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TRANSCRIPT OF PROCEEDINGS

PRODUCTIVITY COMMISSION

INQUIRY INTO RADIOCOMMUNICATIONS

DR N. BYRON, Commissioner

TRANSCRIPT OF PROCEEDINGS

AT MELBOURNE ON FRIDAY, 9 NOVEMBER 2001, AT 11.01 AM

Continued from 8/11/01

DR BYRON: Good morning, ladies and gentlemen. I'd like to resume the public hearings for the inquiry into radiocommunications and the performance of the Australian Communications Authority. I'm Neil Byron. I'll be presiding this morning because my colleague David Robertson has taken ill overnight and is unable to attend today. I have checked with the Productivity Commission Act and, under section 40, the hearing is still legally constituted. I have also checked with the chairman of the commission and we're all right to proceed on this the final day of hearings. We've had yesterday and the day before here in Melbourne, last week in Canberra, the week before in Sydney.

As usual, the hearing will be recorded and transcript will be available on the web site. Because of the transcript, comments from the floor are not admissible, but at the end of the hearing I'll invite anybody else who's present who wants to make any comments on the proceedings or to make a submission to do so then. The final submission that we're hearing today to help with the preparation of our draft report is from the Australian Broadcasting Corporation. Gentlemen, I'd ask you to introduce yourselves for the transcript and if you'd like to make some opening comments and then we can have discussion on that. Thank you very much.

MR KNOWLES: Colin Knowles, director of technology and distribution, Australian Broadcasting Corporation.

MR JADEJA: Dilip Jadeja, Manager, Spectrum Strategy, Australian Broadcasting Corporation.

MR KNOWLES: I will make in fact a few comments, just to try and put our submission into some context. The ABC certainly welcomes the opportunity to appear before this hearing and to discuss aspects of the corporation's submission and of course to respond to any specific matters on which the commission considers we may be able to provide a useful perspective. I thank the commission also for scheduling our appearance to fit in with the fact that I was not available to appear at your earlier hearings.

Our submission attempts to address most of the questions raised in your discussion paper, but we do so from the perspective of a user of the broadcasting and related spectrum and, like all other users, we're a client of the ACA. Let me stress from the outset that the ABC has a long and productive working relationship with both the ACA and the ABA in spectrum management matters, both from a strategic and an operational perspective. The ABC also works closely with our colleagues in the broadcasting industry in relation to most spectrum matters, so that the broadcasting industry itself endeavours to present to the ACA and the ABA an industry perspective in representing our needs to those agencies.

We do understand the complexities under which the ACA must grapple in meeting demands of legislation, balancing public interest, commercial issues,

technology issues and, of course, the financial matters. While some parts of our submission are perhaps critical of some present arrangements, those suggestions are offered in the spirit of a healthy debate. We hope to open the horizons of discussion and naturally, with reflection on some past successful and past unsuccessful encounters, we hope to in fact be able to improve the situation that currently prevails.

As the commission will no doubt appreciate, the ABC relies heavily on the use of spectrum as the highway upon which we deliver our product, which is our programs to audiences. The technicalities of permits, licences and the road rules for spectrum are of little interest to consumers. Likewise, they're of relatively limited interest to the general governance of the corporation. As such, our submission reflects basically the views of the experts within the corporation and those of us who have direct experience, rather than a long considered objective view of the corporation as a whole.

The ABC, to the Productivity Commission inquiry into digital television, put forward a number of economic arguments favouring the particular approach of an independent broadcaster and some of the impacts of that, and I don't intend to try to submit that in evidence or to discuss it. We had a submission which was in fact prepared by Prof Withers which was tabled at that hearing, and I draw the commission's attention to that in the event that you were looking at some of the economic doctrines and principles that the corporation endorsed.

To the ABC's specific interest in this inquiry: as a general sense we have no particular reason to change the status quo. It is quite comfortable at times. We also have some reluctance to engage in often the potential upheaval that major changes impact, primarily because they usually impact upon our bottom line and impact upon our audience. At the same time we do see the need for an incremental change to the processes which take place. Our use of the spectrum, because of our audience concerns, needs to be fairly stable, both in the interests of our financial position and also that of the audience.

Our interests can be divided into several elements. Firstly, we use spectrum to transmit our programs to the Australian public, both terrestrially and by satellite. We use spectrum to transmit the ABC's programs internationally, using HF radio. We need to distribute those programs from our studios to the points of transmission, and this is done normally by satellite and microwave links. We also use spectrum to create content in terms of moving programs from perhaps sporting venues, other venues, back into our studios and to exchange material between our various studios in building new programs. Associated with that of course we use a number of ancillary parts of spectrum such as radiocommunications devices for communication between our operatives. So therefore our use of spectrum is diverse and covers a number of frequency bands.

Our major use of spectrum is of course for national and international delivery of our programs to the audience. The broadcasting model in place across the world

generally relies on very cheap equipment in the hands of consumers and perhaps more complex equipment for the broadcaster. This is probably best demonstrated in HF radio, HF broadcasting, where HF broadcasting has been able to achieve the objectives of communicating with particularly developing countries and getting behind iron curtains and other things. To receivers it probably costs less than 5 or 6 dollars. In fact, often it's the batteries that cost more than the receiver.

To do that of course it means that we use what might often be seen as inefficient use of spectrum by high-powered transmitters blasting into this process. One could achieve HF transmission, as is demonstrated by professional communications, using much lower powers, but of course this involves somebody having a very substantial antenna installation and a very complex receiver. So the broadcast model is driven by the fact that the largest part of the infrastructure is in the hands of the public. From that point of view it's fairly difficult to change. It has a lot of inertia in any change, as indeed we are already seeing with the changeover to digital transmission. I guess similar arguments apply to the geostationary orbit in terms of there are a number of factors which influence.

Turning back to the HF spectrum again, without international regulation in terms of the rules of the road, the way that spectrum is shared and the parameters in which it's used, the spectrum would largely be useless, but in recent years there has been a considerable amount of cooperation between users of spectrum in the HF bands which allow it to be used far more efficiently. For example, within the Asia-Pacific region, the coordination exercises taking place have reduced the number of frequencies by about 40 per cent that are needed to deliver the same service in broadcast hours.

That ultimately represents an increase in the number of broadcast hours for the equivalent amount of spectrum, and that is achieved simply by not having more than one broadcaster trying to transmit on the same channel. At the same time, those international standards also mean that we get a commonality of being able to access receivers and the like. In relation to the geostationary orbit, the ACA is certainly not a free agent. There are a number of political issues which are applied in that satellite band, that in particular developing countries have in fact sought to have access to the band to ensure that their long-term interests are protected and it's not just the rich countries that acquire the spectrum. So therefore no single country is able to in fact determine all the rules and establish the rules.

In many cases the spectrum itself has in fact of course been carved up in ways which allow it to be used in a reasonably efficient way, so that if you look through the spectrum you'll find that all of the broadcasting bands are staggered in such a way that the interference products from one service actually appear in another broadcasting service rather than in the radiocommunications service. So associated with the high-powered transmissions we might run in FM. A series of interference components actually appear in the television bands, and progressively, which mean that those like services are actually managed, even though they're in different parts of

spectrum. This is sort of a part of spectrum farming, as it were, in order to make the things work.

Australia of course is an island state with very few neighbours. As a consequence, large parts of its spectrum are free from international consideration in relation to allocation matters. On the other hand, even though it is free, we have a small population base. Therefore, we tend to look for international standards in relation to equipment, so that the flexibility for example of the GSM spectrum in being able to take our telephone from here to Europe and have the telephone work comes from international standards; likewise, the cost of television receivers and the like comes from the fact that they're mass-produced to common standards. And so therefore standards become an important further consideration in terms of what uses you can apply to the spectrum.

In relation to the broadcasting issues, there has been an argument that's been floated around over time that broadcasting spectrum should in fact be just scattered around and made a free market commodity and should it be planned in the same way as other radiocommunications spectrum. We strongly support the present model of the ABA's planning processes in this, in the fact that the ABA really sets itself as a spectrum organiser, as the agent of the ACA. The advantage that we see as the ABC from this point of view is that the ABA through its public process is able to actually make some social allocative decisions and, to use the land analogy which in fact I've noticed the commission has been using, which is one that I personally used myself in about 92 when the ABA first started, was that in the broadcasting sense, if we were using the land analogy and planning the township, we needed to plan some public spaces and we needed to plan some fire stations and other things, and we then have a general housing estate.

In the ABA's sense, then the public use allocations would be national broadcasting and community broadcasting, maybe some other element - we've got other parts we need to consider - and then of course there's the general commercial allocation which flows from that. The benefit of that process is that, while it might be feasible for the ABC's spectrum requirements to be subsidised by government to get transparency, the fact of the matter is it will never happen.

Constantly we find ourselves in a situation that we're always scrounging for the funds, rather than actually being given funds for these sorts of purposes, but even in the context of the current ABA process, obtaining spectrum reservations and support for those from government has been difficult, although there has been a change of attitude in more recent times as the government has realised that by not making some reservations for ABC services, that the opportunity to do so is in fact taken away because all of the spectrum is then fully allocated and the only chance of getting it back for our purposes would be to actually purchase a service from the open market at open market rates which in fact would normally be commercial radio station rates and that in itself has proved to be somewhat prohibitive in terms of an option for government.

At the moment at least I think that, certainly for the existing spectrum, the present process, while it has been slow, has certainly led to a reasonably orderly process of being able to deliver the services the public pays for. The attitude of our board is that ABC services are publicly funded and therefore should be available to all Australians, at least to the extent that it's economically feasible in terms of delivering those transmitters. We do not pay for our own transmitter network at this point. Well, we do, but the government actually pays on a back-to-back contract to cover that, because historically the government funded the ABC's transmission network and determined when and where it extended.

In the case of our digital services, the government once again has paid for our transmission network to roll out, recognising the large economic impact that would have on our bottom line. All other uses of spectrum of course we do pay for in the normal way, whether it be studio transmitter links and the like. One of the things we look for in that of course is some stability in the use of that spectrum, and we do go into negotiation with the ACA in terms of things like studio transmitter links and the like because our investment in that is often quite substantial. It may not be substantial in some people's terms, but it's fairly substantial as far as our capital budget is concerned, and the life of this equipment typically will be 10, 15 years. Therefore, we look for some stability in acquiring that.

We also look for some commonality, to the extent that if we move, say, a production facility, an outside broadcast van from Brisbane to Sydney, we would like that to be able to operate in that same environment, so therefore we try to common up on frequencies as far as possible. The broadcasters do in fact share their spectrum under cooperation arrangements, whereby we authorise each other to use each other's spectrum and manage that spectrum within its own right under the blessing of the ACA, which means that we use less channels than we would have otherwise used in having each dedicated channels and it makes more available on a more economical basis. So there certainly is a degree of cooperation of spectrum management if it were taking place between the broadcasters in that context.

There have been arguments floated that in fact broadcasting will no longer need spectrum in the future because it will all be done by other means. We don't particularly like that argument very much either. If you look at the convergence arguments where people are saying, "Well, it will all be delivered by pay TV or otherwise," we find that the pay TV operators are all busily looking to find wireless solutions, and the Internet-type people are looking to find wireless solutions as well so they don't be tethered to the wires, and it all starts to look very much like broadcasting at the end of the day.

It's our belief, and looking around the world, that free-to-air broadcasting will continue to remain a major force within the community for quite a number of years to come; that it will be supplemented by pay TV and other devices. It will certainly be supplemented by the other alternative entertainment medium, but there is no real

evidence yet which suggests that consumers are prepared to make all of their own programming decisions, that many of them still want to be able to listen to the radio while travelling to work, without having to pre-program, whether it's the news or a mix of other product, and likewise with TV.

Even in the US, which has had a dominant cable market for quite a number of years, the free-to-air market still maintains in excess of half of the viewing population. So while convergence will come, I think it's going to be slower coming than some people might predict. Likewise digital transmission: while certainly it is more spectrum efficient, we can't actually turn off the analog until such time as everybody is converted, and I think our best guess at that is probably at least 12 years away. Then it comes to the next question: do you then use that spectrum for more broadcasting services or for some other purpose? What's the cost of doing that? Of course that will be a policy decision for government downstream.

That probably is a quick overview of the sort of issues we want to raise in the submission, rather than actually elaborating at length on the submission, which I'm sure you will be able to read, and we're happy to take any questions and discussion on the issue.

DR BYRON: Thank you very much. Thanks particularly for a very comprehensive submission and drawing on your diverse and long-term experience as a major user of the system. I've got a number of questions and they may not exactly follow through the sequence in the submission, but I'll try and follow that as much as I can.

MR KNOWLES: We are happy to take them in any order.

DR BYRON: Okay. This is not really a major question, but in the introduction you refer to the submission that the ABC had made to the DCITA review. For various reasons, that review is unable to give us the submissions that were made to it, but they have said that they have no objection to the initiator sending a copy to us also. So we'd love to see it, but we can only see it if you give it to us directly.

MR KNOWLES: Mm'hm.

DR BYRON: Thanks. In section 2.2 of your submission there's a statement there about the current system of the ACA using spectrum auctions as a way of maximising revenue generation. You're talking about the tensions between the organisation as an allocator and as a revenue generator. The ACA has told us that they explicitly do not attempt to maximise revenue, although they concede that they could do that. When you refer to their revenue maximising behaviour, do you have something in particular in mind or are you just apprehensive that they have the capacity to - - -

MR KNOWLES: I think from the point of view that, just looking from the sidelines at some of these things - for example, the reserve prices for some of the

spectrum would seem to be targeting setting a high price - one also has to question the fact that governments set revenue targets before the decisions are put out and the pricing situation is determined, so therefore one would have to reach some conclusion that in fact there was some pressure on the authority to achieve revenue targets, given that they're put into the budget ahead of making the decisions about the auctions and the like. It's that sort of behaviour issue that in fact really says there's a tension living there. It may not always be what's the straight economic answer; it may be one driven by, "Can we raise enough revenue on this particular solution?" To some extent, the datacasting auction process was a similar sort of process. There was a high reserve price set which in fact made most of the potential deliverers run away, to say nothing of the rules at the time. But that's a separate question.

DR BYRON: Yes. It's been put to us that, depending on the way the rules for the spectrum licence auction are set up, the ACA has the potential to set up a contrived scarcity, if they wanted to solely go for maximum revenue generation, although I guess the - is it one of the 3G mobile licence auctions didn't generate anywhere near as much as had been in the budget estimate the year before? But that probably had something to do with a dotcom bubble bust.

MR KNOWLES: I think that's true. I don't think there is any specific example where one could say that the revenue is - that that is a primary objective, to maximise revenue, but I think that certainly, just looking at the perspective, it's one of those things that as a user who might be potentially affected by that, it is apparent that in fact this could be a change of approach to the whole thing. For example, if large slabs of the spectrum would in fact be sold off and then separately managed under a secondary market, then in fact that may change the dynamics considerably.

DR BYRON: The subject of scarcity of spectrum comes up all the time. We had a statement in Canberra last week, I think - not verbatim but from memory - that there's no scarcity of spectrum; there's just a scarcity of good spectrum management or something like that. But we've had lots of discussions in these hearings about the extent to which new technologies, R and D, the ability to more finely dissect the spectrum, actually creates the capacity to do much more with less, to deliver more sort of beneficial use to customers with the same amount of spectrum. I guess the question was, to what extent do you think that technological improvements will continue to expand our ability to satisfy ever increasing demands?

MR KNOWLES: I think we've got two factors coming into the spectrum scarcity or lack of scarcity equation. Firstly, as time has gone, we've been able to exploit higher and higher bands in spectrum and therefore, particularly in relation to point-to-point type services, short range, they've become available as we got closer and closer to the light end of the spectrum. In the 1900s when we started off and radio barely worked, there was a pretty scarce range of spectrum because a very limited amount of it could actually be exploited.

Indeed, when television first started in Australia, it was confined to the VHS

spectrum while consideration was given to UHF. UHF barely worked. The spectrum barely worked, and a decision was taken at that stage that in fact the receivers would be so unreliable that it couldn't be exploited effectively. As a consequence, the decision was taken at that time that in fact Australia would never
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Ripponlea and our South Bank studios a fibre-optic connection. It took me six to eight months to get the connection in place because none of the carriers could offer it to me on a door-to-door service basis, and it took that long to actually get it installed. So it's not a flexible mechanism. Indeed, most of the major sporting venues which are being used by broadcasters on an ongoing basis, quite a number of those now are actually cabled up in advance so that those facilities are available.

DR BYRON: They're predictable. They're regular and they're high traffic.

MR KNOWLES: Yes, and there's enough traffic going through to justify the expense. But in other cases we're stuck with using either a microwave link or otherwise to come back. As I say, in some cases satellite is the only vehicle to use. Satellite is far more expensive in terms of rolling it out and getting it out there and putting in the uplinks and so forth and so on. But if I'm trying to deliver on my transmitters, which I do, via satellite, because I'm delivering the same program to 2 or 3 hundred transmitters, it's far more economical for me to do that by satellite than to in fact have fibre installed out to each transmitter which, given the remoteness of Australia, becomes an impossible option.

But certainly in relation to the pricing argument, I think the market itself tends to sort that out to some degree in terms of the point-to-point stuff because there already is basically an interchange between satellite and cable now on substitutability where often the only choice that you can sometimes make - for example, if I was doing a two-way interview with somebody, it's very difficult to do over satellite. As you often see somebody having to wait for the delay, wait for the question, it becomes a very stilted interview. So the preference there would be to use fibre, which reduces the delay, and in fact digital technologies introduce an extra bunch of delay which further complicate the process along the way.

DR BYRON: Can I come back to the allocation question, rather than the pricing question. You've got some very interesting points in the submission about the duration of apparatus licences and renewability and also compensation in the event of cancellations. The point has come up a number of times during these hearings about the way we use the word "licence". It is somewhat ambiguous in that it ranges at one extreme from a permit to do something - a dog licence or something - to at the other end something like a 15-year spectrum licence which is bought and sold; it's tradable, and it's more in the nature of property. "Licence" at one end is permanent; the other is property.

My understanding of the reason for the one-year apparatus licences - I'm told they can be as short as 24 hours - is that the crown basically reserves the right to reallocate on a year-to-year basis. Now, that to me makes the apparatus licence more at the permit end rather than tradable property, like real estate. If you take the idea of an apparatus licence and say, well, recognising that it's an essential input that goes with a lot of very valuable expensive and worthwhile technology that's delivering services that we all demand, if the technology and equipment is going to last

15 years, then the use of the spectrum should last the same period of time, that sounds very sensible.

It seems to me that if you change an apparatus licence from a one-year to a 10-year or a 15-year licence, it's changing it from permit to property, if you get what I mean. If I were to ask hypothetically how much is somebody willing to pay for a 10-year licence where that duration is, if you like, guaranteed, the answer is likely to be different from 10 times the price of a one-year licence which may or may not be renewed because the difference in what you're getting is that sort of certainty. If the licence is taken away, you're compensated.

We've had quite a few submissions from people who say, "Well, instead of one-year renewable apparatus licences, we'd like to have them 10 years or 15 years, and we'd like to be compensated if they're interrupted." That to me seems quite contradictory to the initial nature of the apparatus licences reserving the right of the crown to reallocate for some higher use. If you're going to make it property with full compensation and so on, maybe the price that you would need to pay is more than the cost of a one-year maybe renewal licence.

MR KNOWLES: I think there's a reasonable argument for that one, too. Dilip may have some other view on that, but I would be inclined to think that if you look at the apparatus licence issue, it's a half-way transition between what happened with the new act and what used to happen under the old act. Under the old act of course everything was basically apparatus licence. In the new act there was an attempt to say that there are parts of the spectrum which you might want to manage differently, and I think the best example is probably the mobile phone spectrum where you want to get it out there, you want people to manage it. They're using a large block of spectrum to manage it, and to some extent it one could almost regard the broadcasting spectrum like a spectrum licence.

DR BYRON: Where the ABA is the - - -

MR KNOWLES: The ABA is the holder of the spectrum licence and it sublets it.

DR BYRON: And manages the use within the - - -

MR KNOWLES: Yes. We hold apparatus licence for our transmitters under a sort of back-to-back arrangement. The broadcasting licence and the apparatus licence go together, and so do all the commercial broadcasters. So we have sort of one-year licences which are payable after five years. That's correct. But they're still apparatus licences, but as I say, we get the spectrum licence part of that via the ABA. In relation to things like microwave links and so forth, then that comes back into the apparatus licence question, and obviously there are some attractions in having a longer licence for those. It probably may well be reasonable that you might pay more for it.

On the other hand you could also run the argument that itinerant use might well attract a higher fee because of the nature of the planning activity which needs to go in to make it actually happen and run, and that applies for example if I acquire space on the satellite. If I acquire permanent space on the satellite, I pay a much lower price than I do if I pay for itinerant capacity on the satellite because it gives certainty to the provider of that service.

DR BYRON: Other people have said to us on this question of the duration or the tenure that they thought it didn't really matter whether it was a week, a month, a year or five years, as long as the conditions under which the licence would be renewed were perfectly explicit, or the conditions under which it would not be renewed, so that provided you do A, B and C, provided you don't do X, Y and Z, it will be renewed. That's virtually as good as perpetual lease or freehold, in the sense that, given some defined exceptional circumstances, the government has the right to resume, but barring those exceptional circumstances it's as good as indefinite.

MR JADEJA: Probably I can say a few things about that. This question obviously relates to the part of the previous question and, yes, it is right that if you had a licence for a longer duration that there is a time element value that should be added to that licence fee - it should not be a simple multiplication of years with licence fee - and the fact that if there is compensation, then that has to be looked at as well. I think the proposition that we were putting forward was much simpler, to say two or three things: the first thing is that the apparatus licence by definition applies to an apparatus. An apparatus has a life cycle, if you like.

Most of the broadcasting apparatus would have a life cycle of about 10 to 15 years or 15 to 20 years. But if you take 15 as a broad number, then when that equipment life cycle expires, then we're quite happy to vacate that licence, and in that sense we don't claim a permanent right to the property of that licence. But we do want a continuity of that licence for the period of time so that we don't have to keep changing the apparatus as often as the licence changes, and if we had to, then that would lead to the question of compensation which then would just mean the cost of shifting the apparatus, if the apparatus was still having some life left in it - notional life, if you put a notional life cycle value to it - and if it required a substantive change to a different spectrum - and I really mean substantive - then in some cases, if the cost of that spectrum was extremely different from the cost of the spectrum that we were using, that would raise another sort of element of compensation there - that we were operating in a band which was not costing us as much as the new band might cost us.

So if you look at that, I think it was a very reasonable proposition to say, "Yes, we want a longer time frame because we want to phase in the equipment life cycle with the apparatus licence time period there," and if we have to shift, then there are just costs of shifting which could in most cases be paid by the incoming party who would then be buying the spectrum licence because the issue arose out of (indistinct) apparatus licence spectrum to a spectrum licence. So that was the general position

that we had, but we totally accept your point that there should be longer in terms of the time, a prize attached to the length of time and some kind of premium, if you like, to it, and we certainly don't claim that it should have a property right attached to it without an adequate property consideration to it.

MR KNOWLES: I think it's probably reasonable to say that our experience with the ACA has been that, yes, there has been a fairly reasonable degree of certainty in terms that there has been reasonable notice for changes that are occurring and so forth and so on. So we're not saying that in fact we're being sold short in the present context. What we're saying is, if you're going to change the rules, we'd want to make sure that in fact that sort of continuity continued to exist, rather than actually lose what is currently custom and practice by new rules.

DR BYRON: You've referred to the fact that an apparatus licensee only gets two years' notice that they're being required to vacate, but others have said to us in these hearings that by the time something is actually first raised at the ITU and then it goes through the WRCs and then the ACA puts out consultation papers and so on, it's been suggested it might be seven or nine years or something between when the first indication is given that this particular piece of spectrum is being considered for another use and the point where the ACA actually gives you two years' notice that it's time to move. So it suggests that even the current process is not without giving you some warning, some substantial warning.

MR KNOWLES: I think that's true. Indeed, I think that the process, managed properly with adequate communication taking place between the players - and, indeed, that happens with us as major users - you can plan around those sorts of things, and therefore it probably relieves a lot of the arguments about compensation. Given a reasonable amount of notice, you certainly aren't going to go out and replace your equipment if you know that down the track things are happening and you're going to make it last a little bit longer. I think it's important that that sort of level of communication certainly actually continues to exist, rather than the situation where, for example, if you had a different licensing regime where in fact the rules were largely left open to the market to decide a quick changeover, you might suddenly find yourself either having to pay an extra premium to stay where you are or lose your activity. So certainly the current process works for us fairly well.

DR BYRON: On that point of an extra premium to stay where you are, the topic has been raised of, rather than spectrum being vacated and for a spectrum licence, it might be sold with apparatus licences still there, like selling a shopping mall with sitting tenants, and the new spectrum licensee becomes the Westfield and the sitting tenants stay where they are. But it's quite likely that the new owner might actually want to charge a slightly different rent to what you were previously paying. So, yes, I guess it could cost the apparatus licensee to stay where they are.

MR KNOWLES: The big issue you confront with that of course is that it sometimes may in fact get to the point where you're denied access; you're denied

access by economic grounds. Speaking from an ABC perspective, confronted with that situation beyond a certain price, in fact the service would not be affordable for example and therefore it may be that you can no longer afford to have outside broadcast links, in the extreme, or forced into a totally different technology or a different band, at considerable extra expense. Now, depending on the budget situation and the allocation question, the corporation then has to make a call: does it allocate that much to there or is its interests in allocating more into the program context, because unlike a commercial organisation where we can actually get more revenue, we know from the beginning of the year what our bottom line is.

So it's a slightly different mechanism for us because there's no commercial value - well, there's no directly commercial attributable value. For example, if you're doing a sporting event as a commercial broadcaster, maybe you might deem that in fact doing that particular thing attracts so much advertising revenue you can carry the cost. In our case, if we're doing the arts program down at the Symphony Centre or something, then there may be no real added value, and in fact it may deny us actually putting that program to air or reduce the number that we can actually afford to do.

DR BYRON: Changing the subject slightly, you've mentioned that the Department of Defence and broadcasters, including the ABC, have historically been pretty substantial users of spectrum and that the government has set aside larger parts of the spectrum for broadcasting and defence because they both have to fulfil public expectations and objectives. I think there's a suggestion in your submission that Defence has taken advantage of this and may be using more spectrum than is necessary. I'm just wondering whether that argument might also be applied to broadcasters.

MR KNOWLES: I wouldn't want to take the Defence argument too far, for the simple reason that I think Defence today may not be utilising all of its spectrum, but it might need it tomorrow if something happened. There are interoperability issues and other things that fall into that category. In the broadcasting sense, by and large I think that we certainly haven't been sitting on spectrum for the sake of sitting on spectrum. We've been limited by the technology and, indeed, the ABA's activities in terms of even trying to find two datacasting channels in the metros have found considerable difficulty in finding enough spectrum to do it.

Indeed, that has imposed upon us, in terms of our digital implementation, some severe limitations which we're not even sure of how well they work yet, and we're going to be right at the leading edge of experimenting. We're implementing digital technologies here in terms of single frequency networks - and the current work we're doing on hierarchy and modulation - which have not been done anywhere else in the world. They've been talked about in other parts of the world, but they've never been implemented in the same ways we're doing it here, and we know from some work we've done that this is going to be quite difficult to do. We've got to try and do it and hopefully pull it off, because if we don't pull it off then a lot of the ABA's planning in relation to providing those extra channels will in fact turn out to be null and void.

DR BYRON: Many of the submissions have made suggestions that so-and-so is hoarding or sitting on spectrum that they don't really need, and I think those sorts of claims have been made by most parties against most other parties. But it is in fact very difficult to tell, as you say, because they may not need it today but they may have a plan to use it in the near future, or it may be intermittently used and so on. It's a very difficult issue to assess. But I would imagine that, apart from the use it or lose it notion that you've got in the submission, there are other ways of making sure that people don't sit on a valuable resource like spectrum without using it.

MR KNOWLES: In the context of a use it or lose it philosophy, there would have to be some flexibility in that as well. Somebody needing to build a lot of infrastructure, for example, may well have to get the spectrum first before they can build the infrastructure and may not be using it for a period, and the broadcasters find themselves in that situation regarding digital spectrum. For example, the ABA set aside a whole bunch of digital spectrum. We need to know what the frequencies and so forth are to buy the transmitters and build the infrastructure, and that's going to take a long time to do all that. So there will be some channels which are allocated and may not be used for five or six years.

The ABA does have a mechanism for using those on a casual basis, but they're very limited in the way they can be used because with our digital broadcasting technology, that technology has been made to work in conjunction with the existing analog spectrum in spectrum which couldn't be used for analog purposes. So it's been able to dovetail in between. So therefore temporary use of that becomes more of an issue and, of course, in most cases where we have allocations that we're not actually exploiting quickly, they're probably going to be in remote areas anyway. Where there isn't going to be a demand, there's plenty of alternatives. In most of the metropolitan areas where spectrum is very tight, that will in fact already be in use anyway and because as I say the single frequency network issue probably comes up. But, yes, there are various mechanisms for handling that.

The argument about lose it and use it probably is best demonstrated in the context of what were open narrowcast licences that the ABA issued for low-powered information services and the like, where there were a number of parties who chose to in fact buy up very large numbers of them with no intention of ever doing anything with them until somebody came along with a satisfactory price. So they would acquire them for $20 or thereabouts, and sit on them and wait until somebody came and offered them 2 or 3 thousand dollars a year for the same licence, with no real added value to the process other than having acquired all of these things with no real intent of actually doing it.

In that context, we'd run an argument that said, well, if you're going to acquire the licence, you have to have some bona fide reason for implementing it, and if you don't, selling it on to somebody else isn't really a bona fide reason to do it when you're just doing it for that purpose. On the other hand, if you had a temporary use

for it, that you were going to let somebody use it for a period and then come back and use it, that might be a different argument.

DR BYRON: The point comes up quite often about the role of the ABA in managing the broadcast services spectrum. I guess one of the things that I've had some difficulty in reconciling is, as you say, the broadcasting spectrum is slotted in along the whole band of spectrum, and both the allocative mechanisms that the ABA uses and the pricing mechanisms that the ABA uses differ from the way the ACA manages and prices and allocates in the rest of the spectrum. It strikes me as rather difficult to accommodate using two different systems to regulate what is in fact very interspersed parts of the same resource.

MR KNOWLES: I guess, first of all, while they are interspersed as was mentioned earlier, they're actually interspersed in sequence - - -

DR BYRON: There's a bit of logic behind it.

MR KNOWLES: - - - which is actually quite a serious logic in terms of making them work together, because they're not necessarily interchangeable for other sources in that context. I agree with you that the pricing mechanisms of actually dissociating the content licence and the transmission licence would make logical sense. Indeed, there have been several attempts to do that in the past. To my recollection, the last time it was actually put forward resulted in the government actually losing money rather than making money out of the process because of the compensating decline in the commercial television licence or the commercial radio licence fee. The cabinet in its wisdom decided that it actually wanted more money rather than less, so it in fact opted for taking the existing system. So there's certainly a long history of trying to change that mechanism and bring those into place and they certainly make logical sense, but they haven't made political sense to date.

DR BYRON: You get a different answer, depending on whether you asked, "How much are you willing to pay for a licence to use a spectrum?" or, "How much are you willing to pay to be one of only three organisations with a licence to use the spectrum?" There's an element of actually paying to be part of the small number.

MR KNOWLES: I know the point you're trying to make, but I think at the end of the day the licensing mechanism which applies to broadcasting, for example, which is basically driven on revenue, not on profit or anything else - it's driven on straight revenue - results in probably almost a 10 times higher return to government for the use of that spectrum than would occur in the case of running a mechanism which actually charges for the spectrum, even if it was a constrained resource.

DR BYRON: Unless there were two parts to it: one is the licence to be one of the three or five or whatever companies that can do this business, and then the price that you pay for the spectrum has an input to that business which would be priced commercially, the same way as every other input to the business is priced.

MR KNOWLES: Or you might get the two airline policy again.

DR BYRON: Which converts itself to a one airline policy, yes. You make the point very strongly in the submission about how important spectrum is as an integral part of the whole business, but if you think of spectrum as just another resource, just another input, I wonder why social and cultural issues affect how you manage an input. You pay full price for electricity, for petrol in the cars you run, you pay full price for the cars, and yet out of all the inputs that you need to run the enterprise there's one of them that you say, "Oh, well, this is special. That can't be charged on a commercial basis."

MR KNOWLES: The issue we're making there is taking it from the national broadcaster's perspective where we're driven by a bunch of charter objectives which are basically public policy objectives. Unless governments were prepared to pay that market price, in fact we would be thwarted in our capacity to deliver those social objectives. Now, if that price varied, that puts you in a rather difficult situation when your funding is locked in for two or three years, unless there's some other alternative mechanism to pay for that and historically governments have not been reliable in fact in terms of augmenting the funding to reflect the increase in costs. So it's purely a survival mechanism argument on our part.

DR BYRON: I said yesterday when we were talking to the Bureau of Meteorology - which is a very large user, as is the ABC, and very similar concerns to yours - on the one hand it may not make any sense at all for the Department of Finance to give you another million dollars so that you can give it to the ACA so that they can give it to the Department of Finance and it sounds comical, except to the extent that it makes it very clear the value of that particular production input that you are using. One of the concerns that people have raised with Defence, with Met Bureau and so on, if you're not paying full price for the spectrum, what other incentives are there within the organisation to make sure you use it as efficiently as possible.

The New South Wales emergency services people were able to give us a whole lot of examples which, if you like, vindicated the fact that they were very efficient users of spectrum. They only asked for what they needed. If they found any ways of economising it, they would surrender bits of spectrum that they didn't need. But in the absence of a pricing mechanism we are then left to ask, "Well, what other mechanisms are there to put the internally generated pressure on the organisation to be efficient?'

MR KNOWLES: The only spectrum we actually use which in fact is priced in that way - or not priced in that way - is in fact the broadcast we use for delivery of programs out to the audience. That in itself, the efficiency of the use of that spectrum, is largely driven by the planning processes of the ABA and the legislation which, for example, to hark back to our digital situation, dictates that we must match the analog coverage in terms of coverage. So we don't have an option of saying,

"Well, we really don't care about those few people out there. We won't bother to provide them with a service. We can use another channel." So we're stuck in the sort of situation that we don't have the options of actually rejigging things to say, "Well, we might be able to use one channel less," at the expense of some audience.

There are a number of mechanisms that would allow us to do that, and the ABA's management of that spectrum actually assists in doing that, but it is a fairly heavily debated process. There is a clear recognition of what returns government gets for that spectrum and I certainly don't have a problem about a pricing mechanism which actually made it transparent but, as I say, what you generally don't

coming over the horizon and how and if it's going to affect you and how you might respond to it?

MR KNOWLES: Basically the coordination process takes care of that issue in terms of the planning process takes care of the first order problem, so that the planning of particular classes of satellites and types of satellites in particular frequency bands. The planning rules make provision for certain levels of protection to terrestrial services and the like, making certain assumptions about dish-pointing angles and all sorts of things like that. So there's a first level of protection already built into the planning which people need to comply with.

The second level is of course in coordination, where you get another chance to have a look at the specifics of a satellite to see how it might affect you, and so therefore both your current use and perhaps sometimes your future use, so that by and large our experience to date has been that that works fairly well. Indeed, chaos would reign supreme in countries like Europe, which is very densely used with high numbers of satellites serving it, if those processes didn't work. They may be cumbersome, but in fact they ultimately do protect the incumbent rights to a reasonable degree and at least have a dialogue about it, so that the coordination process says if I have a problem I can have a dialogue about those issues and whether or not they can be corrected in some way.

DR BYRON: The secondary trading of licences on page 23 of your submission: I was wondering whether a use it or lose it clause that we were talking about before might interfere with the discussion in there about a secondary market, and to what extent, if you've got a secondary market, it's sort of unnecessarily redundant to put in use it or lose it clauses, or the other way around, would having those clauses adversely affect the operation of a secondary market.

MR KNOWLES: I think the secondary market actually changes the parameters of that. I agree with your premise that in fact, if you've got a secondary market running, it's going to take care of the problem because the owner of that piece of spectrum is going to be trying to get the most effective use of that, and may have some reason for some time to hold it while he's planning to make it more productive or otherwise. As I say, I don't think it's a clear-cut situation on the lose it or use it, and it needs to be factored into that context of saying, "Is this part of a process whereby the allocation within that market" - take for example if I bought a piece of spectrum for the purpose of setting up my GSM, I'm going to share it between two or three other users, then it's not going to lie idle for that long, other than the process of working my way through the process to make it work. Therefore, it would be totally nonsensical to actually say you should lose it because you haven't used it, and you've been paying your fee for doing that anyway. I think it becomes more of a complication in areas where deliberate scarcity can actually be created by squatting, and therefore artificial inflation of the price.

DR BYRON: In relation to that, you say in here:

To the extent that broadcasting industry only licenses what it needs, our scope for secondary trading of licences is very limited.

I think you've been fairly critical of some of the mobile phone companies, and yet they would say that they've only bought what they need and that's why they haven't put any on the secondary market because whatever they bought it was because they had a business plan for it, and again, as we were saying before, it might look like they're unnecessarily holding onto it but they have argued that they've only bought what they needed.

MR KNOWLES: Yes. I wouldn't want to run the argument too far about mobile phone companies. One of the issues where we probably run into some conflict with the mobile phone companies is that some of the spectrum we use for example for outside broadcasts, particularly say around the 2.5-gig band, is obviously very attractive from their point of view as well. In a free market situation of course they will outbid us at any time, whether or not their other spectrum is being used in any event. So therefore we at the moment do not have a technology which substitutes for what we get out of that current 2.5-gig technology because a transmitter for a 2.5 gig is about half the size of this phone. If I go up in spectrum, I've got something about four times the size, which means I can no longer put it on somebody's back. The antennas have to get larger and those sorts of things. So they become important parameters in what is feasible in the scheme of things, so there is a tension there in terms of yes, it would be nice to do that but if you look at particularly when the 3G, 4G arguments were running with very high prices being attached, enormous prices were being attributable to broadcasting spectrum.

DR BYRON: They've come down a great deal.

MR KNOWLES: They've come down a great deal. In fact there were some quite nonsensical arguments being applied to what the broadcasting spectrum was worth. There was a suggestion that even our existing broadcasting spectrum was worth billions of dollars because you were multiplying the cost of a mobile phone piece of spectrum by the amount of megahertz that we had and therefore it was worth buckets of money. That spectrum was worth buckets of money at the time in the phone sense, because I could take this phone from anywhere in the world to anywhere else in the world and it actually continued to work. To some extent you could apply the same argument to the broadcasting arrangement, but it would only work if I took all the broadcasting transmitters out and therefore went back to reallocate that whole thing. Now, unless all the world were to do that, then I don't have that mobility capacity that I get with a mobile phone.

We have put some arguments in here which really are points to stimulate some discussion from various perspectives and tried to get a broad-based run on it, and it really is not an argument I'd want to run too far down the track, because everybody will run the same argument in a different way.

DR BYRON: That's fine. Probably the last set of questions I was going to ask about was the non-commercial use of the spectrum. By far the majority of the submissions that we've had in this inquiry have been from organisations explaining why they were special, unique. They were contributing to all sorts of public good, public policy outcomes - whether it's Defence, emergency services, Met Bureau, CSIRO, the Department of Education, railway, Tasmanian hydro. There are all sorts of organisations that use spectrum and can make a very good case for either priority reservation or preferential pricing.

I think the other thing that most of them have in common is a fear that they're going to be charged the equivalent to mobile phone rates. The suggestion that was put to us yesterday by the Met Bureau was that, if I understand them correctly, you'd sort of make an initial separation between commercial users of spectrum where market forces would prevail and where price is a very efficient allocative mechanism (indistinct) and on the other hand you've got the non-commercial use of the spectrum which, coming back to the real estate, the land metaphor - your public parks and your basic infrastructure, the footpaths, the tramlines and the underground water pipes - and you make a decision that they need to be there and you put them there and you don't ask the question of how many million dollars would we get if we sold the footpath as commercial real estate because we have already decided that that's going to be the footpath.

Now, even if you do take that approach and say, "Well, for all the non-commercial users we're going to treat them separately," it seems to me that an organisation like the ACA still has a tremendous problem in prioritising because often the tensions, the competing claims for the use of spectrum, are between two different public service organisations - whether it's Defence versus emergency services or ABC versus Defence or something like that. So coming to the question, have you got some suggestions on how those sorts of tensions might be resolved in the non-commercial area if we're not going to use price as an allocative mechanism?

MR KNOWLES: I think that any process which does that needs to be probably a fairly transparent one, and once you get past the macro problem it's the same issue confronting ABA in terms of making those allocative decisions. That process has actually proved to be quite complex in terms of addressing all the different needs and how do you weigh up the value of a first community service versus the third commercial service and those sorts of things in terms of public benefit, when the community service might only serve 2 per cent of the population? I don't think there is a simple answer to the question, but I think that in fact a debate about it probably helps the discussion and that debate will change over time.

I think even in the ABA's situation its decisions have influenced later outcomes. For example, in one market it may have decided that a new commercial service was really valuable. To put the third commercial service there - in fact the consequence of that is that one of the other commercial services went broke and

therefore it was probably the wrong decision at the time. It meant for that piece of spectrum then something else had to happen to it, which may well already have been denied to a community group or a national service or otherwise.

In other cases, clearly the demand for a particular type of service has been higher than can be satisfied. I guess from the ACA's point of view they will run into exactly the same situation. Not all demands will ever be able to be satisfied. Yes, there will always be some public interest issues such as security and other things that would make some public debate on some of this a little bit complicated. But a process which at least makes an attempt to have a fairly transparent allocative arrangement in terms of the discussion about that is better than one which, in fact, doesn't.

Once you at least lay down the parameters of how you arrive at a conclusion at least you can go back later and revisit whether you got it right or wrong. If you don't ever lay it down therefore it gets very hard historically to go back and see whether you got it right or wrong. I think there is probably no right answer to any of this and it will vary over time and will vary with changes in technology and will vary with demand.

I think I would argue in the light of the ABA's experience, in trying to move from what was a very closed arrangement to a more open arrangement, that at least it has probably got it closer to right than the previous closed arrangement, and I refer to the closed arrangement under the pre-92 act for broadcasting. Allocations of deciding where channels went or what services would be invited was simply left to an administrative decision of the department of the minister. So they were made for all sorts of reasons, which often were not necessarily tied to public interest; they were tied to lobbying - power and all sorts of other reasons. In the new act the government said, "Look, this is not a really good way to do this because it depends on whether I am friendly with you or whether I like the look of your socks or whatever as to whether you get a guernsey."

It doesn't take into consideration longer term use and other things that might need to be considered. In the new act at least it established a planning process which said there are a whole range of hierarchy of needs you need to consider in terms of both short and long term demands, needs and use and community values, national needs and what have you that ought to be put into the melting pot. You'll never get the answer to all of them, but at least you might be able to have a proper discussion about it to provide a mechanism where interested parties - and of course unfortunately it is the parties that exist today and not the parties that exist tomorrow - can put into this process and there has to be some reflection about tomorrow's needs in so far as they need to be part of the consideration.

In some cases you are going to say well, it doesn't make logical sense to reserve some space for something that might happen tomorrow because something else might come along - new technology or otherwise - to shift it. In other cases it

might make eminently good sense to say, "We need to put something aside because we need it for that purpose." And I guess if you look at the Defence argument or the emergency services argument - "There is no emergency today so we don't necessarily need it, but if an emergency occurs we are going to need it and we don't have time to clear it away" - I think that sort of argument has to come along. Nobody is using the public park down there this morning but they will use the MCG on Saturday. It serves a perfectly good purpose there. So its constant use may not necessarily be the argument; it becomes a balancing exercise. It needs to be there and I simply argue that a transparent process whereby at least a wider cross-section of use added into the process is better than one in which decisions are made in some sort of obscure way which are not necessarily published.

DR BYRON: I am sure we would agree with that. One final thing. I do not know whether you are aware or not, but in the UK there is a review going on at the moment which is fairly similar in terms of reference to ours. There are lots of references to the ACA and the Australian act in there, but my reading of that is that in many ways people in the UK are talking about how did they get to a situation which is pretty similar to where we are today, while we're asking the question of can we tweak the status quo to make it work a bit better? Is that consistent with your understanding of the situation?

MR KNOWLES: That is a pretty fair reading. In terms of where the ACA got to to date was a result of some fairly detailed consideration of what were the options and looking at various mechanisms which had been applied to a cross-section of the administration and trying to make a blend between those and where the situation was in the previous time, I think that in terms of a communications regulatory environment we have probably been closer to the US model in some ways than the UK model in the past, because the UK model has been probably more like the old spectrum management agency in the Radiocommunications Act before that, before the agency was established.

I think time has moved on and I think that the UK is now simply catching up. Even in its broadcast allocation arrangements, it certainly has not been as effective as in the way we have done it in terms of our own because of the nature of their own broadcasting environment.

DR BYRON: But one of the major differences mentioned yesterday was that I think the Federal Communications Commission has a statutory requirement to break even, not to generate revenue in excess of cost recovery. Australia I think is quite different from the US in the sense that the ACA generate revenue in total, substantially more than its costs, but I guess we have come full circle back to my first question about the extent to which the tension exists between being the allocator and revenue raising.

MR KNOWLES: I think the relevance of the FCC model is actually translated into what we do or what the ACA does; that yes, there are things about it not making

profits and all those sorts of things and therefore exploiting the common good. I don't have a fundamental problem with the ACA making some profit out of the process which in fact returns back to the government and therefore becomes a tax, if you like, on the use of facilities, because it is a resource which is used. In the same way as we might want to tax forests or other things, it is appropriate that in fact some tax be applied.

I think it is really a question that as long as there is that taxing mechanism, which doesn't get totally out of control by being driven only by the market itself, where we move away from the necessity to plan the parks and schools, to one which says, "Well, we don't care if we don't have parks and schools. We will just have high-rise buildings if we need to." We are saying we wouldn't want to go there.

We still need to make sure we plan the parks and schools and recognise that there are different needs in different areas and that it is reasonably good management to ensure that the town is reasonably planned and there are facilities made available for different types of activity, which is not only part of protecting heritage but also part of protecting the future options. One day the park may well become high-rise - Techno City was our own internal grassland - but that is not there yet.

DR BYRON: On that note I think I have asked all the questions I can, but I would like to thank you very much for your time. Are there any other final wrap-up comments that you would like to make?

MR KNOWLES: No.

DR BYRON: Thank you very much for being so generous with your submission and the discussion. As I said at the outset, if there is anybody present who feels moved to come and take a seat and offer some comment or make a submission for the record now would be a very good time to do so. That being the case, I will declare these public hearings into the Radiocommunications Act to be closed. Thank you for your attendance.

AT 12.40 PM THE INQUIRY WAS ADJOURNED ACCORDINGLY

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