

PROPOSED NEW LICENSING ARRANGEMENTS FOR PLANNING LOW POWER INFORMATION SERVICES

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(THIS IS THE TEXT OF A DISCUSSION PAPER WHICH HAS BEEN CIRCULATED BY THE ABA FOR COMMENT)

INTRODUCTION

The ABA has licensed more than four hundred low power information services in the frequency band 87.5-88.0 MHz since introducing this form of narrowcasting service in December 1992. However, so popular is this type of service that more than twenty new applications are lodged each week and the ABA now has a backlog of more than six hundred applications for low power narrowcast licences. Generally these applications are for transmitters with power not more than 1 watt for which the ABA imposes a general condition of maximum field strength at a distance of 2 km from the transmitter not to exceed 48 dBuV/m.

The ABA currently has a very heavy commitment to planning for mainstream broadcasting and narrowcasting services throughout Australia; this is expected to continue over the next three years. Given the finite resources available for this important task, if we are to allow the low power information industry to grow, it seems that deregulation might be one way to proceed - to let industry accept the full responsibility for planning the services it operates within this sub-band, in much the same way as the Citizen's Band Radio Service operates. In this way, applicants may be able to get a licence to operate their proposed services within a reasonable time frame.

In order to relieve the present situation, the ABA proposes deregulating planning for all low power, i.e. not more than 1 watt, information services operating in the sub-band 87.5-88.0 MHz throughout Australia. This change will be supported by guidelines, including recommended separation distances for services on the same channel, adjacent and next to adjacent channels.

These guidelines are outlined in this paper.

The proposed new arrangements will apply to all outstanding applications as well as to new applications. Existing licensees may apply to have their licences varied to conform with the new arrangements on application (and payment of the appropriate fee). Applications for variation will be treated as new applications for the purposes of processing (in order of receipt).

Outstanding applications will continue to be processed by area, in order of receipt. However, existing applicants will be advised of the changes and given three weeks in which to respond by payment of the necessary licence tax if they wish to retain their place in the queue.

PROPOSAL FOR DEREGULATION

Consistent with the moves to greater self regulation of spectrum users, the ABA proposes that low power services using the 87.5-88.0 MHz sub-band be responsible for planning their own services and managing mutual interference. Experience over the last 12 months has shown that most licence applicants fail to provide accurate information on transmitter site, and often relocate transmitters without proper reference to the ABA. In so doing they frequently overcome local interference problems without assistance.

Under the proposed new arrangements, applicants would apply to the ABA for a transmitter licence, using Form ABA 12. The ABA will not check any of the information provided and will permit use of any one of the five channels 87.6, 87.7, 87.8, 87.9 or 88 MHz to be used (subject to special constraints where television channel 3



Bob Greeney

is in use). It will be up to applicants to liaise with other users of low power information services to ensure that each does not interfere with the other.

It is proposed that low power information services will be licensed on the following basis:

- 1) Location of the transmitter would be anywhere in Australia.
- 2) Carrier frequency to be used must be a multiple of 100 kHz in the range of 87.6-88.0 MHz.
- 3) Maximum transmitter power not more than 1 watt, but not to exceed a value which provides a field strength of 48 dBuV/m at 2 km from the transmitter site. (N.B. antenna height will not be constrained but the power must be adjusted to ensure the transmissions do not exceed 48 dBuV/m at 2 km).
- 4) Neither the ABA nor the Spectrum Management Agency (SMA) will investigate interference between services in the sub-band. However, the SMA and/or the ABA will take action where interference is caused to a licensed commercial, national, or community broadcasting service, to a high power narrowcast service, or to other radiocommunication services. In these circumstances, operation of the low power information service is to cease until the matter is resolved. The costs of any interference investigation undertaken by the ABA or SMA will be levied as a charge on the licensee whose service was the 'last to commence' and

- cause the interference.
- 5) The ABA and the SMA will encourage industry self regulation but would pursue deliberate breach of licence conditions.
 - 6) Licensees will be required to advertise the proposed new station for seven days before the station starts operation and for six days after the service starts operation, indicating the frequency, transmission site, height and other relevant parameters, in addition to the name and address of the licensee and a contact telephone number in case of interference being caused by the new service after it starts transmission. Advertisements are to be placed prominently in a newspaper circulating widely in the area of the proposed station, where local residents and other interested people can readily find out the details of any intended, or new, service so that they know how and where to contact the operators of any new service in the event that interference is caused to other services.
 - 7) Licensees will be required to put an unencrypted announcement to air as a minimum on the hour, every hour, which identifies the licensee, address, phone number etc., so he or she may be contacted for complaints - this transmitter and licensee identification would continue for the life of the station.

The ABA will not assign a frequency nor a location to any service, nor will it apply height restrictions on the transmitting antenna or apply minimum re-use distances between like services operating co- or adjacent channels (see current technical conditions attached). Planning for these services would be entirely the responsibility of users. These arrangements have similarities with Citizens Band (CB)

and some mobile licences.

Under the proposed arrangements, no protection will be provided for any low power information serv-

ice operating within the sub-band 87.5-88.0 MHz. Protection from other low power information services is a matter for consultation between operators and licensees. Existing licensees will be protected from new entrants in the area; the relevant date is to be the date of starting transmission for each service. Any new service will be required to fix cases of interference caused to any licensed service operating before the date of commencement of the new service. For the purposes of this requirement, any licensee who changes channel, location, or other transmission parameters will be deemed to be a new licensee and must publish details as for a new licence.

Existing services are entitled to protection from interference within 2km of their transmitter only. Such protection shall only be accorded to signals equal to or greater than 48 dBuV/m. Interference management is to be arranged by the licensees in the area through consultation with each other. Neither the ABA nor the SMA will resolve these local interference issues except where there is evidence of operation outside licence conditions. The date of commencement for the purposes of establishing prior operation of a service will as a minimum be evidenced by copies of relevant newspaper advertisements.

Where a mainstream broadcasting service is assigned on a frequency too close to the sub-band, say on 88.1 MHz or 88.3 MHz, or where there is a television service operating on channel 3, preventing the operation of low power information services, the ABA may consider an alternative 0.5 MHz from elsewhere within the FM broadcasting band for use by low power information services - note that the ABA will not approve an additional 0.5 MHz where the sub-band 87.5-88.0 MHz is not subject

to interference from mainstream broadcasting.

Where an alternative sub-band is approved by the ABA for use by low power information services, it remains the discretion of the ABA as to whether the use of the alternative sub-band might be allowed on a deregulated basis as is the sub-band 87.5 - 88.0 MHz.

Licensees of low power open narrowcast transmitters must affix a licensing label to their transmitting equipment. This is in accordance with current requirements of the SMA.

Licence fees are to be reviewed by the SMA and may increase significantly in some or all area of Australia for these services. Pending the review of licence fees, the ABA will continue to apply the appropriate General Station licence fee (currently \$28) to low power service licences.

GUIDELINES FOR PLANNING LOW POWER INFORMATION SERVICES

Until now, the ABA has applied the guidelines outlined in News Release No. 13/1992 dated 1 December 1992, copy attached. These guidelines will still apply except that the height restriction on the transmitting antenna is proposed to be removed; all other parameters will still apply.

Under the ABA guidelines, re-use distances were a critical factor in deciding which frequencies could be used within an area. The following table is a guideline to re-use distances which provide adequate protection between services sharing the same channel or adjacent channels. Applicants may want to use the same guidelines for their mutual benefit.

The separation distances recommended and used by the ABA are as follows:

Frequency	Required	Separation Distance	Separation	Separation
Separation	Protection	In Residential Areas	Distance	Distances between
	Ratio	(1 watt ERP -10 m Est Antenna Height)	In Rural Areas	Rural and
			(10 watt ERP -10 m Est Antenna Height)	Residential Services
0 kHz	45 dB	10 km	30 km	20 km
100 kHz	42 dB	10 km	30 km	20 km
200 kHz	25 dB	5 km	20 km	10 km
300 kHz	4 dB	3 km	10 km	6 km
400 kHz	-18 dB	0 km	0 km	0 km

continued on p. 8

The proposed deregulation will not apply to higher power (greater than 1 watt) services in rural areas. Planning for these services will continue to be reviewed by the ABA.

FREEZE ON NEW APPLICATIONS

Obviously, with the current backlog of applications, it seems pointless accepting any further applications for low power information services. Until fur-

ther notice, the ABA proposes to reject new applications received after a date to be determined until a satisfactory outcome of discussions with industry about these proposals and reduction of the backlog is achieved. Applications already received before that date will continue to be handled on the basis of their date of receipt. Any new applications received after the date of freezing applications would be returned to the applicant with a note explaining the

proposals for deregulation.

INDUSTRY COMMENTS ON THE PROPOSAL

The ABA has sought comments from interested persons including the industry peak bodies, the Federation of Australian Narrowcast and Subscription Services (FANSS) and the Federation of Australian Radio Broadcasters (FARB) and current and prospective licensees.

ATTACHMENT NR 13/1992 NEW OPPORTUNITIES FOR INFO SERVICES

The ABA today (1 December 1992) opened up new business opportunities for low power information services throughout Australia by releasing five channels in the FM radio broadcasting band.

Low power services provide localised information such as tourist radio, parking advice for outside public events and commentary at sporting fixtures. Tourists and spectators can then tune-in on their radios for up-to-date details.

'The ABA has received about 50 applications regarding low power services. Today's decision will allow many of these services to get up quickly, perhaps in time for the Christmas holidays,' said Mr Brian Johns, ABA Chairman.

The channels have been released on an interim basis until 31 January 1994, when their allocation will be reviewed after the ABA's detailed planning of the FM radio bands.

The five channels in the 87.5-88 MHz part of the FM band (87.6, 87.7, 87.8, 87.9, 88.0) are intended for use by transmitters with a coverage of less than two kilometres in urban areas (this restriction will be eased in rural areas to allow coverage of up to ten kilometres because there is less chance of interference).

The channels are available for use in all parts of Australia, except where television programs are received on channel 3 (85-92 MHz), as interference problems could result (see background).

The ABA is examining which channels can be made available in areas receiving a channel 3 TV service and will make an announcement early in

the new year.

Technical conditions (below) which apply to the use of low power channels are available from the ABA: 'It will be up to operators to satisfy these conditions and avoid interference to other services. This will greatly simplify planning arrangements,' Mr Johns said.

Localities where television programs are received on channel 3:

ACT	SA
Canberra	Renmark/Loxton
NSW	WA
Nyngan	Bunbury
Newcastle/Hunter River	Baandee
Glen Innes	Kambalda
Eden	
Narooma	
Wollongong	
VIC	TAS
Eildon	Nth/Eastern Tasmania
QLD	NSW
Darling Downs/South Burnett	Bourke/Brewarrina
Townsville	

THE FOLLOWING TECHNICAL CONDITIONS APPLY TO LOW POWER SERVICES:

Special conditions:

1. Spurious emissions from the installation shall not exceed the limits specified in clause 2.4 of the Emission Standard for the Australian Frequency Modulation Sound Broadcasting Service. The installation of an output filter on the transmitter to reduce the power of the second harmonic to at least 90dB below the fundamental is strongly recommended.

2. The licensee shall correct all cases of interference to other radiocommunications services arising from the operation of this transmitter. This shall include correction of interference to radio and television reception. (See Note 1). Since services operating under these specifications are designed to be interference limited this condition does not apply to stations operating in conformance with the specification under special condition 4.
3. In rural areas the coverage radius restriction may be relaxed to a level which will result in a field strength of not greater than 48 dBuV/m (measured at a height of 10 metres) at any location

beyond 10 kilometres from the transmitter. The maximum effective radiated power of any transmitter established under these conditions shall not exceed 10 watts and the received signal in any area zoned residential shall not exceed 48 dBuV/m measured at a height of 10 metres at any location more than 2 kilometres from the antenna

4. Minimum co-channel separation for transmitters operated by the same licensee is not restricted. Minimum co-channel separation between different licensees shall be 10 kilometres.

