In Response

20 May 2002

FuturePace Solutions
PO Box 451
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1.0 Introduction

FuturePace appreciates the opportunity to comment on the few remaining areas where the ACA has issues with our comments to the Commission. We believe the Commission has provided a most important focus and opportunity for conflict resolution and are gratified that the ACA has raised only three issues on which, apparently, differences remain.

2.0 The MDS Conversion

FuturePace appreciates the effort the ACA has taken to place its additional thinking on the public record concerning the ACA decisions that led to the conversion of the MDS B band. The matter has been raised publicly a number of times, not only by FuturePace, and we appreciate the insights given into ACA thinking on the matter. It may go some way to assuaging general industry anger at the decision, although it seems slightly at odds with the attached statement (Attachment C – ACA MDS Rationale Paper) from the ACA website which seems to more than imply that Ministerial intervention after strong representations from the licensees may have been the deciding factor. From this, so to speak, ripple in the record, it would appear that the ACA may have been overturned by the Minister. FuturePace does not

pretend to judge what might in Ministerial terms, constitute "good spectrum management reasons", though we accept that a direction from the political master may constitute such reasons for the Regulator. In any event, the precedental aspects of the latest statement of facts may be useful to industry in general as more spectrum is converted.

Noting the MDS licensees were advised that *"The SMA can make no commitment about the renewal of licences,"* and that the MDS A band was also foreshadowed for conversion along with MDS B in 1995 but for *"good spectrum management reasons"* the MDS A licences were apparently "*not renewed"*, FuturePace's point, no matter when the MDS auctions were conducted, and no matter whether a licence was or was not renewed, and no matter on whose instruction the decision was taken, is that when the later conversion process took place it did so under outdated policy, using fairly inflexible licence conditions. Instead there could have been, for what we would believe to be much better spectrum management reasons, a public auction of spectrum licences using much more flexible licence conditions under the new re-allocation provision in the Act. The ACA had that option available to it but chose, apparently as a matter of good spectrum management, or Ministerial directive, not to use it.

FuturePace believes that neither the industry, the community nor the Revenue were well served by this decision.

Our position is supported by Market Dynamics comment to the Commission in October 2001 "*You can also use that secondary market example (Boulos spectrum resale) as an example of the original allocation (conversion of the MDS B bands) being inefficient*."

We are interested in some of the implications of the matters which the ACA submission says were taken into account in the decision, especially the reference to the impact of licence fees paid before the conversion:

"*In deciding whether to offer conversion or re-auction the MDS B band licences, the ACA took into account:*

- *the fact that approximately $100 million had been paid for MDS licences in auctions as recently as 1994-95, and a total of about $50m was paid in annual licence fees over the subsequent 5 years;"*

Obviously, the value of the annual apparatus licence fees were considered, apart from their usual purpose of reimbursement for access to the spectrum each year, as a factor in determining whether to convert or go to auction. Logically, the value of that consideration should now be applied across the industry. This provides an interesting precedent in other conversion processes and could impact favourably on spectrum prices for future spectrum licensees. FuturePace had previously taken the view that past apparatus licence fees were calculated as a reasonable impost for services or spectrum access received, and that as such they would not contribute their value to a later decision relating to whether to convert or go to auction. However the precedent is important and will undoubtedly be useful to industry as policy for later spectrum conversions is announced.

It seems sensible to leave the debate at that point and agree to disagree on what, in this context, constitutes "good spectrum management reasons".

3.0 ACA Assigned

FuturePace appreciated contact from the ACA in relation to our concerns about the use of the term "ACA Assigned" and we attach correspondence between FuturePace and the ACA (Attachment A – ACA Email) which presumably formed an input into their response to the Commission concerning "ACA Assigned".

It is clear from the context of their submission that we are talking at cross purposes about anti competitive behaviour and the policy on competitive neutrality but equally there is, as evidenced in the attachment, willingness to take some of our concerns on board and we very much appreciate this.

In relation to competitive neutrality our view remains that the ACA should not accept work, including frequency assignment work, in an industry it regulates, but that if it must do so, if for example the 50 or so persons accredited by the ACA to do this work, cannot undertake the volume of frequency assignment work available from industry, then the ACA should pick up any slack on the same basis as the industry operatives it accredits. And if this is the case then the data recorded for GSM900 by the ACA should have been consistent with the ACA's own Register Determination, especially when the full data set was provided by the licensees.

The ACA past practice of recording only the site ID for GSM 900 base stations caused us additional concerns because it was obvious that the notional data base being created by the ACA was having an impact on, and leading to another poorly designed technical framework for the proposed conversion of that band to spectrum licensing. Thankfully, our concern has been overtaken by the decision by the ACA to withdraw that technical framework. We understand the ACA decision concerning the manner in which they recorded the GSM900 data may have been a factor in making that band an unattractive proposition for spectrum licensees.

This is also one more example that justifies our concerns over so-called "simplification" of the spectrum licensing technical frameworks. A full data set is required to do the job the ACA has said it expects of the people it accredits for certification work. The sanctions the ACA may impose on accredited persons if that work is not correct are also quite rigorous, and it is therefore

imperative that data, and the liability which goes with the provision of accurate data, is managed properly.

FuturePace, along with the rest of the industry, is delighted that we will now be able to enter our own data in relation to apparatus licensing, and, provided that the facility which is to be provided, and we have been consulted only marginally on this, is adequate, we can assume that correspondence of the sort at (Attachment B - FuturePace Letter and ACA Response) will no longer be necessary. However that correspondence makes it clear that we were not consulted before the abbreviated data entry took place, we found out because we always check the data for typing accuracy and found the records incomplete, and even after we had raised the issue, ACA decisions were taken regarding what would be entered (although further discussion was offered). If these practices can be eliminated by the new on line system then FuturePace applauds it.

The issue of data integrity is an important one, not just in relation to coordination, it is also about correct allocation of liability in the interference management process.

4.0 IMT2000 Framework

The ACA has said it all: "*If they're buying a spectrum licence now without reading the fine print they could be in for some unpleasant surprises down the track*".

That might include noting that the ACA are now calling it, correctly, the IMT2000 framework.

FuturePace has had a number of discussions with clients about the IMT2000 framework which suggest that reading the fine print would have been a good

idea for the IMT2000 framework. And for any licensee not intending to use WCDMA for the life of the licence it is clear to us that license conditions will very likely require re-negotiation during the life of the IMT2000 licenses. We raised this issue with the ACA before the auction during the two TLG meetings for which we negotiated admission and later at a discussion with the ACA. Our comments, and those of a carrier (bought into the discussions by the ACA as an independent participant, that is, neither representing nor represented by FuturePace) may have been “taken into account” by the ACA but certainly were not acted upon. In fact a very recent (2002) ACA document[1] certainly speaks in terms of technology un-neutral "*provide for the 2076–2110 MHz frequency band to be used for fixed point-to-point services that will be cleared from other parts of the spectrum to make way for a new mobile service known as IMT–2000.*" This would suggest that the FuturePace concern is factual rather than alarmist as the ACA asserts.

We reiterate, the biasing of the IMT2000 framework should have been stated in the marketing plan, not buried in a footnote. This framework is not technology neutral and FuturePace conveying this fact to our clients is not alarmist. It is responsible management and technical advice given the level of expenditure required of licensees in network rollout. It is clear from comments coming to us from industry that what will be required by industry is full technological neutrality, possibly for a revised IMT2000 framework, to take it to 3G, and definitely for future spectrum releases for spectrum licensing.

Far from believing that bidders were aware of the detail of the IMT2000 framework and therefore supported it, we are concerned that the speed of development of the IMT2000 technical framework, combined with ACA assurances that it was technologically neutral, may have lulled some elements of industry into a false sense of security.

[1] Frequency Band Plan *2.1 GHz Band Frequency Band Plan 2002*.

And of course those elements aiming to sell IMT2000 into a relatively captive market may have also contributed to this level of inappropriate confidence.

However this returns us to the ACA's own comment on the need to read the fine print, and we suspect industry will do just that before signing off on any future frameworks, in fact the Draft GSM 900 framework may have been the beginning of such a process of closer industry scrutiny. This is reasonable given the ACA approach of caveat emptor, it is just sensible business practice for industry to take a very close look at any policy or technical rules developed by the Regulator. Nor do we consider caveat emptor an unreasonable position for the ACA to take, provided industry has time and opportunity to consider options and debate is not stifled and opposing views to those held by the ACA are given a fair and open hearing. We have also suggested that in this context more aspects of the ACA process should be subject to external review.

It also seems to us that, given the nature of ongoing input to the Commission seems to be between the ACA and FuturePace, these matters might more appropriately be discussed on a bilateral basis, in that the matters under discussion are at increasing distance from the core business of Productivity Commission interests.

-o0o-

Attachment A – ACA Email

Original Message -----
From: "Stubbs, Rod" <Rod.Stubbs@aca.gov.au>
To: "'Barbara Phi'" <futurepace@bigpond.com>
Cc: "Michael Whittaker" <sspectr9@bigpond.net.au>; "Luther, Geoff" <Geoff.Luther@aca.gov.au>
Sent: Wednesday, May 01, 2002 5:15 PM
Subject: RE: RESPONSE TO YOUR PHONE CALL

Barbara:

Thanks for your email which provided additional information concerning the Productivity Commission submission.

I concur that data integrity and reliability is vital for the communications industry now and into the future. I am hopeful of the electronic interface to RADCOM addressing many of the problems you raise. Importantly, I expect it to create a clear line of responsibility for the data supplied and to empower licensees, through their accredited persons, to address data issues in an automated way not previously available.

I have shared your email with other members of the ACA as I agree the email raises issues worthy of further debate as the ACA moves forward in spectrum management.

Thanks again.

Rod

-----Original Message-----
From: Barbara Phi [mailto:futurepace@bigpond.com]
Sent: Wednesday, 1 May 2002 4:20 pm
To: Stubbs, Rod
Cc: Michael Whittaker
Subject: RESPONSE TO YOUR PHONE CALL

Greetings Rod

Thanks for your call relating to our comments to the Productivity Commission on competitive neutrality.

There are, as you will have seen from our submission, a couple of issues. The first is that the ACA when completing an apparatus licensing assignment, do not have to abide by the same rules as accredited persons, this means that potentially different tests are being applied to industry in work for which both industry and the ACA "compete". I accept that there are probably good legal reasons why the ACA staff

don't complete an actual FAC, but I think it reasonable given all the consultation with industry which went into establishing the datasets for both apparatus and spectrum licensing, and our own personal efforts in getting agreement to the draft determination within the ACA, for the database to be consistent across the board.

The most glaring example of 'ACA Assigned' is GSM 900, which just gives the Site ID, and the licence status as "not issued" even though these stations are operating, but it does occur in other places. And of course it is hard to coordinate against a Site ID. Of course our comments were made in advance of the withdrawal of the GSM900 framework and so may now seem less relevant, however it is a matter which would need to be resolved before the GSM900 could be appropriately packaged in a manner attractive to industry if there were a later intention to again convert to spectrum licenses. We are not familiar with all the issues surrounding the withdrawal of the draft framework but believe the lack of data definition may have been a factor, industry is, as predicted by the ACA, developing quite sophisticated tools for management of spectrum and in particular with the ACA database interface, and consistency and integrity of data holdings, against the Determination which we developed are increasingly important.

The other matter I mentioned to you, and I have raised it with Geoff Hutchins previously, is where an FAC is sent to the ACA and a short form version of the data is entered into the register. I am forwarding my initiating letter and faxing his reply to it.

[*SEE ATTACHMENT B OF THIS SUBMISSION*]

Going to the detail of the Hutchins/Phi correspondence we provide our FAC's as part of a contract with a client, I'm not sure what the legal liability situation is where another assigner accesses the ACA database and coordinates against partial data. If there is resultant interference then it is moot as to who is responsible for the situation. Certainly we see major problems with the ACA, in effect, intervening in a commercial contract between its clients. The task of the ACA is surely to reflect the accurate results of that contract in the ACA database not to edit them against some notion of what is required. Of course the fact that ACA officers are not bound by the same rules as the people the ACA accredits may mean that there is simply a lack of awareness within the ACA as to the uses to which the database is put.

I trust this will be remedied by the new on line approach to data entry and we do thank you for moving to develop that, but it still begs the question about database integrity for past sins of omission.

I am also concerned at the general principle of the ACA participating in the industry which it regulates. It seems to me that competitive neutrality means that, in effect if a task can be done in industry then Government should not compete.

I personally believe that there is more than the potential for conflict of interest where the ACA regulates industry, mediates between its various protagonists and also participates in the industry. Any industry participation must be seen as competing, at

least to the extent that any job done by the ACA is one which industry cannot get.

A good historical example is the AMPS data migration. This happened a long time back, but we had quoted for the work and the ACA stepped in, agreed to undercut us on price, did so on the basis of reducing the data fields to be entered, a cost saving option not open to FuturePace, and then never actually got around to entering the data. Again not an option open to industry.

I think what I'm saying is that the ACA role is Caesars' wife, and the industry regulator should not be grubbing around in the mud with the rest of us competing for the industry dollar. Nor should it be possible for industry to even be seen to be able to apply pressure based on commercial interests, theirs or the ACA's. So the ACA is best placed not providing services to industry except in its regulatory and licensing roles.

I suppose our push for neutrality in design and exclusion of the ACA from the marketplace is based on these concerns. We also believe the ACA has sufficient work, given the limitations of resources and ongoing climate of policy change for its role to be "limited" if that is the word, it sounds like a significant role to me, to that of creating the environment in which competition can flourish, not trying to create competition and certainly not competing with the industry it regulates, and in our SME concern, with individuals it accredits, for the industry dollar.

I hope this has gone some way towards explaining what we were trying to say to the Commission which is not that we are critical of the ACA rather that we see it as requiring a re-focussing onto the possible, rather than trying to handle matters outside its regulatory bailiwick. In fact we refused to award the ACA a B rating and said it was in most areas more an A, but we continue to think there are issues which can be done better, or differently.

It is also clear that we have a strong view on technology neutrality and the Counter-Reformation to central planning which we see as occurring in the development of in particular the 3G and now withdrawn GSM900 frameworks. But that is probably a discussion we should be having with someone else!!

Thanks for your call and if I can assist further please don't hesitate to call.

Kind regards

Barbara

Attachment B – FuturePace Letter and ACA Response

Geoff Hutchins
ACA

Dear Geoff

We recently received advice of the issue of the three Telstra DCS-18000 PMTS Class B licences, one each for Mildura (1138267), Broome (1138268) and Kalgoorlie (1138269) in the 1.8 GHz point to point fixed services allocation, as a result of our representations and certifications. We were very pleased with the speed with which these 'out of policy' applications were processed and Telstra also appreciated the flexibility shown by the ACA in dealing with the matter. However, we believe it necessary to draw to attention the potential industry disbenefit at the manner in which these services have been entered into the Register of Radiocommunication Licences (RRL). A notional and short form method of registering each three-sectored base has been used which may cause frequency coordination problems and reduced spectrum utility in the future.

We believe the technical description for these services in the Register should attempt to emulate spectrum licensing methods where the management of non-homogeneous services requires certain details to be made explicit when, under apparatus licensing, they are often contained either in the relevant standard or RALI in a generic manner.

Is it possible for the data entered in the RRL to be amended to accurately reflect the reality of the coordination situation?

For each licence there are presently two spectrum accesses, one representing base transmitters in the upper band and the other representing base receivers in the lower band. The transmitter spectrum access for each base does not give explicit details for each sector. The antenna height is set to 0. There is no antenna azimuth and no feeder loss.

Our concern is that coordination processes designed for this point to point band, especially automated processes, are unlikely to function correctly if:

- each sector is not represented correctly; and
- the mobile transmitters (and perhaps) receivers are not represented in some manner in the data base.

The method of data recording that has been used is more suited to a homogeneous band, although it is better that that currently used for GSM900. Certainly, our clients are indicating that GSM900 requires much more detailed data to be recorded in the RRL especially if it is to be managed under spectrum licensing in the future.

We believe that specific details and accuracy are very important given the specific coordination requirements implicit in the new special condition that has been attached to these, and presumably similar licenses. The licence condition is "*The licensee must cooperate to the extent necessary to prevent its radiocommunications services from inhibiting the use of 5 MHz of contiguous radiofrequency spectrum by mobile services in the frequency range 1715 to 1725 MHz and 1810 to 1820 MHz in the area surrounding the station location specified on this licence."*

A notional method of representation causes loss of utility by requiring a more than necessary allowance for interference protection both to and from a base station and a short form method of representation is likely to result in devices not being taken into account. We believe the techniques used should be closer to those applied in the more complex situations encountered in spectrum licensing in order to maximise spectrum utility and minimise any need for the removal of point to point services in order to satisfy the licence condition.

I should be grateful for your comments and perhaps we might make an opportunity to discuss.

Regards

Barbara Phi
5 February 2002

In Response

Australian Communications Authority

Barbara Phi
Director
FuturePace Solutions

X2002/315

Dear Barbara,

Thankyou for your letter dated the 5th of February 2002 regarding the three DCS-1800 PMTS Class B licences recently issued to Telstra in Mildura, Broome and Kalgoorlie.

We appreciate the concerns raised in your letter regarding the potential future coordination problems between these PMTS services and other services in the band. However, after consultation with our Customer Services Group, we consider that the technical description provided in the Register of Radiocommunications Licences (RRL), with some minor modifications, is adequate to enable coordination with other services in the band. Also, in view of the fact that these are "out of policy" assignments, we expect that the number of assignments in these areas will be limited and therefore should not pose any major coordination issues in the future.

In respect of your comment about antenna height we will change the data entry as explained below.

In respect of your questions about antenna pattern/azimuth we understand that the technical description in the RRL should assume that, for the purposes of coordination, these services are omnidirectional. In fact, the representation of the antenna without an azimuth direction data field entry actually implies this. However, we agree that this may not be clear to external users of the RRL. As a result we propose to modify the antenna entries for these DCS-1800 PMTS Class B services in the RRL as described below to make this more clear.

In respect of your question about feeder loss information, this can now be collected and recorded in RADCOM. However, there are some policy/implementation issues that need to be addressed prior to this being provided on the RRL CD-ROMs. It is expected that these will be addressed over the next few months.

Mobile transmitters are already covered under the Class Licence for Digital Cellular Mobiles and as such do not need to be specifically recorded or licensed. Also with the PMTS licence type the presence of mobiles is implied and should normally be taken into account in any coordination process.

In summary the following changes will be made to the data entries for these DCS-1800 PMTS Class B services in the RRL:

Purple Building, Benjamin Offices, Chan Street, Belconnen ACT
Telephone: (02) 6219 5555 · Facsimile: (02) 6219 5353
Postal Address: PO Box 78, BELCONNEN ACT 2616
Website: www.aca.gov.au

the antenna height field entry will be updated to reflect the actual height of the antennas on the site (the height of the highest antenna will be recorded in cases where the sector heights vary);

the antenna type field entry will be changed to indicate that the services use a multi-sectored antenna configuration which forms an omni-directional pattern; and

the azimuth field entry will be updated to read "ND" (Non Directional) to reflect the fact that the service is basically omni-directional.

I trust this reply addresses the concerns raised in your letter, however if there are further issues you wish to canvass we would be happy to meet to discuss them.

Yours sincerely,

Geoff Hutchins
Manager, Spectrum Planning
Radiofrequency Planning Group
22nd March 2002

Attachment C – ACA MDS Rationale Paper

RATIONALE PAPER

FREQUENCY BAND PLAN CHANGES FOR THE MDS A (2076-2111 MHZ) AND MDS B (2300-2400 MHZ) BANDS

The purpose of this document is to provide the rationale for the ACA's proposed changes to the existing frequency band plan arrangements for the MDS Bands.

BACKGROUND

The frequency band plan for the 2076-2111 MHz and 2300-2400 MHz bands (made in June 1988 by the Minister under the *Radiocommunications Act 1983*) provides that the primary[1] purpose for which the bands may be used is the provision of services using Multipoint Distribution Systems (MDS). The plan is called the MDS Band Plan. Under the Plan, use of the 2076-2111 MHz band (MDS A band) and the 2300-2400 MHz band (MDS B band) for certain non-MDS purposes is allowed on a secondary[2] basis only.

A Multipoint Distribution System is defined as a fixed service comprising at least one multipoint distribution station (a transmitting station), four multipoint distribution station receivers and any number of multipoint distribution repeater stations. Apparatus licences[3] authorising the operation of MDS in accordance with the MDS Band Plan are called MDS licences.

The MDS Band Plan provides for 19 channels of 7 MHz bandwidth. Prior to it being made, the *Radiocommunications Act 1983* was amended to prohibit the issuing of radiocommunications licences for domestic pay television (pay-TV). This embargo was imposed to allow Government policy issues regarding pay television to be resolved.

To preserve a number of options, the MDS Band Plan effectively provided that 13 channels could be assigned for MDS transmissions, not including pay-TV, at each location prior to lifting of the embargo. All 19 channels would be able to be assigned for MDS transmissions, including pay-TV, when the embargo lifted. The embargo was lifted in October 1992.

While the embargo remained in force, MDS licences were issued on a "first come/first served" basis – ie, at the discretion of the licensing authority, having regard to all relevant considerations. However, with the lifting of the pay television embargo in October 1992, the industry demand for MDS licences to provide domestic pay-TV

[1] A primary service may claim protection from harmful interference caused by another service, but must not cause harmful interference to another primary service.

[2] A secondary service cannot claim protection from harmful interference caused by a primary service, and must not cause harmful interference to a primary service. A secondary service may claim protection from harmful interference from another secondary service.

[3] An apparatus licence authorises the licensee to operate a particular type of radiocommunications transmitter or receiver, in a specific segment of the radiofrequency spectrum, for a particular purpose.

was considered to be such as to warrant the use of a market based mechanism to allocate the licences.

In 1994, 190 MDS licences were allocated by open outcry auction in 13 major cities. This allocation was undertaken by the Spectrum Management Agency (SMA), a predecessor of the ACA. The SMA undertook further MDS licence auctions in 1995 and 1996, which resulted in the issue of over 340 MDS licences in 18 regional areas of Australia. MDS licences allocated by auction were issued for fixed 5 year terms. MDS licences allocated by auction in 1994 excluded two of the five MDS A channels in Adelaide, three in Brisbane, and all five MDS A channels in Sydney, Melbourne and Perth. MDS licences for these non-auctioned channels, which were allocated administratively prior to the lifting of the embargo on using MDS for domestic pay-TV, have been renewed annually and are now held by TV and Radio Broadcasting Services Pty Ltd (TARBS).

In March 1999, the Australian Communications Authority (ACA) released a discussion paper entitled "Future Uses of the Multipoint Distribution System (MDS) Bands" (MDS Discussion Paper) seeking public comment on possible future uses of the MDS bands. Impetus for this review of the MDS bands arose from the impending expiry of many MDS licences (eg most MDS licences held by TARBS, with expiry dates between 25 July and October 1999) and developments concerning IMT-2000 (a third generation public telecommunications mobile service). A summary of the comments received on the paper is at Attachment A.

REVIEW OF THE MDS BANDS

Matters considered by the ACA in the review

In reviewing the future use of the MDS bands, the ACA considered comments received on the MDS Discussion Paper, having particular regard to:

(a) the interests of existing MDS licensees; and

(b) alternative demands for the MDS bands.

These matters are addressed in the following discussion.

Interests of existing MDS licensees

Persons who obtained five year MDS licences have pointed to their considerable expenditure on these licences and associated infrastructure, and that the period for which they have held the licences has not given them sufficient time to recoup their investment.

They contend that their MDS licences should be renewed for a further five years to allow them to obtain a reasonable return on their investments.

Alternative demands for the MDS bands

Alternative demands for various parts of the MDS spectrum are:

- third generation mobile public telecommunications (IMT-2000),
- fixed microwave links, particularly those displaced from the bands identified internationally for IMT2000,
- protection of space services.

These demands relate specifically to the MDS A Band (2076-2111 MHz), which supports 5 of the 19 MDS channels.

Some licensees expressed an interest in greater flexibility of use of these bands and increased tenure. They suggested the use of spectrum licensing[4] for these purposes.

Third Generation Mobile Telecommunications

Spectrum identified by the 1992 ITU World Administrative Radio Conference as intended for use, on a worldwide basis, by administrations wishing to implement IMT-2000 comprises the bands 1885-2025 MHz and 2110-2200 MHz. As shown in Figure 1, the lower of these bands overlaps the MDS A Band by 1 MHz. The removal of this overlap from the existing MDS A Band arrangements would effectively eliminate one MDS channel.

The timing of demand for IMT-2000 spectrum is unclear. Some countries have announced plans to allocate that spectrum in 2000. Allocations in other countries may not take place for a few years. To guide domestic decisions on timing and other planning issues, the ACA established a Radiocommunications Consultative Council working group which is to report its findings by March 2000. At this point, the best indications are that carriers will seek to deploy IMT-2000 services in Australia in 3-5 years.

[4] Spectrum licensing is a form of licensing introduced in Australia by the *Radiocommunications Act 1992*. They are a tradeable, technology neutral spectrum access right for a fixed non-renewable term. Instead of authorising the use of a specific device, spectrum licences authorise the use of spectrum space and give licensees the freedom to deploy any device from any site within their spectrum space, provided that the device is compatible with the core conditions of the licence and the technical framework for the bands.

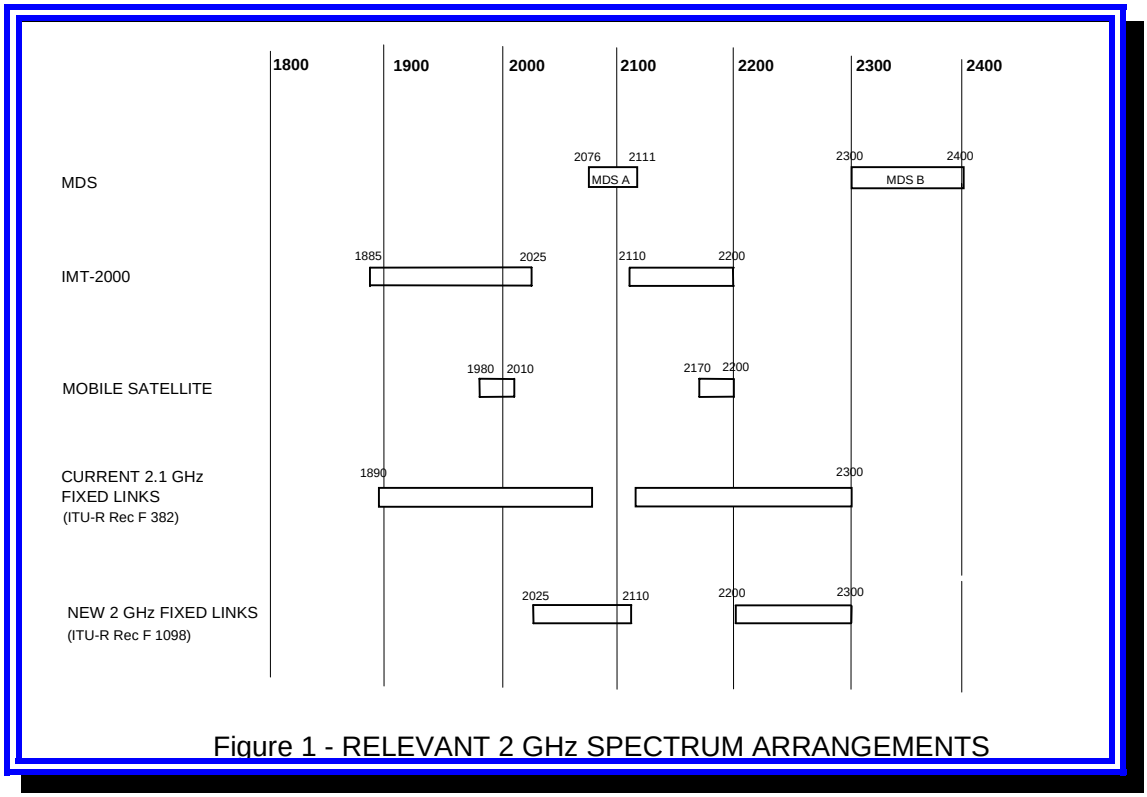

Figure 1 - RELEVANT 2 GHz SPECTRUM ARRANGEMENTS

Fixed Microwave Links

Pressure on fixed link[5] services in the lower microwave bands is already occurring as a consequence of the allocation of 1.8 GHz spectrum for mobile telecommunications, the deployment of DECT services and developments in the Mobile Satellite Service (in the bands 1980-2010 MHz and 2170-2200 MHz).

In addition to the existing pressure on fixed links, the deployment of IMT-2000 services will necessitate clearance of fixed links from the 2.1 GHz Band. At present, there are around 1900 fixed link assignments in this band. The links are used by approximately 50 licensees including carriers, broadcasters, utilities, essential and emergency services, government bodies and private companies. There will be further demand for fixed links to support the deployment of IMT-2000 services, and possibly to accommodate the arrival of digital television.

Recognising that the introduction of IMT-2000 would necessitate clearing fixed links, early this decade, the ITU developed new channel arrangements for fixed point-to-point services displaced by IMT-2000 services. These arrangements, which involve the 2025-2110 MHz and 2200-2300 MHz bands, are in ITU-R Recommendation F.1098-1. They overlap the MDS A Band, as shown in Figure 1.

Protection of space services: A number of agencies are concerned to ensure that use of the MDS bands does not cause interference to space services. The ACA has in the

[5] Fixed links are point-to-point radiocommunications systems

past taken account of the need for space services to be provided with protection from interference and it is anticipated that these needs will continue to be addressed.

Spectrum licensing: In response to the discussion paper, there has been some call for MDS spectrum to be allocated by issuing spectrum licences, with some respondents supporting allocation by conversion or auction.

Outcome of the review

In light of relevant considerations, including comments received on the discussion paper and the particular matters discussed above, the ACA on 29 June 1999 announced by way of media release:

- that MDS A band licences would be renewed up to 25 July 2002, with MDS B band licences to be renewed up to 25 July 2004. The ACA decided to renew MDS A band licences for the shorter period (to 25 July 2002) because of the need to use the MDS A band to support the introduction of IMT-2000 and to accommodate fixed point-to-point services displaced by IMT-2000.

- its proposal for new frequency band plan provisions under the *Radiocommunications Act 1992* (the Act) to support the introduction of IMT-2000 services. The proposed provisions would:

    - set a termination date for the allocation of the MDS A band for MDS services;
    - provide for the 2110-2111 MHz segment of the MDS A band to be used for IMT-2000 purposes (this segment is included in the 2110—2200 MHz band, one of the bands designated for IMT-2000);
    - provide for the remainder of the MDS A band to be used for fixed point-to-point services (links) which will be cleared from other parts of the spectrum to make way for IMT-2000.

For the purpose of giving effect to these band plan provisions, the ACA proposes to revoke the existing MDS Band Plan under section 34 of the Act and to make a new frequency band plan for the MDS A and B bands under section 32 of the Act in which the proposed provisions would be embodied.

Post Review developments concerning the MDS B band

Following representations made to him by certain MDS licensees after the ACA's announcement of 29 June 1999, the Minister for Communications, Information Technology and the Arts has decided to designate the MDS B band for spectrum licensing, which will involve the conversion of existing apparatus licences in this band to spectrum licences. The ACA has included in the proposed new MDS Band Plan words to the effect that the band plan will not apply to the use of a part of the spectrum where a spectrum licence authorises the operation of a device using that part of the spectrum.

SUMMARY

The ACA believes that the proposed frequency band plan changes for the MDS A and MDS B bands are necessary to:

(a) cater for the planned introduction of IMT-2000;
(b) cater for fixed point-to-point services, particularly those displaced from the bands identified internationally for IMT2000;
(c) support operations of various space services; and
(d) facilitate operations under spectrum licences resulting from the conversion of MDS B band licences.

Australian Communications Authority
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ATTACHMENT A

Summary of comments on discussion paper: Future Uses of the Multipoint Distribution System (MDS) Bands

Comments were received from 20 persons or organisations as follows.

Comments on the discussion paper in relation to the MDS A band (2076-2111 MHz)

Four respondents proposed that the current MDS licences in the MDS A Band should be renewed for a further period of 5 years. Three of these respondents indicated that they had spent a considerable amount on MDS and associated equipment and suggested that it was appropriate for the ACA to renew their licences for a further period to allow a reasonable return on this investment. Two of the respondents supported the introduction of spectrum licensing in the band only if the incumbent licensees were able to convert existing apparatus licences to spectrum licences for an acceptable access charge.

Of the 16 remaining respondents, 3 respondents, in view of ITU-R Recommendation F.1098 (to accommodate fixed point-to-point services expected to be displaced by the introduction of IMT-2000) were in favour of the MDS A band being shared between existing MDS services and apparatus licensed fixed services, while foreshadowing the phase-out of MDS services in that band.

Five of the remaining 13 respondents do not support the renewal of MDS licences in the MDS A Band and propose that the band be re-allocated by issuing apparatus licences for fixed or (in the case of 1 respondent) other purposes. One respondent favoured the MDS A band being utilised to accommodate introduction of IMT-2000 services. It also appeared to support the conversion of existing apparatus licences to spectrum licences at a cost based on the apparatus licence tax rate. In addition, it appeared to favour the competitive price-based allocation of currently unlicensed MDS spectrum, but only in cases of spectrum shortage, with incumbents being able to participate only for areas in which they do not currently provide a service. It also supported a "use it or lose it" licence condition.

Of the remaining 7 respondents:

- three respondents were concerned that use of the MDS bands did not cause interference to space services. One respondent, which favoured issuing apparatus licences for the MDS bands, suggested that the ACA consider allocation of the MDS A band for non-MDS purposes (eg space related and fixed services);
- two respondents proposed that the MDS bands be allocated by auction by way of spectrum licences, with one favouring lots of 135 MHz (the total width of the MDS A and MDS B bands) and large geographic areas and the other favouring the areas used for the 28/31 GHz spectrum licence auction. Both favoured re-allocation periods for incumbent MDS licences of the order of 2 years.

- one respondent, in a comment which has particular implications for the MDS A band, recommended that no commitments be made to prospective MDS band users which could hinder the full deployment of IMT-2000; and
- one respondent requested that the ACA, in undertaking MDS licensing activity, have regard to provisions in the Australian Radiofrequency Spectrum Plan designed to protect radioastronomy facilities from interference.

Comments on the discussion paper in relation to the MDS B band (2300-2400 MHz)

Three respondents proposed that the current MDS licences in the MDS B band should be renewed for a further period of 5 years. They indicated that they had spent a considerable amount on MDS and associated equipment and suggested that it was appropriate for the ACA to renew their licences for a further period to allow a reasonable return on this investment. Two of the respondents supported the introduction of spectrum licensing in the band only if the incumbent licensees were able to convert existing apparatus licences to spectrum licences for an acceptable access charge. Another respondent, which favoured apparatus licensing of the MDS band, appeared to support the renewal of MDS licences for the MDS B band without proposing a renewal period, while seeing a need for the ACA to take account of space facilities.

Of the remaining 16 respondents, 3 were in favour of the MDS B band being shared between existing MDS services and fixed microwave services where practicable, while another respondent supported the use of fixed services in the band in line with ITU recommendations. That respondent also suggested that, to allow re-allocation of MDS services, the renewal of MDS licences for periods not greater than 3 years would be reasonable. A further respondent noted that use of the MDS B band for the relocation of fixed point to point links would need to take account of relevant ITU channel arrangements.

Three of the remaining 11 respondents supported the use of spectrum licences in the MDS B Band. One respondent had no strong views on the purpose of use of the band other than to suggest spectrum licences should be offered through an auction process. Another respondent, while favouring the introduction of spectrum licensing in the band offered through a competitive process, suggested that Telstra be excluded from such a process and also suggested that no reserve price should be set. It also favoured allowing MDS licensees using the MDS B band to move to the MDS A band. The 3rd respondent appeared to support the conversion of existing apparatus licences to spectrum licences at a cost based on the apparatus licence tax rate. Also, it appeared to favour the competitive price-based allocation of currently unlicensed MDS spectrum, but only in cases of spectrum shortage, with incumbents being able to participate only for areas in which they do not currently provide a service. It also supported a “use it or lose it” licence condition.

Of the remaining 8 respondents:

- two respondents proposed that the MDS bands be allocated by auction by way of spectrum licences, with one favouring lots of 135 MHz (the total width of MDS A and MDS B bands) and large geographic areas and the other favouring the areas

used for the 28/31 GHz spectrum licence auction. Both favoured re-allocation periods for incumbent MDS licences of the order of 2 years;

- two respondents were concerned that use of the MDS bands did not cause interference to space services;
- one respondent suggested that at least part of the MDS B band be reserved for telemetry services and did not favour spectrum licensing of the band;
- two respondents had no specific comments regarding future uses of the MDS B band; and
- one respondent requested that the ACA, in undertaking MDS licensing activity, have regard to provisions in the Australian Radiofrequency Spectrum Plan designed to protect radioastronomy facilities from interference.

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