should be received without interference.

The broadcasting services bands are generally highly congested. In those areas where spectrum is clearly available, there is often little or no demand for services, and no operators interested in providing commercial broadcasting services. Conversely, in the metropolitan areas and other areas where the demand for spectrum exceeds supply, planning of services must be tailored to protect existing services from interference.

In relation to digital television, the ABA has followed the legislative requirement and planned for services to match analog coverage. In addition, where spectrum availability permits, the ABA plans two 7MHz channels for datacasting services.

Planning

The ABA's process for planning analog services in the broadcasting services bands is described in the ABA's *General Approach to Planning* (1997) document. The ABA has developed a series of policy and technical assumptions that are used in planning services. The policy assumptions are set out in the *General Approach to Planning* and the technical assumptions are set out in Annexure B to the ABA's *Technical Planning Guidelines*. Copies of both documents are attached.

Key characteristics of ABA planning under the *Broadcasting Services Act* include:

- An assumption that the primary use of the spectrum will be broadcasting;
- Planning for a significant number of existing services;
- Mechanisms to set aside spectrum for community and national broadcasting services;
- An emphasis on wide public consultation and the use of detailed public policy criteria specified in the *Broadcasting Services Act*.

The ABA has not planned in a 'green fields' environment. It has also sought in many areas to accommodate demand for new services without compromising coverage of existing services. As a result, there has been limited scope for significant discretion to be given to individual broadcasting service providers in their licences as to the manner in which spectrum may be used.

In general terms, the ACA sets broad technical parameters within which any person holding an appropriate licence may provide a service. The licence itself sets technical conditions for the operation of the specific service within the broad technical parameters. This approach contrasts with the ABA's approach to planning, which is much more customised to known demand in each area and provides specific solutions to the circumstances (including expressed demand and the willingness of service providers to meet that demand) within a particular licence area.

Licensing

The ABA allocates commercial broadcasting service licences by auction, except where otherwise required by the Broadcasting Services Act. Transmitter licences for open narrowcasting services (broadcast under a class licence) are also auctioned. Community broadcasting licences are allocated on a merit system, by reference to the considerations set out in s. 84 of the Broadcasting Services Act.

The ACA has greater flexibility than the ABA in the ways that it can license spectrum usage. There are three different types of licences that the ACA may issue:

- Apparatus licences (transmitter licences for broadcasting services are a type of apparatus licence);
- Spectrum licences (not currently applicable to broadcasting); and

- Class licences (not currently applicable to broadcasting, but could be in certain circumstances)

The ACA's approach to the planning and allocation of spectrum used by broadcasting services can be seen in its planning and licensing of MF narrowband area station services in the upper (non broadcasting services bands) part of the AM band, as well as in its licensing of low powered open narrowcasting services (located in the 87.5-88.00 MHz part of the FM band). All of these services operate under apparatus (transmitter) licences.

The ACA approach to narrowband area station service is essentially to issue over the counter licences to whoever applies for a set licence fee, if a set of technical rules are met by the application for an apparatus licence. The operation of those technical rules results in services of significantly lower audio quality than the services broadcast in the adjacent AM radio broadcast band. On the other hand, relatively large numbers of licences have been made available – though it is understood many are not in operation.

The ABA has made the band 87.5-88.0 MHz available for very low powered FM radio narrowcasting services. The ABA initially undertook this licensing work but later handed over the licensing role to the ACA. The licences are issued over the counter for a set licence fee, provided that technical rules (originally developed by the ABA) are satisfied. Concern about the hoarding of licences has resulted in the introduction of a 'use it or lose it' rule and a proposal to allocate unused licences by auction.

Auctions

The ABA uses the price based allocation system of an auction, determined under s.106 of the *Radiocommunications Act* by the ACA for the ABA, to allocate open narrowcast licences. There is no power in the *Radiocommunications Act* to allow the ACA to delegate power to the ABA to determine the system itself. The ABA decided to auction open narrowcast licences to deal equitably with a situation in which there was more demand for licences than there were licences available.

Previously, licences had been issued on a first come first served basis. This appears to have had some inequitable and inefficient consequences. In the case of the most potentially valuable licences, such as metropolitan area AM frequencies, it gave no coherent basis for choosing between competing applicants. In the case of less valuable licences, it encouraged speculative 'hoarding' of licences and meant that the person with the means and the intention to provide a service was not necessarily able to obtain it.

The auction process is a transparent process for licence allocation under which the highest bidder is issued the licence. In theory, this means that the person who most values the licence gets it. However, in practice the auction process has raised issues that are of concern to some industry participants. Although there is scope for debate about its application, diversity remains an object of the *Broadcasting Services Act*. It has been argued, especially by some narrowcast licensees, that an auction system

might produce pressures towards greater homogeneity of services and prevent the provision of socially desirable but less viable program formats. For example, a number of genuine open narrowcast operators with limited funding (eg, foreign language services) have consistently decried what they see as unfair competition from better-funded applicants such as the TABs, who provide racing radio services, or existing commercial radio broadcasting services.

Licence tenure

Commercial and community broadcasting licences are allocated for 5 years, with a presumption of automatic renewal as long as the ABA does not find the licensee 'unsuitable' in the terms of the *Broadcasting Services Act*. The *Radiocommunications Act* in effect confers unlimited tenure on the associated transmitter licences as long as the parent (broadcasting) licence remains in force.

Licences for open narrowcast services auctioned by the ABA are issued (by the ABA) under the *Radiocommunications Act* for the maximum period of 5 years. Under the *Radiocommunications Act*, the ACA may renew a licence at the end of the licence period by issuing a new licence for a specified period up to five years, or it may decide not to renew the licence, at which time the licence could be re-auctioned (a licensee may seek a review of such a decision; first by the ACA, then by the AAT). In January 2001, the Minister directed the ACA that it must not refuse to renew such licences on the basis of a general policy that the licences should be issued under an auction system. However, tenure is also constrained by section 34 of the *Broadcasting Services Act*, the section under which spectrum is made available for open narrowcasting. The ABA must specify a period for which it is to be made available under section 34, though it may make that period a lengthy one.

Open narrowcast licence holders argued that without a guarantee of renewal of their licences, five years is an insufficient period of time to recoup the investment necessary to establish a broadcasting service.

In view of this, should the special status of the broadcasting service bands be removed, the transitional issue would need to be addressed of the tenure of broadcasting licence holders in the broadcasting services bands.

Future planning exercises in the broadcasting services bands

In the more densely populated parts of the country, the ABA's processes of preparing Licence Area Plans and digital channel plans will, when completed, largely exhaust the spectrum available for new analog broadcasting services. However, successful migration of analog television to digital would make large parts of the VHF Band III and the UHF broadcasting services bands available for broadcasting-related or other uses.

Before then, any further planning of new analog broadcasting services in the broadcasting services bands will require specialised solutions to particular situations in specific licence areas.

SEPARATE MANAGEMENT OF BROADCASTING SPECTRUM

The principal advantage of the separate system of planning and management of the broadcasting services bands is that it permits analysis of the impact of social and cultural factors in planning broadcasting services to meet the needs of specific communities.

In planning broadcasting spectrum, the ABA considers the specific broadcasting needs and interests of a community. The ABA's planning process includes wide public consultation on issues such as the mix of different types of broadcasting services. In deciding whether broadcasting services of a particular type should be planned, the ABA is able to take account of any expressed demand from the local community and evidence from service providers that they are willing to provide service to meet this demand.

The ABA's approach has generated highly customised plans that try to fit spectrum capacity to local area demand and that balance the requirements of several sectors of broadcasting, including commercial (broadcasting and narrowcasting), national and community.

In relation to commercial broadcasting services, the ABA has taken the view that to plan additional commercial services would not represent 'economic and efficient use of the radiofrequency spectrum' unless there was some likelihood that the number of commercial service(s) would increase as a result of the decision. Further, the ABA, in response to the objects of the *Broadcasting Services Act*, prefers to plan additional commercial services to provide a wide coverage service, rather than planning low powered service that would only serve a small proportion of the population served by the existing licensees. This preference is intended to protect the quality of services in outlying parts of licence areas, that might otherwise deteriorate as wide-coverage services reacted to a loss of advertising revenue and competition in the most densely populated parts of their market. Third, the ABA takes account of the potential impact of new services on the level of local programming on existing services. Its concern is that there may be less appropriate coverage of matters of local significance if the new service(s) were unable to redress the deficiency by covering matters of local significance itself (ABA's *General Approach to Planning*, 1997, p.16).

The ABA acknowledges that the planning process under the *Broadcasting Services Act* has been disappointingly slow. As detailed in the ABA's submission to the Commission's earlier Broadcasting Inquiry (Report No.11, 3 March 2000) the original timetable for the entire planning process seriously underestimated the resource intensive nature of this process. This has meant that there have been delays in the allocation of broadcasting licenses and subsequent to this, the commencement of new broadcasting services. Nevertheless, the ABA believes that the planning process has promoted the objects of the *Broadcasting Services Act 1992*.

The process has also delivered services that: a) experience very low levels of interference within their licence areas; and b) provide much wider coverage of

broadcasting services that would have been likely without regulation designed to promote accessibility to services across Australia.

TRANSFERRING SPECTRUM PLANNING AND LICENSING RESPONSIBILITIES TO THE ACA

In the ABA's view, planning criteria for the management of spectrum should not be solely based on technical factors, unless there is some other provision made for the achievement of non-technical objectives.

Those non-technical objectives include a number identified by the Productivity Commission in its Report on broadcasting:

- Promoting the interests of consumers;
- Reflecting the community's social and cultural objectives;
- Encouraging diversity of major sources of information and opinion in the market for ideas;
- Promoting efficient resource allocation in broadcasting related industries and the Australian economy as a whole.

Additional changes proposed by the Commission included the separation of spectrum access (transmitter) licences from broadcasting licences, the replacement of licence fees with spectrum access charges and the introduction of spectrum trading rights.

Any decision to transfer planning responsibilities should not be based solely on narrow criteria of 'technical efficiency'. Rather, it should consider the other objects in section 3 of the *Broadcasting Services Act* and the extent to which these remain relevant to the planning of broadcasting services bands spectrum.

EFFECT OF TRANSFERRING RESPONSIBILITY FOR BROADCASTING SPECTRUM TO THE ACA

In the ABA's view, transferring responsibility for broadcasting spectrum is unlikely to have a significant impact on the current availability of spectrum in the broadcasting services bands principally because, unless and until spectrum is freed up, the broadcasting services bands are highly congested, especially in high and medium demand areas for both radio and television.

Any conclusions regarding the amount of spectrum that may become available following the transfer of regulatory responsibility must address the issue of the spectrum scarcity in Australia. It is difficult to determine the scarcity of radiofrequency spectrum in Australia except on a case-by-case basis. In general, the demand for spectrum in metropolitan markets will usually outweigh supply, with the reverse situation existing in remote areas. Licence area planning is expected to effectively exhaust the remaining supply of spectrum available for analog AM and

FM radio in the more densely settled areas of regional Australia. It is also worth noting that in those areas where spectrum is clearly available there is little or no demand for services or sufficient interest from operators in providing commercial broadcasting services.

Spectrum availability could be increased but this would require changes to the technical criteria used to plan the allocation of spectrum for services within an area. For example, if a decision were taken to reduce the level of protection afforded to a service from other services, potentially more spectrum could become available for use in that area. While this has the advantage of potentially creating more channels, it does have a number of disadvantages. These include the likelihood of greater interference to current and any new services (service quality) as well as a reduction in coverage provided by existing (and popular) services, especially commercial and national broadcasting services (signal availability).

Both disadvantages can be politically-sensitive issues. The Government remains committed to a policy that ensures that Australians living in regional and remote areas have access to the type and quality of services available in the larger metropolitan centres. The strength of the Government's commitment is evidenced by their allocation of capital to the Television Black Spots program.

Spectrum availability may also be increased by greater levels of co-siting of services. This applies particularly in the radio bands as there is already extensive use of co-siting of television services. While this may increase spectrum productivity, it would have an associated cost. For example, co-siting would see more transmitters centralised in fewer locations (thereby achieving reductions in technical infrastructure and maintenance costs) and managed by a market-based, transmission service provider. However, a cost of greater co-siting of transmission services may be the loss of many community broadcasting services, which are unlikely to be able to meet the market rental rate for these services or match the power levels of the commercial and national services. While spectrum availability might be increased through technical planning changes such as those considered above (eg. altering interference protection ratios; co-siting), other costs such as compensation to current users or the payment of subsidies may reduce the economic benefit of these changes.

By far the greatest opportunity for an increase in the availability of spectrum will initially occur when analog television services are phased out. At this stage this should occur at the end of the respective simulcast periods in each of the metropolitan and regional markets. The simulcast periods are for a minimum of 8 years but may be extended by the Minister. Under the *Broadcasting Services Act*, a review of matters dealing with the duration of the simulcast period is to take place before 1 January 2006.

Australian Broadcasting Authority
25 October 2001



**Australian
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The ABA's General Approach to Planning

July 1997

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CHAPTER 1

OVERVIEW OF THE PLANNING PROCESS

BROADCASTING SERVICES BANDS

One of the primary functions of the ABA is to plan the availability of the broadcasting services bands (the BSB)¹ which have been referred to it by the Minister. The BSB which have been referred by the Minister to the ABA for planning are:

- (a) 526.5 - 1606.5 kHz (inclusive) The MF-AM radio band
- (b) 45 - 52 MHz (inclusive) VHF television band I (channel 0)
- (c) 56 - 70 MHz (inclusive) VHF television band I (channels 1 and 2)
- (d) 85 - 108 MHz (inclusive) The VHF-FM radio band is 87.5 - 108 MHz. The assignment covers 85 - 108 MHz to cater for existing VHF television band II (channels 3, 4 and 5)
- (e) 137 - 144 MHz (inclusive) VHF television band III (channel 5A)
- (f) 174 - 230 MHz (inclusive) VHF television band III (channels 6, 7, 8, 9, 9A, 10, 11 and 12)
- (g) 520 - 820 MHz (inclusive) UHF television bands IV and V (channels 28-69)

The ABA is required to plan the availability of segments of the BSB on an area basis [s158(b)].

THREE STAGES OF THE PLANNING PROCESS

The planning functions of the ABA are set out in part 3 of the *Broadcasting Services Act 1992* (the Act). The Act requires the ABA to promote the objects of the Act including the economic and efficient use of the radiofrequency spectrum for broadcasting and to have regard to the matters set out in section 23. The planning process has three stages. These are set out in sections 24, 25 and 26 of the Act. At each of the stages of the planning process, the ABA must make provision for wide public consultation [Subsection 27(1)].

Determination of Planning Priorities

The first stage of the planning process in accordance with section 24 of the Act is the determination by the ABA of planning priorities, between particular areas of Australia and between different parts of the BSB, for the preparation of frequency allotment plans (FAP) and licence area plans (LAP). The ABA determined its planning priorities in September 1993. A document entitled "Planning Priorities - 1993", which includes the planning priorities and explanatory notes, is available free of charge from the ABA.

¹ Section 158(b) of the Act.

Preparation of Frequency Allotment Plan

The second stage of the planning process, in accordance with section 25 of the Act, is the preparation of a frequency allotment plan (FAP) which determines the number of channels that are to be available in particular areas of Australia to provide broadcasting services using that part of the radiofrequency spectrum designated as the BSB.

After releasing two exposure drafts of the FAP for public comment in May and December 1993, the ABA determined a FAP for the BSB on 10 August 1994. A document entitled "Frequency Allotment Plan - August 1994", which includes the FAP and explanatory notes, is available free of charge from the ABA.

Preparation of Licence Area Plans

The third stage of the planning process in accordance with section 26 of the Act is the preparation of licence area plans (LAPs), which determine the number and characteristics of broadcasting services that are to be made available within particular areas of Australia. The characteristics of each service include the service's licence area, category, carrier frequencies, transmitter sites and technical conditions, including maximum effective radiated power in each direction from the transmitter site. Potential and current service providers must "read" the LAP together with the Technical Planning Guidelines (TPGs) so that they are fully aware of their technical obligations in establishing services. The ABA was obliged to develop these technical planning guidelines pursuant to section 33 of the Act. The TPGs came into force on 10 August 1995. Paragraphs 109(1) (d) and (e) of the *Radiocommunications Act 1992* apply the technical specifications in the LAP and TPGs as conditions of a transmitter licence issued to commercial and community broadcasting service providers by the Australian Communications Authority (ACA, formerly the Spectrum Management Agency, SMA).

LAPs are prepared on an area by area basis in accordance with the ABA's determination of planning priorities.

Variation of Frequency Allotment Plan

The FAP determined channel capacity based on the ABA's knowledge and public submissions received at the date the FAP was prepared (i.e. 10 August 1994). The FAP's assumptions about demand, nominal transmitter specifications and siting will be re-examined during preparation of the LAPs for particular areas of Australia. This process may necessitate variations to the FAP as a result of the ABA's public consultation process. No permanent allocations of new spectrum for a particular area will be made until LAPs for that area have been prepared. If it is necessary to amend the FAP as a result of the LAP process, then this will be done consistently with the planning priorities. Consultation on any changes to the FAP will take place within the LAP consultation process.

The FAP will also be revised to reflect any additional services planned during the LAP stage (particularly low power channels). If the amended FAP brings about changes to channel capacity for areas outside the area for which the LAP is being prepared, the changes will be subject to public consultation in affected areas.

CHAPTER 2

PLANNING CRITERIA

In performing its planning functions under Part III of the Act, the ABA is guided by section 23 of the Act, which states:

In performing functions under this Part, the ABA is to promote the objects of this Act including the economic and efficient use of the radiofrequency spectrum, and is to have regard to:

- a) demographics; and
- b) social and economic characteristics within the licence area, within neighbouring licence areas and within Australia generally; and
- c) the number of existing broadcasting services and the demand for new broadcasting services within the licence area, within neighbouring licence areas and within Australia generally; and
- d) developments in technology; and
- e) technical restraints relating to the delivery or reception of broadcasting services; and
- f) the demand for radiofrequency spectrum for services other than broadcasting services; and
- g) such other matters as the ABA considers relevant.

All of the matters in paragraphs 23(a) to (g) are relevant to the performance of all three of the ABA's public planning functions.

The words 'have regard to', (used in a different context) received the following interpretation from the High Court in *Re Toohey; Ex parte Meneling Station* per Gibbs J, 44 ALR 63 at 67:

'When the section directs the Commissioner to 'have regard to' the strength or otherwise of the traditional attachment by the claimants to the land claimed... it requires him to take those matters into account and to give weight to them as a fundamental element in making his recommendation: cf *Re R J D Hunt; Ex Parte Sean Investments Pty Ltd* (1979) 53 ALJR 552 at 554; ...'

However, the relative weight given to each of the matters in section 23 is a question of judgement for the ABA. The ABA draws upon various sources of information in considering the above criteria, including the submissions received throughout the planning process; the relevant demographic, social and economic characteristics of the licence area; spectrum availability and technical limitations; and Ministerial directions and notifications.

CHAPTER 3

LEGISLATIVE FRAMEWORK

Section 158 of the Act provides that one of the ABA's primary functions is to plan the availability of segments of the broadcasting services bands on an area basis.

Section 160 of the Act imposes a general obligation on the ABA to perform its functions in a manner consistent with:

- (a) the objects of the Act and the regulatory policy described in section 4 of the Act; and
- (b) any general policies of the Government notified by the Minister under section 161; and
- (c) any directions given by the Minister in accordance with the Act; and
- (d) Australia's obligations under any convention to which Australia is a party, or any agreement between Australia and a foreign country.

SECTION 160(a) - OBJECTS OF THE ACT

The objects of the Act (contained in section 3) are:

- (a) to promote the availability to audiences throughout Australia of a diverse range of radio and television services offering entertainment, education and information; and
- (b) to provide a regulatory environment that will facilitate the development of a broadcasting industry in Australia that is efficient, competitive and responsive to audience needs; and
- (c) to encourage diversity in control of the more influential broadcasting services; and
- (d) to ensure that Australians have effective control of the more influential broadcasting services; and
- (e) to promote the role of broadcasting services in developing and reflecting a sense of Australian identity, character and cultural diversity; and
- (f) to promote the provision of high quality and innovative programming by providers of broadcasting services; and
- (g) to encourage providers of commercial and community broadcasting services to be responsive to the need for a fair and accurate coverage of matters of public interest and for an appropriate coverage of matters of local significance; and

- (h) to encourage providers of broadcasting services to respect community standards in the provision of program material; and
- (i) to encourage the provision of means for addressing complaints about broadcasting services; and
- (j) to ensure that providers of broadcasting services place a high priority on the protection of children from exposure to program material which may be harmful to them.

The relevance of these objects to the variation of the FAP and the preparation of LAPs is discussed below, as part of the examination of s.23 of the Act.

REGULATORY POLICY

Subsection 4(1): The Parliament intends that different levels of regulatory control be applied across the range of broadcasting services according to the degree of influence that different types of broadcasting services are able to exert in shaping community views in Australia.

Subsection 4(2): The Parliament also intends that broadcasting services in Australia be regulated in a manner that, in the opinion of the ABA:

- (a) enables public interest considerations to be addressed in a way that does not impose unnecessary financial and administrative burdens on providers of broadcasting services; and
- (b) will readily accommodate technological change; and
- (c) encourages:
 - (i) the development of broadcasting technologies and their application; and
 - (ii) the provision of services made practicable by those technologies to the Australian community.

Subsection 4(2) is of particular relevance to the planning process. Having regard to the matters in section 23 of the Act, it may be necessary to vary the technical conditions of the licences of existing broadcasters in a manner which imposes costs on them. Examples are:

- clearance of television services from VHF Band II to make room for additional FM radio services;
- relocation of transmitter sites or changes of frequency of existing services to maximise the number of channels available in an area; and
- otherwise changing the technical operating conditions of existing services to improve the service to the public.

In order not to impose unnecessary financial and administrative burdens on service providers, the ABA has taken account of the cost to broadcasters of any variations to their

existing technical operating conditions as a relevant consideration to be weighed against any benefits that might accrue in terms of the Act's objects and the economic and efficient use of spectrum.

SECTION 160(b) - GENERAL POLICIES OF THE GOVERNMENT NOTIFIED UNDER SECTION 161 OF THE ACT

No Government policies which relate to its planning function have been specifically referred to the ABA pursuant to section 161 of the Act.

SECTION 160(c) - DIRECTIONS GIVEN BY THE MINISTER

On 17 March 1994 the then Minister for Communications and the Arts, the Hon Michael Lee MP, notified the ABA to reserve capacity for an Australia wide sixth high power national television channel, for the provision of national broadcasting services or for community broadcasting services.

On 17 March 1994 the then Minister also directed the ABA (under subsection 162(1) of the Act) to give favourable consideration to the House of Representatives Standing Committee on Transport, Communications and Infrastructure (HORSCOTCI) Report into the future use of the sixth channel. HORSCOTCI gave priority to the sixth channel's use for educational television over community access television in the longer term. It further recommended that:

- A decision on permanent use of the sixth high power television channel should not be made prior to the review of the television broadcasting industry to be conducted by the Minister by 1 July 1997 in accordance with Clause 215 of the Broadcasting Services Act 1992.
- The channel should be made available immediately for community access television using low power transmitters on a continuing trial basis until 1 July 1997.

The ABA has made spectrum available for temporary use by community and educational television groups in several locations. This has been done by the use of the section 34 ("drop through") provisions of the Act.

On 27 May 1997, the Minister for Communications and the Arts, Senator Richard Alston, advised the ABA that he supported an extension of the community television trial for another twelve months from July 1997.

The ABA decided to continue the community television trial on the sixth high power television channel until 30 June 1998, and anticipates that the Government will make its final decision on the permanent use of the sixth television channel within this period.

SECTION 160(d) - INTERNATIONAL CONVENTIONS TO WHICH AUSTRALIA IS A PARTY

The following is an inclusive list of international conventions which the ABA considers must be given effect in planning. Of all the international conventions to which Australia is a party, these appear the most relevant to the ABA's planning function.

International Telecommunication Convention, Final Protocol and additional protocols I-IV: Geneva 21/12/59. This includes the 1959 Radio Regulations which have been revised many times since 1959 and which, in effect, were superseded by the Radio Regulations of 5 December 1979.

Regional Agreement concerning the use by the broadcasting service of frequencies in the medium frequency bands in Regions 1 and 3 and in the low frequency bands in Region 1: Geneva 22/11/75. This agreement applies only to the MF-AM Band. It provides that member countries shall adopt for their broadcasting services operating in the MF-AM Band, the characteristics specified in the Plan annexed to that agreement.

Final Acts of the World Administrative Radio Conference for the planning of the Broadcasting satellite service; Geneva 13/2/77

Final Acts of the World Administrative Radio Conference; Geneva 5 December 1979 (into force on 1/1/82). Introduces new Radio Regulations.

International Telecommunications Convention with Final Protocol, Additional protocols and Optional Additional Protocol: Nairobi 6/12/82. Chapter III, Special Provisions for Radio is particularly relevant. It imposes obligations on Australia in relation to the Rational Use of the Radio Frequency Spectrum (Article 33) and operating stations in such a manner as to not cause Harmful Interference (Article 35).

Final Acts of the Second Session of the World Administrative Radio Conference for the allocation of High Frequency bands allotted to broadcasting; Geneva, 8 March 1987. (in force 14 May 1992). This revised the Radio Regulations of December 1979.

The obligations flowing from these agreements are largely the purview of the Australian Communications Agency (ACA) (formerly the Spectrum Management Agency).

However, a number of the International Telecommunications Union (ITU) Radio Regulations are relevant to the ABA's planning functions.

Article 35 requires that all stations are established and operated in such a manner as to not cause harmful interference to the radio services or communications of other members.

Article 33 requires that members shall endeavour to limit the number of frequencies and the spectrum space used to the minimum essential to provide in a satisfactory manner the necessary services. To that end they shall endeavour to apply the latest technical advances as soon as possible.

Article 9 states that in the assignment and use of frequencies, members should take into account that special measures are required to ensure that safety aspects of radionavigation and other safety devices are free from harmful interference.

SECTION 5 - ROLE OF THE ABA

Finally, section 5 of the Act contains a general direction from the Parliament to the ABA on how it is to achieve the objects of the Act in a way that is consistent with the regulatory policy referred to in section 4. Section 5(1)(b) is of particular relevance to the ABA's planning powers. It provides in part that the Parliament:

confers on the ABA a range of functions and powers that are to be used in a manner that, in the opinion of the ABA, will:

(i) produce regulatory arrangements that are stable and predictable;

The structure of Part 3 of the Act and in particular the public planning process described in sections 24 - 27 of the Act are designed among other things to ensure a high degree of predictability in spectrum planning and allocation. In addition to the bare requirements of those sections, the ABA has endeavoured to ensure stable and predictable regulatory arrangements by making all aspects of its reasoning processes transparent through the release of discussion papers and preliminary views.

SECTION 23 - SPECIFIC OBLIGATIONS OF THE ABA

Section 23 of the Act imposes specific obligations on the ABA when carrying out its planning functions. First, the ABA is required to perform its functions in a way that promotes the objects of the Act, including the economic and efficient use of the radiofrequency spectrum. The ABA is also required, when performing its functions, to have regard to the range of matters set out in paragraphs (a) - (g) of the section.

The ABA notes that not all of the objects will be promoted by its planning functions; some of the objects will be more directly promoted by other functions of the ABA. For example, the development of codes of practice and program standards will directly promote objects 3(h), (j) and to some extent (g). The following discussion of the objects canvasses some of the ways the ABA believes that planning decisions (under sections 25 and 26) might promote the matters in section 23. Whether or not a given planning decision is likely to promote the objects is, of course, a question of fact that will depend on the particular circumstances of the area being planned. The following observations do not constitute an inflexible policy of the ABA towards planning, but describe strategies that might tend to promote the objects of the Act, including the economic and efficient use of spectrum, depending on the particular facts of the situation.

The Explanatory Memorandum to the Broadcasting Services Bill 1992 ('the Explanatory Memorandum') explains the role and uses of the objects in the following way:

The purpose of these objects is to set out clearly the outcomes Parliament wishes to see in the regulation of broadcasting, to assist with the formulation of decisions consistent with the policy enshrined in the Act, and to guide the ongoing administration and enforcement of the Act. It is important to note that the objects are not set out in any order of priority; in other words the

relative importance of an object may be determined by the issue being considered at the time - that relative importance could vary from time to time.

It is recognised that there are tensions between the objects. It is intended that the ABA, in the exercise of its regulatory powers, should have regard to the competing objectives, drawing on its ability to assess community views and needs, and to monitor developments in the broadcasting industry. It is expected that the relative importance of each object may vary over time, and vary in relation to different functions and powers of the ABA.

The objects that are of most obvious importance to the ABA's powers in sections 25 and 26 of the Act are those at paragraphs (a) and (b) of section 3.

- (a) *to promote the availability to audiences throughout Australia of a diverse range of radio and television services offering entertainment, education and information.*

According to the Explanatory Memorandum:

Clause 3(a) relates to the intention that the Act will encourage and facilitate the provision of both 'free to air' broadcasting services as well as subscription and 'niche' broadcasting services to allow a broad range of general and special interests and needs to be met. Diversity in the range of services is encouraged by a more open planning regime that is expected to increase the availability of services, and by a licensing regime which is designed to accelerate the introduction of services and encourage the emergence of the new 'niche' services.

As these observations make clear, the ABA's planning powers have a vital role to play in promoting the object at 3(a), but it is unrealistic to expect that planning alone will promote the object in all its aspects. In particular, some of the 'diversity' of new services can be expected to come from the proliferation of non-broadcasting services such as satellite and cable subscription television broadcasting and narrowcasting services of all kinds.

When preparing FAPs and LAPs, the ABA may be able to promote this object in several ways.

First, the ABA can seek to ensure areas enjoy a mix of different types of broadcasting service. (The reference in section 26 to the 'characteristics' of services includes, in the ABA's view, the category of each service and whether it is television or radio.) National broadcasters and community broadcasters frequently provide programs that are immediately distinguishable from commercial broadcasting, often serving needs that the commercial sector has not addressed. These sectors also have an important role in providing education.

Open narrowcasting also has a place in promoting diversity, particularly open narrowcasting whose reception is limited either:

- by being targeted to special interest groups; or
- because they provide programs of limited appeal.

These types of 'niche' services clearly have a major role in promoting diversity, particularly of information but also of certain types of entertainment, such as entertainment in languages other than English.

Second, as envisaged in the Explanatory Memorandum, the ABA can make additional services available in areas where there is a likelihood this will increase the overall number of broadcasting services being provided. This will create opportunities for service providers to add to the range of services.

It is important to note that the impact of new services on diversity may vary. In the case of commercial radio formats, the outcome of additional services may include lengthy periods of competition between similar formats, adding little to diversity. It is not the ABA's role to ensure that an additional commercial broadcasting service will not simply mimic the format of an existing service in the area, playing the same style of music or even the same songs.

It is not the ABA's role to regulate formats of commercial services. This is underlined by the price-based nature of the commercial broadcasting allocation process and by the generic condition on commercial licences requiring only that they:

... provide a service that, when considered together with other broadcasting services available in the licence area of the licence (including another service operated by the licensee), contributes to the provision of an adequate and comprehensive range of broadcasting services in that licence area...

Certainly the proliferation of services with similar formats in an area will do little to promote the object at section 3(a), though it may further other objects of the Act. On the other hand, allocation of additional commercial broadcasting licences may well result in competing formats and hence greater diversity of choice. As the ABA has little control over the legitimate programming choices of new market entrants, it is truer to say that planning of additional commercial broadcasting services is likely to promote the availability of a diverse range of services in markets, but that in the case of commercial radio broadcasting services, it cannot ensure it.

Third, the ABA can enable improved reception of existing broadcasting services. Inadequate reception currently denies many Australians, particularly those outside of major centres, access to the full diversity of services currently on offer. It can make spectrum available for re-transmission and change licence areas and technical characteristics so as to make it possible for services to reach into areas where they might not otherwise reach.

Fourth, the ABA can plan smaller (local coverage) services or larger services serving more than one existing market. Smaller services in particular, whether community or commercial broadcasting or open narrowcasting, may tend to promote diversity because they are better suited to different types of programming than wide coverage services. Of course, there will often be circumstances where the object is best served by services with similar coverage areas. A hypothetical example is where an existing wide-coverage commercial television service is showing programs drawn from all three commercial networks. If a second licence were issued serving only the main town, it is likely that the second licensee would acquire the rights to transmit the programs of at least one of the networks. The result may be to deprive viewers in outlying areas of programming from that network. This problem could be avoided by planning the second service as a wide-

coverage service. Finally, there may be circumstances where enlarged or aggregated licence areas will promote diversity by increasing the chances that a viable additional service will be offered in the market.

- (b) *to provide a regulatory environment that will facilitate the development of a broadcasting industry in Australia that is efficient, competitive and responsive to audience needs.*

According to the Explanatory Memorandum:

Of particular relevance to this object are the flexibility of the planning and licensing schemes...

As the broadcasting services bands remain by far the most important means for delivering free-to-air broadcasting services, and as there is potential for these bands to carry additional services, the ABA's planning process is at present fundamental to the further development of the broadcasting industry in Australia. As a part of the 'regulatory environment', the ABA's FAPs and LAPs should promote development of an industry that is 'efficient, competitive and responsive to audience needs'.

Examination of the Act suggests that introduction of competition is intended to play a key role in promoting this object. For example, the licensing scheme of the Act is designed to encourage exploitation of alternative means of delivery to the broadcasting services bands. This observation is supported by the regulatory policy in section 4(2) of the Act. Some types of broadcasting require no ABA authorisation at all and access to licences for more influential services (commercial broadcasting and subscription television broadcasting) is subject only to a few simple tests, except in the special case of broadcasting services bands spectrum.

The move to a more open and competitive regulatory regime is also supported by changes to the conditions attached to commercial broadcasting services, both television and radio. The condition that services merely 'contribute' to the provision of an adequate and comprehensive range of broadcasting services in their market will enable bolder experimentation with formats, continue existing industry trends towards networking and also permit the commercial survival of services with a smaller share of the market than may previously have been possible.

According to the Macquarie Dictionary, the meanings of 'competition' relevantly include 'the rivalry between two or more business enterprises to secure the patronage of prospective buyers', and the meaning of 'competitive' is: 'of, pertaining to, involving or decided by competition.' In the context of a genuinely competitive market, the stations that are 'efficient' and 'responsive to audience needs' will tend to overcome rivals that are inefficient and/or less responsive to the needs of their audience.

Consistent with this reading, the ABA believes that permitting new services to make use of the broadcasting services bands and, in particular, planning the availability of additional commercial broadcasting services, is likely, depending on the particular facts of the market, to promote the object at 3(b) of the Act.

This approach is supported by the Explanatory Memorandum, which states in its general comments on Part 3 of the Act:

It is... intended that barriers to entry to the broadcasting service industry be minimised, and that competition in the provision of such services be facilitated through the quicker introduction of extra services.

Three other objects are potentially relevant to the preparation of licence area plans and frequency allotment plans.

- (c) *to encourage diversity in control of the more influential broadcasting services.*

According to the Explanatory Memorandum:

Diversity in control is to be promoted by allowing a greater number of services (subject, in relation to commercial television, to a review to be completed by 1 July 1997 - refer to clauses 28 and 215) under the planning and licensing regimes, supported by the O & C (ie. Ownership and control) limits in Part 5 relating to commercial broadcasting ...

Planning of additional services could promote this object by enabling independently-owned (competing) new service providers to enter the market. Often this outcome will be furthered by the ownership and control limits, which will restrict the right of incumbent commercial radio and commercial television service providers to own or control the new services.

Introduction of additional services to markets will not always promote this object. For example, if an additional commercial television service is shown as available in a licence area plan, an existing commercial television service provider, if it is the only service of that type in the market, may be entitled to apply to the ABA to provide a second service under section 38A. Similarly, an existing commercial radio service provider may be entitled to acquire a second licence, either under section 39 or via the price-based allocation system.

- (f) *to promote the provision of high quality and innovative programming by providers of broadcasting services.*

The Explanatory Memorandum relevantly states:

Clause 3(f) is based on the expectation that the emergence of 'niche' broadcasting services and the development of a more competitive environment should result in high quality and innovative programming if broadcasting service providers, particularly of subscription services, are to attract and retain audience interest.

However, the ABA has received a submission suggesting that additional services may not always promote the criterion in 3(f)². In essence, the submission argued that if additional commercial television services were introduced to the 'solus' (ie a single licence) commercial television market in question:

² The submission is contained in a letter dated 31 January 1994 from Blake Dawson Waldron on behalf of NTD 8 Darwin, in response to the ABA's request for submissions on licence area planning for Darwin.

- there would be no significant addition to the overall quality or innovation of programming, as the existing service was already able to 'cherry-pick' the best of the three networks' programs;
- additional television services would actually detract by constraining the ability of the existing service provider to continue to produce locally relevant and innovative programming; and
- additional television services would have a similar constraining effect on the ability of radio services to produce locally relevant and innovative programming.

While additional services may not always promote object at section 3(f), in the ABA's view, the effect of introducing additional commercial services is more likely to be positive than negative when measured against this object. What is an innovative program is often a matter of judgement for the viewer or listener and 'cherry picking' may focus on the popularity of programs rather than how innovative they are.

The ABA is of the view that additional services may well permit additional high quality and innovative programming to be broadcast, whether in the form of innovative new ideas for local services or top quality programming 'networked' from other parts of the country.

- (g) *to encourage providers of commercial and community broadcasting services to be responsive to the need for a fair and accurate coverage of matters of public interest and for an appropriate coverage of matters of local significance.*

Planning decisions are liable to affect coverage of matters of local significance in several ways.

In general, planning of additional services might be expected to promote appropriate coverage of matters of local significance, where there is some prospect those additional services might be taken up. For example, planning may enable new service providers to address needs not adequately catered for by existing licensees. Also, greater competition in markets may encourage service providers to provide more appropriate coverage of matters of local significance.

However, in planning of highest priority areas a number of submissions on behalf of existing broadcasters have argued that the introduction of competition to small markets will diminish the ability of existing broadcasters to produce programs locally³. This may hinder appropriate coverage of matters of local significance, if the new services do not redress the deficiency by covering matters of local significance themselves.

³ See for example the submission dated January 1994 and supporting appendices from commercial television operator RTS 5A Riverland in response to the ABA's request for submissions on licence area planning for the Riverland area of South Australia.

If the ABA believes that planning of additional services may not promote the object at section 3 (g) of the Act, it will take those concerns into account in its decision and, where appropriate, weigh the possible costs in terms of local coverage against any benefits in terms of the other objects of the Act.

In making its planning decisions, the ABA will also take into account the contributions made by national and community services to coverage of events of local significance in many areas.

... including the economic and efficient use of the radiofrequency spectrum

In performing its planning functions, the ABA must promote the objects of the Act including the economic and efficient use of the radiofrequency spectrum.

The word 'economic' in this context suggests 'economical', in the sense of 'avoiding waste or extravagance; thrifty' (Macquarie Dictionary). 'Efficient' can mean 'productive of effects; operative' (Shorter Oxford English Dictionary). The idea of promoting the economic and efficient use of the radiofrequency spectrum suggests that spectrum should not be planned in a wasteful way, that it should as far as possible be put to productive use, but that conversely, it should not be planned for a particular use if it is not really needed for that use.

Examples of how the ABA might promote the economic and efficient use of the radiofrequency spectrum include:

1. all planning measures designed to maximise spectrum productivity; and
2. not planning broadcasting services in excess of the number required. For example, by planning for very long term demand in one area, the ABA may limit its ability to meet more immediate demand in another. Similarly, it may be wasteful of spectrum - and unlikely to further the objects of the Act - to make more services available of a type than are ever likely to be used.

Section 23 also lists a number of matters that the ABA 'is to have regard to' when performing its functions under Part 3 of the Act.

Finally, the *Broadcasting Services (Transitional Provisions and Consequential Amendments) Act 1992*, requires the ABA to take into account the licence areas referred to in subsection 8(1) of that Act in preparing a licence area plan under s.26 of the *Broadcasting Services Act 1992*.

Subsection 8(1) states as follows:

Subject to any action taken under the new Act and to section 15, a licence to which subsection 5(1) applies has as its licence area the area that was the service area of the former licence under the Broadcasting Act immediately before the commencement of this Act.

CHAPTER 4

GENERAL APPROACH OF THE ABA TO THE PLANNING OF BROADCASTING SERVICES

As discussed in the 'Legislative Framework', the ABA can promote the object at 3(a) of the Act ('to promote the availability to audiences throughout Australia of a diverse range of radio and television services offering entertainment, education and information') by making available a mix of different types of broadcasting services in an area.

In respect of television services, the ABA's FAP generally indicates that six channels are available for television services in all locations. The Minister has notified the ABA that two channels are to be reserved for national television services - ABC and SBS. The Minister has also notified the ABA to reserve the remaining sixth channel for the provision of a national or community broadcasting service. With respect to capacity for commercial television services, section 28 of the *Broadcasting Services Act* states that no more than three commercial television broadcasting services are currently permitted in licence areas. In a limited number of circumstances, overlaps between licence areas of commercial broadcasting services have necessitated additional channels for commercial television services (also affiliated with one of the three networks but showing different local programs) being made available. In these situations, a spare channel for the Minister's additional national or community broadcasting service may not exist.

In weighing up the merits of different categories of radio broadcasting services, the ABA considers community and commercial radio services to be mutually exclusive options in relation to frequency allocation, as a community radio broadcasting licence must be operated by a non-profit organisation. That is, any profits cannot be distributed amongst individuals. In general, community organisations cannot afford to purchase commercial radio broadcasting licences, particularly in markets where investor interest results in high prices being paid. (Whereas commercial broadcasting licences are allocated through a price-based process, community broadcasting licences are allocated via a merit-based process.)

Open narrowcasting radio services are a different case, for two reasons. First, an open narrowcasting provider can bid for a commercial licence, as commercial radio licences are allocated through a price-based allocation process. Second, a commercial or community radio broadcasting licence can be made available for open narrowcasting (under the provisions of section 34), if it is not taken up during the ABA's allocation process. So making a frequency available for commercial or community broadcasting purposes does not necessarily preclude an open narrowcasting service provider from ultimately obtaining the licence. Those licences made available in licence area plans specifically for open narrowcasting services are allocated via a price-based process.

In accordance with s30 of the *Broadcasting Services Act* 1992, for the purposes of s38A, s39, the ownership and control provisions of the Act and the population reach rules, the ABA has determined population figures for licence areas (including in overlap areas) for commercial broadcasting services. Copies of the determination are available from the ABA upon request.

CHAPTER 4 (1)

COMMERCIAL BROADCASTING

As indicated in the 'Legislative Framework', the ABA believes that planning additional commercial radio broadcasting services is likely, in certain circumstances, to promote several of the Act's objects, including the economic and efficient use of spectrum. The Legislative Framework contains a detailed discussion of how various planning outcomes may promote the objects of the Act. The basis for planning additional commercial television services has been referred to in previous chapters.

In forming a view on the likelihood a decision will promote the objects, including the economic and efficient use of spectrum, the ABA will consider and reach views about the likely effect of its decision, having regard to the local circumstances of the market, the likely impact of other planning decisions in the LAP and other relevant matters under section 23(a)-(g).

Assuming technical capacity can be found to increase the number of services, the ABA believes there are three key areas of concern that are relevant to any decision about whether to increase the number of commercial broadcasting services available in an area.

First, the ABA is concerned that planning additional commercial services in a market may not represent 'economic and efficient use of the radiofrequency spectrum', nor would it serve to promote the objects of the Act, unless there were some likelihood that the number of commercial service(s) of that type would increase as a result.

Second, in order to promote the objects at section 3(a), 3(b) and (c) of the Act, the ABA would prefer that any additional commercial service in a market be a wide coverage service, rather than a low powered service addressing only a fraction of the population served by the existing licensee(s).

For this reason, the ABA will generally plan any additional commercial services to match the coverage of any existing commercial services of that type in an area.

Third, the ABA is concerned that the loss of present levels of local programming on the existing service(s) may result in less appropriate coverage of matters of local significance, particularly if the new service(s) would be unable to redress the deficiency by covering matters of local significance itself. (The object at para 3(g) of the Act relates.)

The ABA accepts that the objects of the Act may pull in different directions, requiring it to choose which object to give the most weight to, depending on the local circumstances of the market. (For a more comprehensive discussion of the relevant law, please refer to the Legislative Framework.)

The ABA will in general have regard to:

- the likelihood that making an additional commercial service available for allocation in an area will increase the number of services of that type serving the area;
- whether or not any additional services would offer wide coverage comparable to existing services; and
- the likely impact of any increase in the number of services on the coverage of matters of local significance.

Consideration of these issues will necessarily involve a consideration of number of the section 3 objects and the matters listed in section 23.

Licence Areas

The service area of commercial services operating before commencement of the *Broadcasting Services Act* in October 1992 continued as licence areas by virtue of section 8 of the *Broadcasting Services (Transitional Provisions and Consequential Amendments) Act 1992*.

In determining service areas, factors taken into account by the Minister, under the *Broadcasting Act 1942*, included the following: social and economic links between the major urban centres in the area; governmental functions and responsibilities; topography; signal coverage and possible effects on the commercial balance between the station and other stations claiming to serve the community or communities in the area.

The ABA assumes that the licence areas of existing commercial and community broadcasting services using the broadcasting services bands represent accepted media markets and the ABA will not vary them without good reason, other than to update them where boundaries are based on outdated Census descriptions. The ABA further assumes that additional broadcasting services within those markets, using the broadcasting services bands, should have the same licence area as existing services unless there are good reasons to the contrary.⁴

⁴ Source: *ABA Record of Assumptions*

CHAPTER 4 (2)

COMMUNITY BROADCASTING

In forming an opinion on community radio broadcasting services, the ABA determines whether it is likely to promote the objects of the Act at paragraphs 3(a), (f) and (g), including the economic and efficient use of the radiofrequency spectrum. The Legislative Framework contains a detailed discussion of how various planning outcomes may promote the objects of the Act.

In forming its opinion, the ABA considers views about the likely effects of its view, having regard to the local circumstances of a particular market, the likely impact of other planning views in a licence area plan and other relevant matters under section 23(a)-(g).

Additional community services in a market

Sections 23(a) and (b) of the Act require the ABA to have regard to demographics and social and economic characteristics within a licence area. Section 23(g) requires the ABA to have regard to such other matters as it considers relevant. The ABA believes the funding requirements of existing community services, and its own knowledge of the sources of funding and support available to community broadcasting services, are relevant considerations when considering the scope for introducing additional community services.

Under the *Broadcasting Act 1942*, a special interest public radio service was defined as a service clearly focused on a particular interest or need, or group of common interests or needs (eg educational, ethnic, Aboriginal, Radio for the Print Handicapped). Special interest public radio (using an 'S' class licence) was clearly distinguished from public radio for community purposes, which used a 'C' class licence.

The Department of Communications publication *Public Radio: Planning Guidelines*, August 1985, identified the former 'C' class public licences as serving a wide community of interest typically relying on multiple sources of revenue, notably listener subscriptions, donations, fund raising activities and sale of sponsorship announcements. They may also receive assistance from other sources, such as government funding administered by the Community Broadcasting Foundation (CBF).

While additional community services allocated for wide community purposes would tend to compete for a limited pool of sponsorship, subscribers and government assistance, special interest community services (including former 'S' class public licences) frequently tap into different sources of revenue altogether. The impact on an existing community licensee serving a wide community of interest may well be limited to a reduction of any part of its subscriber base representing the special community interest for which a new licence has been allocated.

Forms of assistance may include direct support from other institutions catering to that special interest. Some special interest community services, notably RPH, are also likely to receive the bulk of their programming from elsewhere.

Thus, additional community licences serving special interest groups may complement rather than compete with existing community services. Indeed, there may be scope for co-operation between the licensees. This complementarity will be important if small

communities are to sustain special interest as well as general purpose community broadcasting services, thereby increasing the diversity of available services.

Aboriginal and Torres Strait Islander people and the print-handicapped are two groups that are often poorly catered for in the mainstream media. Both were identified by the then Minister, Senator the Hon Bob Collins, in his letter of 1 October 1992, as examples of particular interest groups whose needs the ABA should consider.

Emphasis placed on temporary transmissions undertaken by aspirant community broadcasters.

In its temporary transmissions policy the ABA has stated that it may have regard to a range of matters (including the structure, management and administrative operations of the service and the record of any previous temporary transmission broadcasting by the applicant group) in assessing applications from aspirant community groups for a community broadcasting licence. Any experience of test or temporary transmissions on the part of an applicant will be relevant.

If an area does not presently have a permanent community broadcasting service and the area might reasonably be expected to be able to support a service (ie a large enough market) the ABA will assume that it would promote the objects of the Act to make a service available unless there is evidence that the licence would not be taken up.

The existence of a local aspirant community broadcaster or a firm expression of interest in providing a service is regarded as prima facie evidence of some community support for and possibly also some need for a community broadcasting service in the area. The period for which a local aspirant community broadcaster has existed and actively pursued temporary transmissions may give more weight to this assumption.

The ABA may have regard to a range of matters including the record of temporary transmission broadcasting by aspirant community broadcasters in assessing whether it should plan a new service in an area. Information about the conduct of and impact in the community of such test or temporary transmissions will be useful to the extent that it provides evidence relevant to the planning criteria at section 23 of the Act.

Community Licence Areas

The ABA assumes that when planning for community broadcasting services, it is appropriate to consider the population size and other demographic, social and economic characteristics of particular interest groups that may require a dedicated community service as well as the overall demographic, social and economic characteristics of the market.

In determining a new community service licence area, or granting an extension to an existing community radio broadcasting service licence area, the ABA will have regard to:

- whether a community-of-interest exists, and over what geographic area;
- whether there is spectrum available to provide coverage of the geographic area;
- whether members of the community the aspirant, or licensed, community radio broadcaster will be able to actively participate in the operations and programming of the licensee in providing the service. Where the geographic distance may seem to prohibit

active participation, the aspirant, or licensed, community radio broadcaster will be required to outline the strategies it would adopt to overcome such problems;

- whether a statutory authority, such as ATSIC (Aboriginal and Torres Strait Islander Commission) has determined a boundary of community for the purposes of representation for Aboriginal people or Torres Strait Islander people (in such cases it would follow that the ABA would have the same regard to that boundary as it would to a local government area boundary)
- whether an established licence area (or media market) exists. Where it does, whether it is the licence area of an existing community radio broadcasting service. If not, is it the licence area of another category of radio service eg a commercial radio service. Where an established licence area does exist, whether the existing licence area is appropriate;
- in the case of an existing community radio broadcasting licensee seeking to extend its licence area, whether the licensee is meeting its current maximum operating conditions, in particular, whether it is serving communities of 200 or more within its existing licence area (in the preparation of LAPs, the ABA assumes, when planning the technical characteristics of services that communities with a population of 200 people or more are entitled to expect a service from a broadcaster that is licensed to provide one)⁵;
- whether people identify with a notion of community for the purposes of access to services, for example, people with a disability, such as a sight impairment;
- significant changes in rural areas, and will take these into account when looking at community-of-interest considerations for people in non-metropolitan areas;
- whether aspirant and existing broadcasters address the Objects of the Act in relation to their claim of community-of-interest; and
- such other matters as the ABA considers relevant.

It is important to note that the ABA places the onus on the submitter/organisation making the request, to demonstrate that a community-of-interest exists, and the mechanisms for ensuring that the community it intends to serve will be able to participate in the operation and programming of the service.

⁵ ABA *Record of Assumptions*, licence area planning.

CHAPTER 4 (3)

OPEN NARROWCASTING BROADCASTING

As discussed in the Legislative Framework, the ABA takes the view that planning for open narrowcasting services has an important role in promoting the object at paragraph 3(a) of the Act. For example, such open narrowcasting formats as foreign language, racing information and tourist or traveller information services have a unique contribution to make to the range of broadcasting services in areas. For this reason, the ABA is concerned to accommodate open narrowcasting services during the public planning process at the same time it considers the need for other types of services.

As there are differences in both the planning and subsequent allocation processes between open narrowcasting services and conventional commercial and community radio services, the ABA has given consideration in the course of the planning process to what is the appropriate way to cater for open narrowcasting requirements disclosed during the public planning process.

On 5 December 1994, the ABA obtained legal advice from counsel, J J Spigelman QC, on options for planning open narrowcasting services during the public planning process. The advice indicates that the ABA would be entitled to show an open narrowcasting service as being available in a licence area plan, but that there are some indications in the Act that this may not be the case. (This advice is available as part of the ABA's Record of Advice under Subsection 27.)

During preparation of LAPs, the ABA has further considered the advice from counsel regarding open narrowcasting services and has decided to cater, as far as possible, for long-term open narrowcasting demand within LAPs. Short-term open narrowcasting services in particular areas will continue to be planned outside of the preparation of the licence area plans (section 26). It should be noted that the ABA retains the power to make spectrum available for open narrowcasting or other purposes outside licence area plans, by use of section 34 of the Act.

CHAPTER 4 (4)

NATIONAL BROADCASTING

In performing its functions under sections 26 and 31 of the Act, the ABA is to promote the objects of the Act, including the economic and efficient use of spectrum.

As discussed in the Legislative Framework, the ABA can promote the object at 3(a) of the Act ('to promote the availability to audiences throughout Australia of a diverse range of radio and television services offering entertainment, education and information') by making available a mix of different types of broadcasting service in an area. In forming its Preliminary Views presented in discussion papers accompanying draft LAPs, the ABA firstly has regard to the Minister's notification for reservation of capacity for national broadcasters under section 31 of the *Broadcasting Services Act*.

The importance of this is that the ABA is required to reserve spectrum capacity in the broadcasting services bands for the number of national broadcasting services specified in the notice. The choice of frequencies and technical characteristics for each service is a matter for the ABA.

CHAPTER 5

RECORD OF ADVICE AND ASSUMPTIONS

Section 27 also requires the ABA to keep a record of, and make available for public inspection, all advice received by the ABA, and all assumptions made by the ABA, in performing its functions under sections 24, 25 and 26 (Subsection 27(2)).

The purpose of the record to be kept under Subsection 27(2) is to facilitate the 'wide public consultation' referred to in sub-section (1). This is confirmed in the Explanatory Memorandum which notes with respect to sub-section (2):

'This is one of the many provisions in this Act which are intended to make the ABA accountable in the exercise of its powers and performance of its functions.'

The combined effect of 'advice' and 'assumption' is to encompass a broad range of sources of information available to the ABA for the purpose of performing its functions under the planning provisions. The overriding purpose of section 27 is to facilitate public understanding of and participation in the planning process.

RECORD OF ADVICE

The ABA has not treated the word 'advice' as limited to formal or professional opinion, although it includes such. The Macquarie Dictionary defines 'advice' among other things as:

'a communication, especially from a distance, containing information'

The Australian Concise Oxford Dictionary expresses this meaning without the reference to distance, as:

'information given, news'

RECORD OF ASSUMPTIONS

An assumption in the context of subsection 27(2) bears the meaning set out in the Macquarie Dictionary:

'something taken for granted; a supposition'

The fact that the ABA is permitted to make such assumptions in performing its planning functions is confirmed in section 169 of the *Broadcasting Services Act 1992*, which provides:

'In making a decision on any matter, the ABA is not limited to a consideration of material made available through an investigation or hearing conducted in relation to the matter, but may take into account such other matters as it considers relevant, including the knowledge and experience of the members.'

The following excerpts are from legal advice prepared by JJ Spigelman QC and NJ Williams of counsel on 7 November 1994 and included in the record of advice.

'The word "assumption" obviously does not extend so far as to encompass the whole of the "knowledge and experience" of the members of the Authority. What Subsection 27(2) does is to impose an obligation to formally record the matters which the Authority either takes for granted or supposes to be true, on the basis of the Authority's collective "knowledge and experience".

There are matters of such common knowledge that persons involved in the public consultation process would be expected to be aware of them. Accordingly the purpose of the maintenance of a record for public inspection would not be served by requiring such matters to be recorded.

The ABA should keep a record of any supposition it makes that may have a practical impact on the exercise of the planning powers unless the supposition is so obvious that one could assume that any participant in the public consultation process should be aware that the assumption would be made.'

CHAPTER 5(1)

INDEX OF GENERAL ADVICE RECEIVED

The Index is constantly being updated. The list below reflects the situation as at 30/6/97. For an updated version, please contact the ABA on Freecall 1800 810241.

SUBSECTION 27(2) BROADCASTING SERVICES ACT 1992

1. Letter Minister to Chairman re Government Policy on Licensing of Community Broadcasters (1-10-92) att. Notice of reservation of community broadcasters (1-10-92 11pp)
2. Letter Minister to Chairman re HORSCOTCI Report (1-10-92 2pp)
3. Letter Minister to Chairman ABA re reservation of channels for National Services - att. Notice of Reservation of Capacity for National Radio and Television Broadcasters pursuant to subsection 31(1) (1-10-92 14pp)
4. Letter Minister to Chairman 5.10.92 att. Instrument assigning part of the spectrum to ABA under s18(3) (5-10-92 2pp)
5. Letter Minister to Chairman ABA re various matters including Management of Radiofrequency Spectrum (2-12-92 5pp)
6. Letter Minister to Chairman ABA re Outcome of government consideration of possible future use of the sixth high power television channel - att. Notice of Reservation of Broadcasting Spectrum Capacity for National or Community Broadcasters pursuant to subsection 31(1) and Direction Under Subsection 162(1) Use of the Sixth Channel Frequencies (22-12-92 4pp)
7. Letter Minister to Chairman ABA re Decision to establish a national SBS radio network (19-1-93 2pp) - att. Notice of Reservation of Capacity for National Radio Broadcasters pursuant to subsection 31(1) (19-1-93 10pp)
8. Letter Minister to Chairman ABA re replacement list of reservation (25-5-93 2pp) - att. Notice of Reservation of Capacity for National Radio Broadcasters pursuant to subsection 31(1) (13-5-93 16pp)
9. Fax NBN to Chairman ABA re Draft FAP (11-6-93 9pp)
10. Fax NBN to ABA re draft FAP (21-6-93 3pp)
11. Copy of advice from M Minehan on natural justice (25-6-93 7pp)
12. Copy of advice from AGs office of General Counsel to AGS on Planning Priorities (21-7-93 3pp)

CHAPTER 5

13. Letter Minister to Chairman ABA re replacement list of reservation notices (16-8-93 1p) - att. Notice of Reservation of Capacity for National Radio Broadcasters pursuant to subsection 31(1) (13-8-93 17pp)
14. Letter Federation of Australian Radio Broadcasters Limited (30-8-93 4pp)

Priorities released 30/9/1993

15. Letter Minister to Chairman ABA re replacement list of reservation notices (1p) - att. Notice of Reservation of Capacity for National Radio Broadcasters, National Television and Community Broadcasters pursuant to subsection 31(1) (29-10-93 15pp)
16. Letter from National Transmission Agency - discrepancy between Ministerial reservations, and channels allocated in draft FAP (11-11-93 2pp)
17. Memorandum recording advice received from the Spectrum Management Agency on International Conventions (23-11-93 9pp)
18. Copy of advice from AGs office of General Counsel on the role of the ABA in the planning and licensing of JJJ services (18-1-94 7pp)
19. Copy of advice from AGs office of General Counsel on s39 of the BSA (18-1-94 3pp)
20. Copy of advice from Australian Government Solicitor on s39(4) of the Broadcasting Services Act 1992 (18-2-94 3pp)
21. Letter Minister to Chairman ABA re Notice of Reservation for National Broadcasters - Use of Sixth Channel Frequencies - att. Section 31 notice re sixth channel and section 162 direction (17-3-94 3pp)
22. Copy of advice from JJ Spigelman QC on s26 of the BSA - "Category of broadcasting service" (17-3-94 11pp)
23. Copy of draft advice from JJ Spigelman QC on s36 and 38 of the BSA (30-3-94 26pp)
24. Fax from Federation of Australian Radio Broadcasters Limited to P Webb views on the planning process and allocation of licences (8-4-94 4pp)
25. Letter Minister to Chairman ABA re Delays in planning (24-6-94 2pp)
26. G Tanner - filenote - meeting with concerning Ministerial notice for reservation of capacity (15-7-94 2pp)
27. Letter S Page A/g AS, BPOL concerning Minister's notice for reservation (20-7-94 3pp)
28. Draft filenote M O'Dea of conference with Spigelman QC re Minister's section 31 notices (22-7-94 2pp)

29. Filenote J Corker of conversation with Spigelman QC re Minister's section 31 notice and categories in LAP (27-7-94 1p)
30. Filenote C Ceramidas of conference with Spigelman QC re viability (9-8-94 1p)
31. Copy of advice from AGs office of General Counsel to P Field Dept of Communications & Arts on section 26 and categories of broadcasting service (10-8-94 7pp)
32. Copy of advice from AGs office of General Counsel to P Georges Dept of Communications & Arts on s31 Reservation of capacity for national and community broadcasters (16-8-94 4pp)
33. Copy of fax from Dept of Communications & Arts to J Corker re date of commencement of operation of s31 notice (19-8-94 2pp)

FAP released 19/8/1994

34. Copy of advice from JJ Spigelman QC on s73 of the BSA (22-8-94 5pp)

Riverland draft LAP released 31/8/1994

35. Letter from Mr John Bigeni, Federal Head, Television Technical Services, Australian Broadcasting Corporation - Frequency Allotment plan, August 1994 - future availability of channels 9A and 12 (15-9-94 1p)
36. Copy of fax from JJ Spigelman QC on s27(2) of the BSA - "Advice" (27-9-94 4pp)
37. Note to file M. O'Dea from the Australian Government Solicitor on the status of Commonwealth records transferred by the Department of Transport & Communications to the ABA (4-10-94 1p)

Griffith draft TV LAP released 14/10/1994

Mildura draft LAP released 21/10/1994

38. Copy of advice from JJ Spigelman QC and Neil Williams of Counsel on the meaning of the words 'assumptions' and 'advice' in subsection 27(2) of the *Broadcasting Services Act 1992* (7-11-94 5pp)
39. Copy of advice from JJ Spigelman QC on whether making a determination under s26 of the *Broadcasting Services Act 1992*, the ABA is required to take into account commercial viability of existing services (1-12-94 12pp)
40. Copy of advice from JJ Spigelman QC on whether in preparing licence area plans under s26 of the *Broadcasting Services Act 1992*, the ABA may plan for open narrowcasting services (5-12-94 10pp)

Darwin draft LAP released 22/12/1994

Spencer Gulf draft LAP released 13/1/1995

Geraldton draft LAP released 23/1/1995

Broken Hill draft LAP released 23/1/1995

Mt Gambier draft LAP released 22/2/1995

41. Copy of advice from JJ Spigelman QC on whether the ABA can decide pursuant to section 26 of the *Broadcasting Services Act 1992* that it will indicate in a licence area plan that one commercial radio service is available immediately and another is to be made available by a specified date (24-3-95 3pp).

Esperance, Kalgoorlie and Merredin draft LAP released 25/3/1995

42. Filenote of C Bishop on conference with AGS in regard to advice on s26 - whether National Services should be included in the Licence Area Plan, what constitutes a Licence Area Plan and on the Mildura Draft Statement of Reasons (7-6-95 3pp)
43. Filenote of C Bishop on conference with AGS in regard to advice on the Draft Statement of Reasons for the Mildura Licence Area Plan (8-6-95 1pp)
44. Filenote of C Bishop on conference with Neil Williams of Counsel on Advice on s26 - whether National Services should be included in the Licence Area Plan (15-6-95 2pp)
45. Filenote of C Bishop on conference with Neil Williams of Counsel on advice on s26 - whether National Services should be included in the Licence Area Plan (23-6-95 2pp)
46. Filenote of C Bishop on conference with AGS in regard to advice on the Mildura Draft Statement of Reasons (4-7-95 1pp)
47. Filenote of C Bishop on conference with AGS in regard to advice on the Mildura Draft Statement of Reasons and discussion on Chapter 4 - TV Reasons (5-7-95 1pp)
48. Filenote of C Bishop on conference with AGS in regard to advice on the Mildura Draft Statement of Reasons and discussions on Chapter 4 - TV Reasons and Chapter 5 - TV Evidence (6-7-95 1pp)
49. Filenote of C Bishop on conference with AGS in regard to advice on the Mildura Draft Statement of Reasons and discussions on Chapter 4 - TV Reasons and Evidence, Chapter 6 - Radio Reasons and Evidence and Determination - Licence Area Plan (7-7-95 1pp)
50. Copy of advice from Neil Williams of counsel on the inclusion of National Broadcasting Services in Licence Area Plans prepared under section 26 of the *Broadcasting Services Act 1992* (7-7-95 9pp)
51. Filenote of C Bishop on conference with AGS in regard to advice on the Mildura Draft Statement of Reasons and discussion on Chapter 6 - Radio Reasons and Evidence - today's draft (10-7-95 1pp)

Mildura/Sunraysia final LAP released 14/7/1995

52. Letter from CAPCOMM Pty Ltd to ABA, re: Medium and High Power Open Narrowcasting Services. (17-7-95 4pp)

Remote Western Australia draft LAP released 27/7/1995

53. Memorandum from R Greeney on Television Channels 9A & 12 - Clearance of Aeronautical Navigation Services (Distance Measuring Equipment - DME) (3-8-95 6pp)
54. Facsimile from Civil Aviation Safety Authority Australia on behalf of Airservices Australia - Decommissioning of Distance Measuring Equipment (DME) (7-8-95 2pp)

Technical Planning Guidelines determined 10/8/1995

Interim Australian Broadcasting Planning Handbook 10/8/1995

Griffith final TV LAP released 16/8/1995

55. Letter from R D McIlwain, Chief Executive, (TAB) The Totalisator Administration Board of Queensland to Chairman ABA, re: More powerful race broadcasting transmission required (15-9-95 3pp)

South West Western Australia draft LAP released 29/9/1995

Riverland 2nd draft LAP released 20/10/1995

Darwin/Katherine final LAP released 23/10/1995

Perth Television draft LAP released 27/10/1995

56. Letter from David Soothill, Director Communications & Planning, SBS to ABA Re: Generic SBS submission intended to cover a range of matters that are expected to apply to all areas of licence area planning (5-12-95 7pp)
57. Filenote on meeting on 11 December 1995 between the SMA and the ABA to discuss the revised Riverland discussion paper and Band II clearance issues generally (11-12-95 2pp).
58. Facsimile from Mr T.S. Lazar suggesting possible network arrangements which would allow three commercial services to be provided in a number of markets (3-1-96 1pp)

Central NSW radio draft LAP released 19/1/1996

Remote Central and Eastern Australia draft LAP released 9/2/96

59. Letter from SMA to ABA, Re: Demand for Mobile Satellite Services in Channel 5A Spectrum. (26-2-96 6pp)

Spencer Gulf TV/Broken Hill radio and TV, final LAP released 28/2/1996

60. Copy of advice from Neil Williams of counsel on the eligibility of GWN to apply for a single additional TV licence covering all non-metropolitan WA under s.38A. (29-3-96 9pp)

Mt Gambier/South East Region of SA and VIC, final TV LAP released 23/4/96

61. Letter from FACTS to ABA, re: Statements of Reasons for FAP - Solus Television Licence Areas and Tasmania (29-4-96 1p)

Carnarvon, Karratha, Pt Hedland final radio LAP released 26/6/96

62. Schedule of Investigation to ABA from Minister for Communications and the Arts, Senator the Hon Richard Alston, re: Inquiry Into Future Use Of Sixth Television Channel. (2-7-96 4pp)
63. Paper from FACTS that is included in s215 report by ABA, re: requirements for a basic television facility which could be used to service the needs for a community based television service (15-7-96 11pp)

Ceduna final community radio LAP released 19/7/96

Mandurah final radio LAP released 19/7/96

Torres Strait final community radio LAP released 23/7/96

64. Letter from Terry Cassells, Director Broadcasting, Australian Competition & Consumer Commission, re: Draft discussion paper: planning for commercial television in remote and regional Western Australia (15-8-96 2pp)
65. Memorandum from Connie Ceramidas on Section 106 determination - can licences be bundled into lots (16-8-96 8pp)

Riverland final TV and radio LAP released 28/8/96

Remote Western Australia (Remainder) final radio LAP released 29/8/96

Bordertown, Kangaroo Island and Woomera (SA), Lord Howe Island (NSW), Murrayville (VIC) and Nhulunbuy (NT) final community radio LAP released 29/8/96

Charleville, Longreach and Roma final radio LAP released 29/8/96

Northam final radio LAP released 30/8/96

66. Letter from Mr Richard Alston, Minister for Communications and the Arts, to Chairman ABA, re: notifying his intention to issue a new Notice of Reservation of Capacity for National Broadcasting Services for the whole of Australia (10-9-96 1p)

Geraldton final radio LAP released 16/9/96

Alice Springs final radio LAP released 18/9/96

Mt Isa final radio LAP released 18/9/96

67. Memorandum from Carolyn Lidgerwood on Variations to Standby Specifications (1-10-96 16pp)

Esperance, Kalgoorlie and Merredin final radio LAPs released 8/10/96

Katanning and Narrogin final radio LAPs released 10/10/96

Remote Central and Eastern Australia final radio LAP released 17/10/96

68. Letter from Mr Norman Ashley, Managing Director, Inforadio Australia Pty Ltd, re: Submission regarding matters pertaining to the Licence Area Planning Process (15-10-96 4pp)
69. Letter from the Minister of Communications and the Arts, Senator the Hon Richard Alston, re: Intention to issue a revised Notice of Reservation of Capacity for National Radio Broadcasting Services (21/10/96 1p)
70. Notice of Reservation of Capacity for National Radio Broadcasting Services (No.1 of 1996) from the Minister of Communications and the Arts, Senator the Hon Richard Alston (21-10-96 13pp)

Bridgetown final radio LAP released 13/11/96

Bunbury final radio LAP released 14/11/96

Albany final radio LAP released 14/11/96

Bourke/Tenterfield final radio LAP released 13/12/96

Remote Central and Eastern Australia TV final LAP released 18/12/96

Remote and Regional Western Australia TV final LAP released 24/2/97

Perth TV final LAP released 24/2/97

71. Letter from David Sice on behalf of CBAA re: high power services in Sydney and increasing the operating power for community broadcasting services throughout Australia (26-3-97 4pp)
72. Response from Graeme Carroll, Manager Public Affairs, Federation of Australian Radio Broadcasters (FARB), re: Responding to the ABA discussion paper on "Community Interest Considerations when Planning for Community Radio" (3-12-96 3pp)
73. Response from Mr Michael Thompson, General Manager Community Broadcasting Association of Australia (CBAA), re: Responding to the ABA discussion paper on "Community Interest Considerations when Planning for Community Radio" (19-12-96 5pp)

74. Response from Brian Arley, Senior Policy Officer, National Indigenous Media association of Australia (NIMAA), re: Responding to the ABA discussion paper on "Community Interest Considerations when Planning for Community Radio" (23-12-96 5pp)

Central Victoria and Central Murray draft LAP released 3/4/97

75. Letter from Mr Stanley Willmott, Chief Executive RG Capital Radio Pty Ltd, re: High power services in Sydney and the view that the Government should amend the *Broadcasting Services Act* to require simultaneous submissions to be sought from all markets Australia wide at the same time, to determine expressions of interest in new services, to determine the basis of new priorities. (10-4-97 4pp).

Bathurst final radio LAP released 20/5/97

76. Letter from Minister to Chairman ABA regarding extension of community television trial for another twelve months from July 1997 (27.5 97 2pp)

Parkes final radio LAP released 20/5/97

Lithgow final radio LAP released 20/5/97

Central Western Slopes final radio LAP released 6/6/97

Central Tablelands final radio LAP released 6/6/97

Albury draft radio LAP released 27/6/97

Wangaratta draft radio LAP released 27/6/97

Shepparton draft radio LAP released 27/6/97

Deniliquin draft radio LAP released 27/6/97

Swan Hill final radio LAP released 27/6/97

Mudgee final radio LAP released 30/6/97

CHAPTER 5(2)

RECORD OF ASSUMPTIONS

SUBSECTION 27(2) OF THE *BROADCASTING SERVICES ACT 1992* -
RECORD OF ALL ASSUMPTIONS MADE BY THE ABA IN PERFORMING
ITS FUNCTIONS UNDER SECTIONS 25(2) AND 26.1. POLICY ASSUMPTIONS - PREPARATION OF LAP AND VARIATION OF
THE FAP

The following were unchallenged policy assumptions made by the ABA at the commencement of the planning process. Where appropriate, notes updating or explaining the assumptions have been added.

1. **Universal Access**

Communities with a population of 200 people or more are entitled to expect a service from a broadcaster that is licensed to provide one (see paragraph 3.1.1 of volume 6 the ABA document 'Current State of Radio and Television Planning'⁶ [the 'Current State Document']]).

Note: This assumption is relevant only when planning the technical characteristics of services. The ABA will ensure as far as possible that the technical characteristics of the service would enable the service provider to provide a service to communities within the licence area with a population of 200 or more.

It will not always be appropriate or even possible to plan to this criterion, particularly in areas where there is a scarcity of suitable broadcasting services bands (BSB) spectrum.

2. **Fortuitous Reception**

Reception of distant signals from a radio or television station in another licence area is regarded as fortuitous and will not be protected when planning decisions are made (see paragraph 3.1.2 of volume 6 the 'Current State document').

3. **Channel Capacity**

Six wide coverage free-to-air television channels had been planned throughout Australia before the commencement of the Broadcasting Services Act. That plan is set out in a 1986 publication entitled 'Equalisation of Regional Commercial Television; Draft Indicative Plan' ('the Draft Indicative Plan') (Parts 1 and 2 are contained in the first volume and Part 3 is contained in a second volume).

⁶ *Current State of Radio and Television Planning, Vol. 6*, Australian Broadcasting Authority, 1992, Planning Division, ABA, Canberra.

In 1993, all metropolitan areas except Hobart and Darwin received services on 5 of the 6 allotted channels - programs from the Australian Broadcasting Corporation, three commercial networks and the Special Broadcasting Service were transmitted.

In the overlap areas of the Central Coast (NSW) and the Gold Coast (QLD) 8 translator channels were provided at each site to accommodate operators in each market in addition to the national services. In May 1992, the Department of Transport and Communications published a document entitled '*Australian Television Channel Allotment Plan*'. That document listed proposed television channels for most communities in Australia. In some cases the Department had not found that a sixth channel was available or depended on the release of spectrum before the full complement of six could be achieved (see paragraph 3.1.4 of volume 6 of the ABA document '*Current State of Radio and Television Planning*'⁷ [the '*Current State Document*']).

In the Current State document (1992), the ABA assumed that the scope for introducing additional radio services in the AM band was very limited, unless the AM band was re-planned.

In the case of VHF-FM radio, the ABA in the Current State document set a 'planning target' of 16 wide coverage services in metropolitan areas and 8 wide-coverage services in regional areas where possible, noting that this planned capacity may not be available until after clearance of television services from VHF Band II. (The ABA's assumptions on Band II clearance are discussed below, at item 9.) In the initial FAP, prepared in August 1994, the ABA further developed its 'broad targets' for the number of channels in particular areas of Australia in the light of demographic and social and economic characteristics of areas. The four 'very broad' categories were:

- a) 'metropolitan areas' including Sydney, Melbourne, Brisbane, Adelaide, Perth. In these areas the ABA has aimed for a target of 16 high power channels;
- b) 'main cities' such as Canberra, Hobart, Darwin, Gold Coast, Newcastle, Wollongong. In these areas the ABA has aimed for a target of 12 high power channels;
- c) 'regional centres' such as Cairns, Ballarat, Bendigo, Port Pirie, Bunbury, Alice Springs. In these areas the ABA has aimed for a target of 8 channels; and
- d) 'remote areas' including remote communities in Northern Territory, Western Australia, South Australia and Queensland. In these areas the ABA has aimed for a target of 8 channels.

According to the FAP, the target figures

... endeavour to maximise total FM spectrum availability in all areas where need has arisen or is likely to arise, in a way that would accommodate large differences in the number of existing FM services between areas throughout Australia. They also give some scope to the ABA to address any demand during the LAP process, whether in metropolitan areas or other major cities, regional centres or in remote

⁷ *Current State of Radio and Television Planning, Vol. 6*, Australian Broadcasting Authority, 1992, Planning Division, ABA, Canberra. 4

areas. If met, the target figures would ensure channels are allotted such that demand for additional spectrum can be addressed in all areas. Note, however, that in some areas the 'targets' cannot be reached. An example of why this might occur is the presence of television services on part of the VHF-FM band in an area or in an adjacent area. The targets are no more than a tool for apportioning between areas the spectrum capacity that is available - they are not in themselves a reason for proceeding with Band II clearance in areas where FM channel supply falls short of the target.

The initial FAP, and its underlying assumptions, will be reviewed on an area basis in light of the matters in section 23 during preparation of the relevant licence area plans.

4. **Sixth Television Channel**

The sixth channel in 1993 was the last high power, free-to-air channel available in many parts of Australia where other channels are taken up with the ABC, SBS and the three commercial services.

Note: The Australian Broadcasting Authority has decided to make the sixth channel available on an area by area basis to providers of open narrowcasting services for community and educational non profit purposes. This followed a direction about use of the sixth channel given to the ABA by the Minister on 22 December 1992. The ABA did this on a temporary basis pending a ministerial review of the television broadcasting industry to be conducted by July 1997 (see paragraph 3.1.5 of Volume 6 of the 'Current State document').

On 27 May 1997, the Minister for Communications and the Arts, Senator Richard Alston, advised the ABA that he supported an extension of the community television trial for another twelve months from July 1997.

The ABA decided to continue the community television trial on the sixth high powered television channel until 30 June 1998, and anticipates that the Government will make its final decision on the permanent use of the sixth television channel within this period.

5. **New Television Services**

New Television Services will be on UHF channels in line with developments in other developed countries (see paragraph 3.1.6 of Volume 6 of the 'Current State document').

Note: In areas where the issue of planning additional services on VHF is raised in public submissions, the ABA will re-examine this assumption on a case-by-case basis in the light of the matters in section 23.

6. **Translators**

The equipment used to broadcast a service is called a transmitter. Re-transmission facilities, often called translators, are generally low powered transmitters whose purpose is to extend the coverage of the licensed service by providing a satisfactory signal to areas which receive a deficient signal from the parent transmitter. Translators are allocated a different frequency from the main transmitter and therefore use a different part of the

spectrum. The ABA has assumed that all new television translators would be on channels in the UHF band (see paragraph 3.1.7 of Volume 6 the 'Current State document').

Note: In areas where the issue of planning television translators on VHF is raised in public submissions, the ABA will re-examine this assumption on a case-by-case basis in the light of the matters in section 23.

7. Equalisation in Australia

By 1993, the 1986 Draft Indicative Plan had been given effect in four markets, one each in Queensland and Victoria and two in New South Wales. Three commercial services had been planned and implemented for each of these markets. The ABA noted that, in Tasmania, plans were being developed to extend the services of the two existing regional operators throughout the State, commencing in 1994. Finally, the ABA noted that equalisation had not been planned in other parts of Australia.

8. Remote Commercial Television Services (RCTS)

There are three remote markets that have television services distributed by satellite delivery systems either direct to homestead receiving systems or via re-transmission television facilities to serve remote communities. The ABA expressed the view that the six channel plan ought to extend to these remote community services.

Note: By operation of section 5(1) of the Broadcasting Services (Transitional Provisions and Consequential Amendments) Act 1992 former remote television licences under the *Broadcasting Act 1942* continued in operation as commercial television broadcasting licences under the *Broadcasting Services Act 1992*.

The ABA's view about the application of the six channel plan to remote community services will be reviewed during preparation of the relevant licence area plans.

9. Band II Clearance

The ABA originally assumed that the Band II clearance program would continue until all affected television stations have been cleared to alternative channels, preferably VHF. It noted that previous Ministers had given undertakings that the timing of residual clearances would be assessed on the basis of the need for FM channel capacity or earlier at the request of the licensee. The ABA also stated that channel 5A, whilst not technically a Band II channel, was required for space research services and was being cleared as part of the clearance of Band II.

Following submissions received during preparation of the initial frequency allotment plan, the ABA changed its views on these matters. The ABA decided it would examine the need for clearance in the preparation of licence area plans under section 26 of the Act in the light of the objects of the Broadcasting Services Act, the regulatory policy in section 4 of that Act and the matters in s.23. If there is no demand for FM radio services the ABA decided it will not necessarily clear services that use Band II.

II. FURTHER ABA ASSUMPTIONS - PREPARATION OF THE LAP AND VARIATION OF THE FAP

During the process of preparing licence area plans and variation of the frequency allotment plan in particular areas, the ABA has regard to the following further assumptions:

1. The ABA assumes the demand for additional broadcasting services can be inferred from demographic, social or economic indicators within a market or from comparison with other markets with similar demographic, social or economic characteristics, even where it receives no relevant submissions during the public consultation phase of planning, or where the evidence of submissions conflicts with the demographic, social or economic evidence.
2. The ABA assumes that when planning for community broadcasting services, it is appropriate to consider the population size and other demographic, social and economic characteristics of particular interest groups that may require a dedicated community service as well as the overall demographic, social and economic characteristics of the market.
3. The ABA assumes that the licence areas of existing broadcasting services bands commercial and community broadcasting services represent accepted media markets and the ABA will not vary them without good reason, other than to update them where boundaries are based on outdated Census collection districts. The ABA further assumes that additional broadcasting services bands broadcasting services within those markets should have the same licence area as existing services unless there are good reasons to the contrary.
4. The ABA assumes that aspirant broadcasters have a role to play both in identifying and in creating popular demand for additional services, thereby promoting the objects of the Act. Accordingly, the ABA will have regard to expressions of interest by aspirant broadcasters when assessing demand for new services, even where it receives no relevant submissions from potential viewers or listeners during the public consultation phase of planning, or where the evidence of submissions conflicts with the evidence of demand from aspirant broadcasters.
5. The ABA assumes audiences in solus commercial television markets would generally prefer to receive the same number of commercial television broadcasting services as are received in the major city markets of Australia.
6. The ABA assumes audiences want television services to cover issues of local significance and to reflect something of the local character of the area in which they live.
7. The ABA assumes that the area, because of its relative isolation, will to some extent have different needs, particularly for news and information, to those of television audiences in the major television markets of Australia.
8. The ABA assumes Aboriginal and Torres Strait Islander people, the print-handicapped, non-English speakers and people from a non-English speaking background are groups within society that are often poorly catered for in the mainstream media and would generally support the introduction of services catering to their needs or controlled by members of the group.

9. The ABA assumes that new technologies such as digital audio (or digital sound) broadcasting ('DSB') and digital terrestrial television broadcasting have the potential to alter the planning environment considerably by allowing capacity for more or enhanced broadcasting services using the same amount of spectrum. However, it also assumes preparation of initial radio and television LAPs can be completed Australia-wide before these digital technologies become commercially available in Australia.
10. The ABA assumes that even if a DSB system were introduced in Australia later this decade, AM and FM services would still remain the most important media for radio services for a number of years, as it would take an extended period of time for DSB receivers to reach comparable penetration rates and for DSB transmission facilities to provide a comprehensive coverage throughout the country.
11. The ABA assumes that VHF television channels 4 and 5 and the part of VHF channel 3 used by VHF FM radio in Australia (ie. the spectrum between 87.5 - 108 MHz) are or are likely in future to be required for FM radio broadcasting services in all markets where they are not currently used for television services.
12. The ABA assumes that VHF channel 5A will be required for non-broadcasting services in all markets where it is not currently used for television services.
13. The ABA assumes that the part of VHF channel 3 not used by VHF FM radio in Australia (85 - 87.5 MHz) will be required for non-broadcasting services in all markets where it is not currently used for television services.
14. The ABA assumes that parts of the VHF television band, 202-208 MHz between channels 9 and 10, and 222-230 MHz above channel 11, previously used for aeronautical navigation services throughout Australia, became available for broadcasting services on 1 March 1996.
15. The ABA assumes that the remaining parts of the broadcasting services bands spectrum assigned to it are potentially useful for a range of non-broadcasting services in the category of fixed and land mobile communications. However, the ABA assumes that the objects of the Broadcasting Services Act, including the economic and efficient use of the radiofrequency spectrum, are best served by giving first priority to broadcasting uses of this spectrum.
16. The ABA assumes that locally-based community broadcasters serving the needs of communities, or communities of interest, within the licence area of the service, are best placed to meet the condition at clause 9(1)(c) of Schedule 2 of the Broadcasting Services Act:

The licensee will encourage members of the community that it serves to participate in:

- (i) the operations of the licensee in providing the service; and*
- (ii) the selection and provision of programs under the service.*

III. TECHNICAL ASSUMPTIONS - PREPARATION OF LAP AND VARIATION OF THE FAP

1. Basis of Technical Assumptions

The planning of radio and television services in Australia has been carried out based upon technical planning assumptions detailed in the following documents :

- *Technical Planning Guidelines, Australian Broadcasting Authority, August 1995*

Note : The *Technical Planning Guidelines* (TPG) replace the mandatory technical requirements in the *Technical Planning Parameters and Methods for Terrestrial Broadcasting* and the former emission standard publications by the Department of Transport and Communications.

- *The Interim Australian Broadcasting Planning Handbook (ABA, 1995) (formerly, Technical Planning Parameters and Methods for Terrestrial Broadcasting, Department of Transport and Communications, 1992).*
- *The Australian Radiofrequency Spectrum Plan, Spectrum Management Agency, January 1997.*
- *Emission Standard for the Australian Amplitude Modulation Sound Broadcasting Service*, contained in the *Technical Planning Guidelines* (TPGs);
- *Emission Standard for the Australian Frequency Modulation Sound Broadcasting Service*, contained in the *Technical Planning Guidelines* (TPGs);
- *Emission Standard for the Australian Terrestrial Television Service*, contained in the *Technical Planning Guidelines* (TPGs);

2. Specific Technical Assumptions Relating to Particular Areas

Where the preparation of licence area plans in accordance with section 26 of the *Broadcasting Services Act 1992* (the Act) results in the variation of the frequency allotment plan, under section 25(2) of the Act, it is the opinion of the ABA that specific technical assumptions are appropriate to particular areas. Note that technical assumptions relating to a particular area are included with the LAP discussion paper for the area.

(end)

ANNEX B:

TECHNICAL ASSUMPTIONS USED IN ANALOG PLANNING

Note The General and Technical assumptions used in digital television planning are published separately in the Digital Terrestrial Television Broadcasting Planning Handbook, first published in July 1999, and as revised from time to time.

1. The Technical Planning Parameters

Since 1982, the planning of analog radio and television services in Australia has been carried out based upon technical planning assumptions detailed in a document entitled, *“Technical Planning Parameters and Methods for Terrestrial Broadcasting, 1992”* (henceforth referred to as “the TPPs”) which was published by the Department of Transport and Communications in 1992. That document consolidates previous Department Planning Guidelines (GS1, GS2, and GS3/4) published in October 1982. The TPGs and TPPs been used by the ABA in preparation of LAPs pursuant to section 26 of the *Broadcasting Services act 1992* (the Act) since 1995.

The TPPs cover such technical matters as: minimum channel spacing for services in the same area; co-channel interference; notional transmitters sites; notional radiation pattern; notional market areas; reference television receiving system; upper and lower adjacent channel interference.

Information on the major issues relevant to the planning of radio and television service transmitting facilities as dealt with in the TPPs and the way they were dealt with by the ABA in its LAP determination are explained below.

2. Transmitter system emission standards

The analog emission standards are now included in the TPGs. They contain information on radiated signal characteristics, for example channels, carrier location and modulation and polarisation, main program signal characteristics (modulation system, sub-carrier frequencies) and any ancillary communication services.

Characteristics of radio and television broadcasting transmission systems in Australia were previously defined in the *Emission Standard for the Australian Terrestrial Frequency Modulation Sound Broadcasting Service*, the *Emission Standard for the Australian Terrestrial Television Service*, and the draft *Emission Standard for the Australian Amplitude Modulated Sound Broadcasting Service*, published by the Department of Transport and Communications.

Channelling Arrangements

The channelling arrangements for the Australian AM and FM radio and the television broadcasting services are found in appropriate appendices to the TPGs.

Technical Planning Guidelines

Minimum median field strength

The minimum median field strength for adequate reception quality in the absence of interference from other services are outlined in the TPPs. Minimum field strengths have been adopted for urban, suburban and rural areas to allow for the normal generation of electrical interference by domestic and industrial equipment and for random variations in the level of location of broadcasting receivers.

The concept of minimum median field strength was adopted to overcome electrical noise in the absence of interference. Urban areas, which attract the highest median field strength are characterised by high buildings, lifts, machines, computers, cars, electrical lighting and other noise sources. Suburban areas, corresponding to the next level, include household electrical noise, some factory noise and some car noise. The rural service contour encompasses the areas of low industrial noise, and are typically isolated small communities and a small concentrations of vehicles.

Co-channel Interference (and adjacent channel interference)

Because of the need for broadcasting receivers to be able to distinguish between services on the same channel, but in different locations, it is necessary to separate the transmitters by enough distance to ensure that signals from the unwanted service are not strong enough to interfere with reception of the wanted service. This is called co-channel protection. The further away another service on the same channel is, the less the protection required to avoid co-channel interference. Generally the distance between broadcasting stations using the same channel, (the re-use distance), is determined by the transmitter power of each station, the location and height of the transmitting antenna, the radiating pattern of the transmitting antenna and the intervening terrain.

Typically, two analog 200 kW VHF (or 600 kW UHF) television stations on the same channel using the same polarisation are separated by about six hundred kilometres to avoid interference within each other's licence area. In some circumstances, co-channel television services can be located closer together if opposite polarisation are used and/or if each channel is off-set from the other, that is, their frequencies are changed slightly from the standard channel frequencies.

Similarly, analog services operating on adjacent channels must be removed from each other by a minimum distance, or may employ frequency offsets, to ensure that the selectivity of the receiver is adequate to distinguish between adjacent services on adjacent channels.

Existing transmitter sites

The ABA has assumed that any new FM or television services determined in the planning process would be provided in a manner consistent with the TPPs and the TPGs. This would include, for example co-location on existing FM radio or television transmitter sites.

The location of existing sites and the technical operating conditions of transmitters located at these sites is a significant factor in determining the number of channels that will be available. This is because many elevated locations in Australia are sites already have an existing transmission infrastructure with radio communications and broadcasting

transmitters and antennas, and any new transmission facilities must work in harmony with this infrastructure, from a cost and environmental perspective.

In addition, use of a common transmitter site for broadcasting services has the following advantages:

- It maximises the number of services available in that area by maximising spectrum productivity.
- It reduces interference to other broadcasting.
- It is preferable to co-locate a number of single service sites for economic reasons. This is because it is cheaper to use an existing transmitter site rather than establishing a new one.
- It is preferable to co-locate a number of single service sites for environmental reasons. This is because it is less likely to disturb the environment if an existing transmitter site is used and because use of existing transmitter sites which are generally located in less populous areas means that fewer people are subject to very high field strengths which can cause reception difficulties.
- It is more convenient for viewers. Multiple sites may mean viewers would require multiple antennas.

Minimum channel spacing for services in the same area

The TPPs provide advice on minimum spacing for analog services in the same area, with particular reference to each medium, ie AM or FM radio or to analogtelevision. For analog television services with substantially similar coverage, the receiver cannot distinguish between services on adjacent channels. For this reason VHF channels are usually assigned on an “N + 2 basis”. This means there is at least one channel between any two analog channels planned for the same area. Similarly for wide coverage FM radio services in the same licence area, the minimum channel spacing is 800 kHz.

UHF analog television channels are assigned on an “N+3 basis” that is, at least two channels separate each service planned to serve the same area. Use of the “N+3” basis for UHF analog television planning avoids the potential for image and local oscillator interference between analog television services.

Analog Reference receiver

As there is a wide variation in the technical performance of current radio and analog television receivers available in the Australia as evidenced in the studies conducted by the Communications Laboratory of the Department of Transport and Communications, a concept of a ‘reference’ receiving system was used by the ABA. This means that planning has been based upon an assumption that the transmitted signals will satisfy at least 75 per cent of receivers currently available to the public. The ABA used 75 per cent as the benchmark because:

Technical Planning Guidelines

- For television receivers, the 75% bench mark was used for the Australian Television Receiver Standard produced by Standards Australia
- It accorded with international practice.
- It was in accordance with the parameters in the TPPs.
- It is the technical judgement of the ABA that this standard will lead to the most efficient use of spectrum and provides the best guarantee that the public will be able to receive the services.

Note: It should not be concluded from this that 25% of the population would obtain poor television reception, or would not meet the ABA's planning targets. The 25% figure only has meaning when the combination of: an actual reception situation; the receiver performance; and the actual channels allotted in a particular area; create the necessary interference condition. The conjunction of the condition will occur in much less than 25% of cases.

This approach received support in the public consultation conducted by the ABA in 1994 when determining the frequency allotment plan.