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TRANSCRIPT OF PROCEEDINGS

PRODUCTIVITY COMMISSION

INQUIRY INTO RADIO COMMUNICATIONS

DR D. ROBERTSON, Presiding Commissioner
DR N. BYRON, Commissioner

TRANSCRIPT OF PROCEEDINGS

AT MELBOURNE ON WEDNESDAY, 24 APRIL 2002, AT 9.49 AM
Continued from 23/4/02 in Canberra

DR ROBERTSON: Good morning. The first group this morning is FuturePace with Barbara Phi, who is the director, and Michael Whittaker, who is the technical director. I announce that so they can identify you on the transcript.

MS PHI: That's very important, because our voices are rather interchangeable. Michael will begin.

MR WHITTAKER: FuturePace is generally very supportive of the position the commission has taken. The commission has done well to sift through the many views, opinions and facts presented to it both in submissions and hearings. However, we have identified in our latest submission some matters on which we believe it necessary to provide further clarification.

FuturePace firmly believes in technical excellence and regulatory consistency to provide flexibility and certainty for spectrum licensees. We have provided the rationale rather than unsupported opinion for the certification and registration of devices under the current technical arrangements for spectrum licensing.

Data integrity: the commission has our submission in response to the draft report and we emphasise the need for a consistent data set as provided for in the ACA register determination. We believe that industry is managing well within the agreed data set and do not accept that there is a so-called burden of any sort on industry. The commission will have noted that the data requirements for apparatus licensing are actually more numerous than for spectrum licensing. Apart from a couple of new players, not accredited by the ACA, who do not appear to understand the importance of the data set for managing interference across the frequency boundary between spectrum licences and apparatus licence space, there is absolutely no push from major industry players for change. In fact, the push from industry is in the direction of maintaining the status quo so as to provide economies of scale in processing and management.

We talk about device registration: the commission was treated to a colourful performance last week in Canberra about apparent economic inefficiencies of device registration and interference impact certificates where Market Dynamics Unwired - that's MDU - stated that IICs - that is the interference impact certificates - are unnecessary because spectrum licensees have only to manage within their spectrum, spectrum licensees did not have to worry about adjacent spectrum, and interference was a matter for the ACA, and when problems occurred, the ACA went out to measure the site anyway, so it wasn't necessary to register site details, and certainly certification was not necessary. FuturePace disagrees. Co-site interference management is, according to the ACA's own determinations, a matter for licensees. In spectrum licensing ACA intervention is an option of last resort. In interference management MDU is confusing apparatus and spectrum licensing policies.

FuturePace will talk about the IICs now. FuturePace sees the IIC as certifying the integrity of our national centralised database. That database is administered by the ACA. The certified database provides an up-to-date, online, accurate and dependable basis for planning and coordinating services. In the case of spectrum licensing it provides a certified basis for managing interference across the frequency boundary and determining options for the operation of receivers across the area boundaries. It also provides the database - the certified database provides an open and transparent basis for determining liability in interference settlement.

Removal of the IIC requirement would undermine the legal integrity of the database upon which the liability associated with spectrum licensing is going to be distributed. By requiring an IIC and therefore maintaining the integrity of the national database the ACA is demonstrating that it is serious about ensuring interference is managed in a clear and transparent manner.

We'll talk about technology neutrality now. FuturePace continues to argue against a likely use as a base for the development of spectrum licensing frameworks. We believe it is both possible and essential to design frameworks without an in-built likely use. Any bias that industry deems necessary should come as a commercial decision by industry after an underlying technology-neutral framework has been first provided by government. We believe that licensees are entitled to maximum flexibility and certainty and with certainty enhanced by a minimum of negotiation. Flexible, technology-neutral licence conditions are essential to maximise utility and hence, the value of spectrum licences.

Also, four things are essential for the day-to-day management of spectrum licences: (1) a certified and consistent database to allow as much automation as possible in the processing of bulk registrations; (2) consistency between data and regulatory requirements for successive spectrum releases, so as to allow for economies of scale in the development of management tools and processes; (3) provision of a consistent development framework without limiting creativity, so as to allow realisation of the significant R and D, management, tools, staff training and infrastructure which telcos are investing in spectrum licensing; and (4) development of technical frameworks which are capable of responding to the high level of creativity in the telecommunications equipment development sector with limited negotiation through the licence term. It should be said that technological neutrality is an essential prerequisite for any form of perpetual licensing and FuturePace sees no reason why both cannot be provided.

The role of the ACA in telecommunications marketplace: the ACA may be thought of as a pseudo spectrum licensee, managing their spectrum under apparatus licensing; therefore until the apparatus licensing role can be handed to industry,

possibly in the form of a management right, the ACA continues to be considered as a part of industry. However, we believe the ACA should be bound by the same requirements as placed on actual licensees. Especially it should not be able to compete against industry for work on terms more favourable than those available to industry.

I'll give you an example: while the ACA does not handle spectrum licensing certification and registration work, it continues to handle apparatus licensing applications. However, it is not locked into the provision of certification and has flexibility in how it operates. It can write, and does write, ACA-assigned status in the database and provides a lesser level of technical specifics than is demanded by the ACA of the industry it accredits. Industry must meet ACA-determined standards. The ACA may, if it chooses - and it does - not meet those same standards and may also undercut industry on pricing in the market in which the ACA acts as a regulator and mediator.

This situation cannot be reconciled with competitive neutrality policy. FuturePace believes that the eventual full-time task of the ACA is its regulatory policy development and mediation roles and in particular in fulfilling its role as custodian of an accurate, national database thereby supporting industry with its government appointed task of spectrum management.

Private spectrum mangers: the GSM 900 band has been cited recently as an example of efficient private management of spectrum or what it could be like. In fact there have been major problems with the data entry, the ACA having failed over a number of years to enter full data despite it being provided by the carriers, and the proposal to convert GSM 900 to spectrum licensing has been withdrawn to allow industry concerns, past and future, to now be dealt with. The issue of fixing the incompleteness of data in back entries is still under consideration. Clearly the GSM 900 band is not an example of good spectrum management.

FuturePace agrees that there is a potential role for private management of apparatus licence spectrum. As previously noted it is arguable that the ACA are, in fact, a notional spectrum licensee with a large number of third party operators. While the theory of private managers is acceptable, there are considerations outside the market based rhetoric. Perhaps the major concern is that apparatus licensees comprise a number of very disparate groups of people, SMEs and emergency services, for example.

Economic disbenefit created by failure of a private band management company, where the licences were tied up as part of the company asset base, is unthinkable. Perhaps a mid-round would be the sale of management rights with the asset continuing to be vested in the ACA. Management rights might nevertheless be

able to consist of a suitably conditioned spectrum licence making the licences easily and quickly recoverable in the event of a company failure. The fact is that, whatever its shortcomings, government is forever and telecommunications companies, as we have seen, manifestly are not. I'll now hand over to Barbara.

MS PHI: Before spectrum licensing there used to be considerable debate about whether or not a band was to be allocated to one of a number of equipment standards. That's how central planning operated. Many of the problems the commission is wrestling with concerning spectrum licences, such as whether to extend the term because of public interest or to re-auction, are closely related to the allocation process for apparatus licensing.

In the early 1980s Michael tells me that he was present at a speech given by the former head of spectrum planning in the ACA's predecessor, precursor organisation, and he shocked his audience by saying that spectrum licences would be introduced, they would be technology neutral and given to industry to manage, without government involvement, so that Australia could keep pace with the rate of change in wireless communications. It seems that at the time government was incapable of doing this because of the red tape associated with the allocation process under apparatus licensing. In addition, we were told that industry would be 20 per cent cheaper and that was basically the market based approach that was suggested. The latest submission by the ACA to the Productivity Commission says;

> While individually most apparatus licences could be considered as prescriptive and inflexible, the apparatus licence regime as a whole offers considerable flexibility. New licence types can be implemented relatively easily to meet particular needs and a strength of the apparatus licence system is the relative speed and simplicity of the initial allocation. They are available immediately over the counter for a predetermined price unless a price base allocation process is justified due to competing interests in the particular spectrum.

Apparently over the last 20 years the situation regarding the allocation process for apparatus licences has changed completely. We doubt it. After all, the process described by the ACA is the sale of the licence. The allocation period can take years of ITU and ACA planning activity before everyone who has to be comfortable with the allocation process is comfortable. In fact, the ITU decision in 2000, that 1.8 gigahertz could be used for 3G services, may have been an epiphany to the ITU, but Australian spectrum licensees had had that capacity from the time of licence issue in 1998.

What FuturePace sees in much of the evidence presented to the commission is central planning dressed up as market based management. The disguise is necessary

because in the past the political climate required central planners to either sing the party line and operate underground, or to be ushered to the sidelines with a special project. You were either on the team or you were not. There is almost a code, a special code used by central planners in describing elements of current management. We are developing a FuturePace dictionary to assist in this and we'd like to share a few examples with you. We will welcome additions to it for listing on our web site.

For example, the term "likely use" used in conjunction with designing a technical framework for spectrum licensing is central planning speak for "We have decided which equipment type is to get the guernsey." The term "simplification" used in conjunction with improving the design of the existing technical framework is central planning speak for "We got the equipment wrong and wish to change it." The term "technical farce," used in conjunction with the device boundary, is central planning for, "Please can we just go back to the good old days?" The term "long lead time," used in conjunction with a spectrum auction, is central planning for, "If we fiddle about for long enough they'll beg for apparatus licensing." The statement from the ACA, "Further, while it is true that spectrum licences are more flexible than apparatus licences in responding to changing uses and technologies, spectrum licences arguably offer less flexibility in the event that the technical conditions for a band need to be altered. The ACA would generally require agreement from all spectrum licensees in the band before considering a significant change to the technical framework," is central planning for, "We have managed to maintain control of the spectrum by not providing a technology-neutral basis upon which industry may negotiate alternate uses of the spectrum between themselves."

The phrase, "Let's get rid of IICs," is central planning for, "There's no difference between spectrum and apparatus licensing." The term, "Area based apparatus licensing," is central planning for, "There is no difference between apparatus and spectrum licensing." The phrase, "There is no difference between apparatus and spectrum licensing," is central planning for, "We want a single, more flexible licence." The term, "Let's run another industry workshop," we think is central planning for, "We will keep consulting with industry until industry give in and beg for apparatus licensing."

You will note that yesterday Telstra said they were expecting to discuss technological neutrality at an ACA workshop to be conducted later this year. The ACA, in their submission, have listed the concerns they want to raise at that workshop as whether registration of devices under spectrum licensing should be required at all; whether a simplified form of device registration would perhaps be more appropriate and whether the ACA should remove the requirement for IICs. Those issues were broadly the Market Dynamics agenda and they've all been debunked or rejected by major industry players and found lacking in terms of technical rigour.

It seems to us that there is quite a bit of the central planning underground still operating within the ACA. Now, not all central planners of course are in the ACA. Industry associates are usually established equipment benders who yearn for a return to the glory days of central planning when their marketing people went into battle in platoon strength at the ITU for a piece of the spectrum action. This process continues as a part of the allocation process for apparatus licensing, but an added market frisson can be added in the Australian context by ensuring that the access conditions for a spectrum licence are biased towards a particular type of equipment.

Neil mentioned private parks yesterday. The 3G licences are effectively a private park for vendors of IMT 2000 equipment. Now that we have managed to crack that code we think it might be a bit easier to come to terms with what is being offered and what is being presented to the commission. Central planning is alive and well in many of the statements and many of the statements support this view. It is not true that a major difference between apparatus and spectrum licensing is the licence term. This may be the case within the ACA but increasingly industry is telling the commission that the ACA is out of phase with industry on this aspect, except of course those parts of industry flogging a particular technology.

There is also a level where it is quite reasonable for carriers and equipment

next week.

DR ROBERTSON: Because somebody else will take it over, not because of - - -

MR WHITTAKER: Interference will occur and that's it.

DR ROBERTSON: Yes.

MR WHITTAKER: You pay for what you get.

DR ROBERTSON: And you don't pay anything so you don't get much.

MR WHITTAKER: No, you don't pay anything - - -

MS PHI: If you pay nothing, you may not get much at all.

DR ROBERTSON: That may not go down too well, I suspect, if you start talking about market prices.

DR BYRON: You asked about our reaction to your submission. You seem to have a problem with our use of the phrase "generic boundary conditions". It may be a semantic point because it seems to me what we were trying to say is very similar to what you have said about technologically-neutral licences. I'm hoping it's a simple misunderstanding about the - - -

MR WHITTAKER: Don't worry, we were hoping it was, too.

MS PHI: We were very much hoping that as well.

MR WHITTAKER: We use the term "generic standard," which is written into the licence conditions. The licence conditions may be considered to be a generic equipment standard. When you say "generic boundary conditions," they may in fact be the same thing. Maybe we should come up with a Productivity Commission dictionary as well.

DR BYRON: No, it may simply mean that we - - -

DR ROBERTSON: You can see who's laughing and who started this.

DR BYRON: We've probably used the same words but in a different sense to the way you understand them, but I think that's simply a semantic misunderstanding.

MR WHITTAKER: Okay.

DR BYRON: On the subject of interference, though, you said before about the role of the ACA being the regulator and custodian of the database. Do you see them as having any role at all - ongoing role - in interference management and investigation?

MS PHI: In spectrum licensing the subordinate legislation is clear, and that is that licensees manage interference, and if they can't sort it out - if spectrum licensees go to the ACA and say, "X is interfering with that transmitter," or "We're copping a problem," the ACA's proper response is, "Go sort it out," because they are managing the spectrum. That was certainly the initial philosophy that the ACA set up. Individual officers may decide to fix it, but the legal reality is that spectrum licensees are responsible.

What we've had is a bleeding of apparatus licence practice into discussions on spectrum licences because, as I understand it in apparatus licensing, the ACA does go out and check things out and does interference management. What it will do is measure the site, and they all go out and stand on rooftops with things and it's all very technical. I'm not going to refer to chaps with coathangers, I shall be very proper, but essentially - - -

MR WHITTAKER: She's the technical manager of the business.

MS PHI: I'm the technical manager. But essentially it is a process which the ACA deal with in apparatus licensing but not in spectrum licensing.

DR BYRON: One of the reasons for asking that is I think the situation is the same in New Zealand, where legally the spectrum licensee is responsible for managing any interference either caused to them or by them, but they frequently run back to the regulator and say, "We don't have the powers to sort this out. We don't have - - -"

MR WHITTAKER: No, they don't.

DR BYRON: "- - - search powers, we don't have subpoenas, we don't have warrants," and only a government body can actually deal with it.

MR WHITTAKER: We heard you say that yesterday so we know where you're coming from and indeed that is the case here. When Barbara spoke of licensees managing their interference, it depends on where they are and the situation which they're in. The interference management requirements in a spectrum licence are co-site, such that they have to negotiate entry onto that site, they know their neighbours, they work together, that can be solved. The negotiation there is very simple and can be sorted out, therefore they're made responsible and very clearly responsible for that sort of interference management.

When it comes to someone off the site, say, for example, it is a masthead amplifier gone into self-oscillation and it's Joe Blow out there in suburbia causing interference on to a site, Telstra or Vodafone - they have no power to go and see a member of the public and say, "Hey, turn that thing off." However, the ACA first of all gives a warning, it advises the public that they are causing a problem and that they need to turn it off. If it doesn't get turned of then, then they get an infringement notice and a fine, et cetera. Telstra can't issue fines. It's got no legal power at all. So I believe that that situation will always be there. The objective is to ensure the spectrum planning and the licence conditions minimise that.

DR BYRON: That's the last resort - - -

MR WHITTAKER: That's why we say last resort.

MS PHI: It's the last resort. Certainly the first thing is not to ring up the ACA and say, "Please, sir, I've got a problem," and have the ACA hop in a truck and come out and measure your base. They don't do it.

DR BYRON: Sure.

MS PHI: It's simply that they don't have the resources to.

DR ROBERTSON: No.

MS PHI: They are not resourced to do that.

DR ROBERTSON: You would need some pretty sophisticated equipment to track down an example like that.

MS PHI: And potentially a lot of people too, yes, and it's reasonable for them not to seek to do it.

MR WHITTAKER: Do you have statistics on interference to telecommunication services - has the ACA given you that yet - over the last few years?

MS PHI: No.

MR WHITTAKER: Have a look.

DR ROBERTSON: While Neil was asking his question I went through my copy of your submission and the only question mark I had in the margin was actually against Segue - I think it's Segue - S-e-g-u-e.

MR WHITTAKER: Segwa.

DR ROBERTSON: I assumed that you're talking in the same tone as "vague".

MS PHI: I'm sorry.

MR WHITTAKER: No.

MS PHI: No, no, we're never vague.

DR ROBERTSON: But I did look it up so I do know what it means.

MS PHI: That's good. We are pleased to have contributed.

DR ROBERTSON: I'm not sure I'll ever use it.

MS PHI: It might also go in the Productivity Commission dictionary, you never know.

MR WHITTAKER: I've got a few more dot points here. There are a few subject I'd like to bring in, use our time. We've had some people complain about the device boundary. In our opinion - not only our opinion - we know that they obviously don't know the purpose of the device boundary under spectrum licensing. It's this old thing about apparatus licensing is the same as spectrum licensing - you know, that's central planning speak for what? A number of things.

We have difficulty with the criticism of the device boundary which in one network, which we have registered, enabled the efficient and certified registration of 498 out of 500 bases in an automated process which was accomplished efficiently and cost effectively.

MS PHI: It should be said that the two would have also happened had the licensee bought just a teensy bit more spectrum.

MR WHITTAKER: The two exceptions were handled because they were meant to be handled under the framework with spectrum sharing agreements. Neil, you spoke about those yesterday to Telstra. Obviously they had to negotiate with someone else so that other party is also involved in spectrum sharing agreements. It works quite well, but it only happened in two cases, and that's the objective. The design of the framework is to minimise that negotiation. It is a cost, or can be a very significant cost.

MS PHI: And a delay.

MR WHITTAKER: And that's a cost too.

MS PHI: Yes, that's true.

MR WHITTAKER: The MDS: our first submissions spoke of the 2.3 gigahertz or MDS affair.

MS PHI: Yes.

MR WHITTAKER: How do we get that on the tape?

MS PHI: Would you like to chat about that?

DR ROBERTSON: Sure.

MR WHITTAKER: How we'll handle this is I'll read what the ACA have said here and Barbara will come in with a few comments on the way through. The ACA say:

> In relation to fees charged for the conversion of the MDS band to spectrum licensing, to set the record straight, we note that the conversion fees were not based on previous auction prices because these licences had previously been auctioned and the term of the licences and their renewability had been left somewhat open at that time.

MS PHI: The fact is that - it's actually a good answer but it's not an answer to the question that was put. The auction for the MDS licence has actually been conducted in 1990 and the conversion was in, what, 2000? Now, there's a lot of spectrum gone under the bridge in that time and the significant policy change was spectrum licensing itself, the first framework coming out in 95. So what we are dealing with is an auction which predated existing policy and we understand a set of - a clear understanding that the licences were not for renewal. The issue to us is not how we went about developing the price. The issue is: why wasn't it auctioned? In terms of competition, creating competition, creating a viable market, creating that secondary market that you gentlemen have focused on so much, we cannot see how you could sell the spectrum for 26 and 44 million and, a couple of weeks later, it was worth 140 or thereabouts, if the press reports are correct.

It could have been properly defined, auctioned, put to market and sold to the benefit of the revenue and for the creation of a more competitive market. It would have created interesting tensions between it and 3.4, because a lot of the usages are

similar, and there may have been economies in terms of the three point - the equipment that's available at the lower level is quite - there's quite a range of equipment there. Now, we've missed out on that. I think that's the question that should be answered, not how we got to what we did. To us it's a very sad, missed opportunity.

MR WHITTAKER: It was made very clear in the licences that they should not expect renewal. Very, very clear. The other thing is - missed out on the opportunity to replan that spectrum. It was converted licence and very, very biased in the technical framework. Those MDS licences were sold way before the first spectrum licences were issued.

MS PHI: So in a sense I think that's where we're coming back, in talking about the role of the ACA not being to create the market, but to create the circumstances in which the market can operate. This is a prime example of not doing well in picking winners. If you have a policy which says that a spectrum licence is created under certain circumstances then you don't get this - look, for the licensees this was a very valid market activity. They got a damn good deal. I might rant and rave but I don't blame them a bit. If you can get away with it, then why would you not? I mean, it's a reasonable commercial position.

But, as I said earlier, what we have is a situation where commercial interests may want less flexibility. They may not want their competitors to have access to different equipment. One equipment vendor may quite legitimately may be seeking to buy something for their equipment. A carrier may have a market plan that it doesn't want to reveal, or it may want to cut off someone else. All of those things are legitimate commercial activities, but the ACA isn't a commercial activist and it ought to be creating the widest possible, and the most technically creative playing field to allow that activity to happen. I think what perhaps is happening is that it's caught up in thinking that it has to create competition. I don't think that that is what is being asked, and I don't necessarily think they're capable of that - not with everything else they have to do.

DR BYRON: Create the conditions under which it may occur.

MS PHI: Create the conditions, yes. It happens a bit even with accredited people. They do run training courses to help accredited people understand spectrum licensing. That is a worthy thing to do, but if you accredit 50 people you really do need more things for them to work on. The answer to that again is - you've asked about rolling out spectrum - the answer is more spectrum, more things, a more viable market and that will create work for those 50 people. It's not dividing the work that is there.

DR BYRON: I guess what we keep coming back to is that one of the constraints in a much greater use of spectrum licensing in getting that out further - you know, which would lead to presumably a more active dynamic secondary market, and I guess one of the things I'm wondering about is whether ACA is losing the capability to put more spectrum licenses on the market, just in terms of the people with the expertise to design the licenced instruments, or something like that. Is that a constraint?

MS PHI: That may well be a constraint, but if that's the case then industry should design the rules, I suppose. Do you have a view on that, that I won't have to give you a red card over?

MR WHITTAKER: We're dealing with business here and, to a degree, human nature. The ACA is obviously using its tools, legislative tools, spectrum planning tools, to try and create, ostensibly anyway, competition. But it's getting involved in picking winners, whether it likes to admit it or not, and the ACA will say, "Let's run another workshop." However, the people in that workshop may have objectives as well, and apply strategies in those workshops to limit competition or - that's their job. They're businesses. The other things is that it's another extension of exactly what happened in the ITU under apparatus licensing. You've got the businesses and governments going in there to decide who is going to get the spectrum. That business has now been translated to how we will use the spectrum. It's gone into the technical framework, the access conditions - so that biasness.

MS PHI: Certainly the frameworks can be written without those biases and they can be designed for 15 years. They can be designed for the efficiencies that Telstra sought yesterday. It talked about not wanting to have to negotiate through the life of the licence, wanting flexibility, wanting to be able to purchase a spectrum licence with certainty as to its utility and not having to fuss about with lots of negotiations which reduced its value. Certainly that can be done. If it can't be done within the ACA skills base then - I mean, there are skills in industry. We have them, probably other people may think they have them, but certainly we have developed frameworks which are - 3.4 is a good example.

Even with that, of course, you've been presented with some misunderstandings. The idea of subscriber terminals at 3.4 - you heard Telstra say yesterday quite correctly they don't have to be registered individually. We will be registering for Telstra later this week, using that group facility and there will be one registration for each major population area. Groups are picked up in that. That actually covers hundreds or thousands of subscribers. For our client's sake we hope it's thousands, but it covers that. So it really is a matter of - yes, it can be done; maybe it can't be done within the ACA. There perhaps does need to be a more rational process of training within the ACA.

Of course there is no training in spectrum licensing. One of the difficulties is that the ACA staff don't themselves write interference impact certificates, so in a sense they're preparing something against a skill set that they don't use. If you looked at some of the work that's come out, the now defunct GSM 900 did things against that data set that were quite bizarre, possibly in ignorance of the fact that there were previous industry discussions. It's a thing that happens when an organisation is required to change quickly. What you wind up with is that they've had a lot of skills loss, they have had a lot of history - the history of the policy - and it's gone out the door. To that extent, yes, there may be a problem.

But I think there is a sufficient push within industry to say that if the ACA is unable or - that there is an industry capacity to do that inside the ACA or out of it. To me there is no particular impediment to the ACA deciding broad policy and industry, against set parameters, reaching the agreement on the rules. That is actually what happens within a proper consultation process in the ACA anyway. I mean; it's really a matter of what the balance is within that equation.

DR ROBERTSON: The role of the ACA is clearly something that concerns you. You would probably give it a B-minus, I would guess, from what you - - -

MS PHI: Sometimes I'd give them an A, and there are a couple of things that they are really very good on - you know, they'd be A-plus. But on some of this - - -

DR ROBERTSON: You don't give A-pluses.

MS PHI: Don't you? We're more generous than you, but then we know our place in the food chain. They've done a tremendous job of moving into change management, but they have had skills loss and atrophy, and that hasn't been picked up. Some of these suggestions are central planning taking over what is meant to be a marketplace thing.

DR ROBERTSON: How far do you think the department or the minister, in fact, might be behind that?

MS PHI: Do we have a Fifth Amendment? If not, can you get me one immediately? I think in most of - - -

DR ROBERTSON: I don't think so.

MS PHI: No? In most of these things I think that the ACA acts reasonably independently and on the technical matters I'm not convinced that, apart from the knee-jerk reactions of seeing something and thinking it's a good thing - ministers see

things and are impressed, but I don't think they necessarily say, "Well, we'll have that." There are technical considerations to be taken into account and government really is guided by the advice of. There may be other political considerations - timing issues and all of that - but I don't think the minister sits down and makes technical decisions.

DR ROBERTSON: But a minister has a role.

MS PHI: If you're talking about the role of the minister - - -

DR ROBERTSON: About the Radiocommunications Act.

MS PHI: - - - during the development process and whether things need to be sent over and sent back and all of that, and could that be truncated, yes. Yes, but to suggest that the minister defines, you know, what technology is to be used I think is a bit - no.

DR ROBERTSON: No, I wasn't thinking of that.

MS PHI: But I certainly think there is a need for - it may have been - I think you said yesterday, Neil, that in the early days there was - I think it was your statement anyway - that there may have been in earlier times a need for belt and braces and to make sure that things were right. But surely we've now got to the point where we've run enough of these auctions for it not to be novelty. The system does work well. Industry is familiar with the auction system. It operates and it ought to, I suspect, be - now, having got that running, I think we really need to look at the frameworks and to make sure the product is as suitable for the purpose, for which it's put, as it can be.

In the case of GSM 900 - those draft papers - that was not the case. IMT 2000 we thought could have gone much further; it could have been much more flexible. The ACA have said in their own documents that it will need to be renegotiated. We were concerned that that really wasn't up-front in the marketing plan. It is a note in a schedule to a guideline or something that really I think is not - it perhaps had not as much clarity as we would have liked. But if it is possible to do technologically neutral, flexible, creative frameworks that allow Australian industry to draw on the best equipment available internationally, to negotiate the best prices and deliver the best product possible to consumers, why would we not do it? I suppose that's our question.

The only way you can do that is by being technologically neutral, open to all types of technologies, not biasing your frameworks and doing it in a way which is open to all industry consultation. It's an excellence issue, I suppose.

DR BYRON: I guess I am particularly interested in the process issues and tidying up the formalities that need to be gone through to get more spectrum licences out there into the marketplace sooner. If the procedures, of backwards and forwards, are unnecessarily long is there some way of facilitating that process - - -

MS PHI: I think if you put the backwards and forwards time into defining the conditions, you'd probably wind up with a better product. I think you've got a point. Some of those things, where there is no time limit - and I mean, 3.4 sat for months waiting for decisions that were not related to the technical rules. Certainly in that sort of process either the minister doesn't have a role or there could be some time constraints on it. That might be something to look at. I haven't really thought about it in detail.

DR BYRON: Could the ACA initiate a declaration process rather than having to come from the minister?

MS PHI: I'm not sure of the legalities. Despite my bush lawyer pretensions I don't have a law degree, so I wouldn't presume to guide you, but it's something to look at.

DR BYRON: I think the law may at the moment say that only the minister can instigate something.

MS PHI: Yes, but there's this terrific thing called an Amendment Bill. I'm aware of that.

DR BYRON: Then there's the question of whether it needs that check and balance, et cetera - it actually needs to be in there or whether it was a good idea 10 years ago but is no longer necessary.

MS PHI: It may well be that government may now find that it doesn't need to do it either. That really is a question that we wouldn't begin to address. But in terms of creating a product, which is what we're interested in - that is, the product which is the licence - and the reason we're interested in that is because we have to manage it, in a sense, for our clients. Everything that is tweaked in a spectrum licence affects a number of businesses and ours is one of them. So in a sense, if the time spent on toing and froing could be spent on creating excellence we would be more than happy.

MR WHITTAKER: Neil, you mentioned yesterday about this - interferences managed first in time - I just want to get this clear with you: first in time under spectrum licensing is used to manage the frequency boundary and it is not used to manage interference across the area boundary. So you have in-band interference and out-of-band interference, those two forms, two different types.

DR BYRON: Yes.

MR WHITTAKER: First in time is used with out-of-band interference to manage that, and there is a good reason why it is used there because that's the most efficient way to go, but I haven't got time to explain to you why it is. But the in-band is set by the device boundary so it is at any time, it is not first in time.

DR BYRON: Right.

MR WHITTAKER: I notice some confusion, I think, in your draft report about confusing first-in-time interference settlement with what were really issues related to reallocation of the band itself. So there's a little bit of confusion there.

Something else: Vodafone said yesterday, referring to New Zealand, that they were having terrible troubles with interference between GSM and CDMA and the resolution of that interference. The problem was - and they said there were no up-front licence conditions to deal with that down the track - that is why and that is how we design our technical frameworks here in Australia, so that interference can be managed down the track such that we don't have to have all this negotiation and carrying on and cost later on - it's all up-front.

That was the challenge of designing a spectrum licence, and that's why - I think even Coutts said yesterday Australia is leading the world in this. You saw in our submission that Cave in the UK said we have the most innovative reform of spectrum management anywhere in the world - here. We were lucky because we had time right at the beginning to get industry agreement and discuss it and all the rest, and come up with a package that is quite good. But we want to build FuturePace - us, at least - want to build on that now and make it truly technology neutral to provide this fundamental framework for competition to occur outside of any bias that the government may want to put in it, or outside of any bias that industry may want to put in it, for perfectly valid, commercial reasons.

Macquarie spectrum trading desk: it failed and there was a slight ripple of a giggle through the thing, but really they were quite on the mark. We had nothing to do with it right at the beginning but they were just like us - two or three years ahead of the market. They've got overheads, obviously, which we haven't got. We can sit here and eat toast and jam or whatever for 12 months but Macquarie can't, so that's unfortunate, but I believe that will happen again if the government gets sufficient spectrum onto the market, and there is no reason why they shouldn't.

You talked yesterday too about conditions under whether a licence would be renewed or extended or re-auctioned. You are trying to define rules around something that is impossible because of all the interactions and the variables. While

we have been able to come up with a technical framework to manage all the variables and interactions of interference, I really doubt whether you will be able to come up with something with rules and whatever that defines when it's public interest. You see, in our dictionary "public interest" - I don't know whether it's central planning but it really means "minister's whim" to us - public interest.

MS PHI: Or at least it can be.

DR ROBERTSON: It means whatever you choose it to mean.

MS PHI: Yes. We understand why you have a problem with it.

MR WHITTAKER: Yes. So the only way is where you're heading: where licences will be perpetual and someone will come along with this great business case and say, "Hey, we get this spectrum, we can make all this money. Do you want this amount of money for it?" This could be two years into the licence, five, 15, 20, 30, 40, you know, whatever. I think that is the most efficient way to do it, and any other rules you may come up with it are going to be really - - -

MS PHI: I was caught yesterday listening to some of the comments about, you know, "We'll have a mid-term licence review and then we'll have a decision and then we'll have five years and then we'll have another review." I really thought that the agony of a fast auction would be better than slow death by review.

The other thing is that the ACA would need a killer bureaucracy to do all the reviews. I really was wondering what - you know, is there a purpose to this? I think you either auction it off at the end of 15 years or you make it perpetual and let the market deal with it. The review bureaucracy, I think, would be killing. If I were in the bureaucracy I might think differently, but I was trying to work out how it would work. As a structure I thought it actually lacked process rigour content.

DR ROBERTSON: We need to wind up because we have got - - -

MR WHITTAKER: Just one last thing.

DR ROBERTSON: All right.

MR WHITTAKER: We noted yesterday that the commission indicated that the ACA intended lodging a more detailed submission. In those circumstances FuturePace may also wish to lodge a further submission and I assume we will be given that opportunity. That's it.

DR ROBERTSON: Yes. You will see what goes on on the site. I mean, you're

perfectly at liberty to send us anything you like. It's up to us whether we choose to use it, of course.

MS PHI: That's fair enough.

DR ROBERTSON: And that applies to ACA as well.

MS PHI: Yes. Obviously there has got to be an end point to the deliberations but it really does come down to the fact that, yes, we do have some different views and if there is something that we thought was compelling we would like to come back.

DR ROBERTSON: Yes.

MS PHI: Thank you so much for your time. We appreciate that we are an opinionated SME. Most of our opinions are well founded; a couple are personal but the technical ones are very well founded, and we thank you for your attention. It is an extremely tedious subject for people who don't earn their bread and butter with it, and we thank you for your patience. Thank you.

DR ROBERTSON: And we appreciate your sympathy. Thank you very much. I close the meeting for a short adjournment.

DR ROBERTSON: Good morning. I am Dr Robertson and Dr Byron is my colleague. We are the two commissioners in this inquiry. I'll fill you in on a few details because, of course, people who appear before us usually hear this blurb at the beginning, but since we have only just met you we'll put you in the picture. The inquiry, as you know, started in the middle of last year. The commission is required to review the Radiocommunications Act and the market based reforms and activities undertaken by the Australian Communications Authority. It is also part of the national competition policy legislation review process. They are our terms of reference in a nutshell.

You've seen our draft report, I believe - the one that came out in February. What we're doing now is collecting opinions on that and new information, if there is any, in order to prepare a final report which will be done by the middle of the year - we hope before the end of June. That's by us - when the government releases it is their business. We've had hearings in Canberra and this is the second day of hearings here in Melbourne. I'm sorry you couldn't be here, or we couldn't come to Adelaide, because I find addressing you through the television much less satisfactory than meeting you face to face.

Participants of course are not required to make an oath but the act does require that any comments made by people appearing before us are truthful - which is fairly obvious. We also take a transcript and the transcript will be sent to you when it has been prepared and it will be on the web site covering this particular inquiry and you can have additional copies of that on request. In order to help the transcribers I wonder if you would introduce yourselves by name because then we can identify you in the process of transcription. I think that's all I need say. We have your submission. What I suggest perhaps is that you might like to introduce the submission and add to it as you wish. You may have read some other submissions that you would like to comment on. Then perhaps we can have an exchange of views on some of the things you have to say. Over to you.

MS LEA-SHANNON: My name is Raena Lea-Shannon and I am with Craig Small. I am the author of the report to the commission on behalf of Electronic Frontiers Association, but perhaps if I just give a brief summary of the scope and submissions that have been made on behalf of EFA. Because the Electronic Frontiers Association focus is on users of the Internet and Internet resources necessarily the scope of this paper is focused on those issues as they relate to radiocommunications regulations. We're not coming from the point of view of a telco or a broadcaster. It's pretty much a consumer point of view, if you like, in relation to the consumption of Internet services. That's the background to the scope of the submission.

When I started doing the research on the submission and reading the

submissions that have been made to the Productivity Commission prior to the drafting and up to the point of the Productivity Commission's preparation of the draft report, it seemed to me that things had been moving exponentially rapidly in the area of wireless communication and use of the spectrum. It seemed to me, in reading the Productivity Commission's draft report, that it sort of caught on the cusp of a lot of things that are happening. For instance, I think just at the time that the original submissions would have been being laid leading up to the radiocommunications draft report, the FCC in the United States had been poised on opening up some more part 15 spectrum. Tthe draft report makes a sort of fleeting reference to a book by Prof Lawrence Lessig, which was a book he wrote in 1999 called Code and Other Laws of Cyberspace.

Subsequent to that, as I say in the submission, he has written another book which is called The Future of Ideas and in that book I think he advances quite substantial argument about spectrum regulation that bears serious consideration by the Productivity Commission. I would expect that the commission wouldn't have had much of an opportunity to really look at that and consider the sorts of things that are raised, so for that particular reason I draw attention to Prof Lessig's book, The Future of Ideas, in my report, in the hope that the Productivity Commission can take an opportunity to read that and look at the sorts of ideas that are emerging from someone who is, I suppose, a fairly prominent legal thinker in this sort of area.

You would probably be aware that Prof Lessig was invited and appeared at the World Congress IT in Adelaide at which John Howard, (indistinct) Alston and Bill Clinton all spoke. He advanced some quite, I suppose, disturbing prognoses for what happen in the future if, to some extent, the stranglehold of regulation isn't loosened a little bit. In regard to the proposals that we make in the submission, there's a range of alternatives that I suppose we are asking the Productivity Commission to look at. There is the extreme end which would be to, if you like, radically deregulate the spectrum and move towards what Prof Lessig and others have raised in the complete spectrum commons.

That suggestion is only made in a fairly idealistic sense, I suppose, because what has to be taken into consideration is the position the spectrum is in now, which is that it is a highly regulated environment and there are incumbents who have paid large licence fees for the expectation of the use of that spectrum for a prolonged period of time without any other person competing with that. We tried to take that into consideration in the proposal contained in this submission for what is referred to as "the public domain style spectrum," with a view to opening up some parts of the spectrum to the maximum flexibility to facilitate the sorts of technology that are now emerging.

I think, reading the Productivity Commission's draft report the Productivity

Commission seems to adopt the Australia Communications Authority submission that the use of class licences is going to be the most appropriate way of creating a vehicle for the ultrawide bandwidth and frequency spectrum spread type technologies. In our submission we say that whilst that class licence is a very good innovation and has served excellent purpose in opening up uses of some of the wireless technologies, such as 802.11b, that it is in essence - the class licence is in essence focused on devices and not spectrum.

What we're inviting the Productivity Commission to consider is that for true flexibility there has to be a form of spectrum licence which is free and relates to spectrum, not to device, so that certain pa

inhibited these sorts of new innovations coming into the Australian market.

MS LEA-SHANNON: I understand how you could get the impression that the submission might be making that radical proposal, because it refers to essayists and people that have made that radical proposal, but what I had intended in the concluding part of that submission was to say, look, this is what people are suggesting. It's not really feasible, because we can't move from this direction and do 180 degrees and head in that direction without causing havoc. Let's not do that.

Let's look at the efficacy of the idea of a common consumer that we can apply in a narrow sense that might be feasible. I guess you've got probably, from what I've read, two or three years before ultrawide bandwidth applications are going to start coming out. A couple of the articles I read have talked about advancement in the ultrawide bandwidth technologies for mobile phones that is around the corner, or whatever. At the moment with the class licence system the way it is, it could be cumbersome and narrow public domain style spectrum could be a quicker response to that technology as it comes in, without being the radical position that other people have proposed.

If the Productivity Commission chose, it could be recommending that addition, so you've got the spectrum licence, the device licence, the class licence and something which you could call a public domain spectrum licence, so you could call it just a class spectrum licence, because that's really what it is - as an extra tool to anticipate that technology, because I think it's probably going to happen very quickly when it does.

DR ROBERTSON: Yes. We appreciate the reason - we're doing this inquiry now but we have to maintain flexibility because we can't spend a year looking at the Radiocommunications Act every other year. We're going to have to look at it now and leave it flexible enough to deal with certainly the next five years. We appreciate your submission and your comments and I think they're useful. We'll certainly take them into account.

MS LEA-SHANNON: On the question of the amendments to the Telecommunications Act, is there any likelihood of that sort of amendment being considered as well - creating another class of carrier so that there's not a telco-style carrier, that there can be a less restrictive, lower entry level carrier licence?

DR ROBERTSON: Yes, we've only just been informed about this ourselves, so we'll have to look into this with some of our colleagues who did the telco inquiry. We didn't do it. I can't answer your question there. I don't think Neil - can you?

DR BYRON: No.

DR ROBERTSON: No, we're not expert enough to give you an answer.

MS LEA-SHANNON: Okay. Can you give some indication of - it's probably fairly early at this stage, but in light of the submissions that you've received in response to the draft report to date and the people that you've heard from, has anything came up that's radically different from what's in the draft report? Is there a violent change of direction - no?

DR ROBERTSON: No, we won't change our direction very much. We might have to fiddle with a few details to satisfy some quite conflicting views we've had. But, no, I think our direction is pretty well settled. We'll make some minor changes but it won't change anything affecting you, I don't think.

MS LEA-SHANNON: Right.

DR ROBERTSON: Okay?

MS LEA-SHANNON: Yes, okay.

MR SMALL: The only other comment I had was whatever comes about - we've had these problems before - these issues before where law A had a set of definitions and law B has similar but not quite the same definitions and certain people or certain situations can be in the difference, and it has caused all sorts of problems for certain people. So whatever you do, make sure you look at the corresponding legislation in the other acts so that you don't get the case where someone can't - respectively cannot not break the law because this one says you must do this, and this one says you must not do this. We have had this problem before.

DR ROBERTSON: We're not legislators. We only make recommendations.

MR SMALL: Yes, it's more don't recommend that this thing must happen, or must not happen, when in fact this act, or the other act says the opposite, or you get - there be more definitions. In your capacity for making recommendations just recommend to the legislators that they try and make the legislation integrated.

DR ROBERTSON: Yes. All right, we'll try.

MR SMALL: Thank you.

DR ROBERTSON: Thank you very much.

DR ROBERTSON: The session is reopened, and this afternoon we have got the Australian Communications Authority represented by Geoff Luther and by John Grant. Actually, you had better introduce yourselves as you speak so that you are identifiable. So over to you, Geoff.

MR LUTHER: Geoff Luther. I'm the senior executive manager of radiocommunications in the Australian Communications Authority. We just want to make the very briefest of opening statements, and then I guess leave it open to questions. First off, let me say we welcome the opportunity to come along here today and give our response to the commission's draft report. As you would have seen from our submission we overwhelmingly endorse both the broad thrust of the draft report and the great majority of its findings and recommendations. We find that it has been a very useful process, not the least because it has helped us to focus our own minds about where the priorities lie for future reform, and it has been the generator of some very useful debate, both within the ACA and between the ACA and parts of industry. So overall we certainly welcome the commission's inquiry.

In our submission we have drawn attention to a few areas where we have a disagreement of emphasis with the commission and probably only about two areas where we actually explicitly disagree with the recommendations or finding. But by and large these are at the margin and overall we would like to commend the commission's report.

DR ROBERTSON: Okay. It's over to us quicker than we thought.

DR BYRON: Yes. Maybe the two points, to start with, are the two major points - or the two largest - I shouldn't call them major but the two main points of disagreement, because I agree that in much of your submission it is a question of emphasis and subtleties and perhaps some semantics or use of terms that we haven't got quite the right terminology for, but would either of you like to lead us through where you see the two main points of contention.

MR LUTHER: I'm not sure. I guess what we would regard the two major points of contention are - one was in regard to the commission's findings about the competition policy limits under section 60 of the Radiocommunications Act and the other being this sort of much vexed question of whether we should move towards a single licence type or maintain a clear distinction between apparatus licensing and spectrum licensing. Taking them both in train, I don't know that we feel very strongly about the competition limits. I guess our response, based on quite a deal of history now, going back over several years with the competition limits, is that we believe by and large they have worked reasonably well. They certainly have been helpful, I think, in introducing new competition into the Australian communications market. We take the commission's point that there is an argument that you should

just rely on other provisions within the Trade Practices Act and there's nothing particular about this industry. But I guess we remain unconvinced at the argument that if you've got a weapon in your armoury - in the government's armoury there - which has been used and has been useful, we remain to be convinced that it's sensible to remove that weapon. I guess we would agree though that it should be used very carefully. That's the key point, I would think.

DR BYRON: I don't think our position was, you know, vehement opposition to it, but a questioning of whether it was really necessary, whether there weren't already other instruments that could do much the same job, and whether the effect of the competition limits might be circumvented anyway if there was a secondary market in that party A is either precluded from bidding, or can only bid up to a certain limit by these provisions, but then the day after the auction can go to the secondary market and get it anyway. If the ultimate test is whether or not section 50 of the Trade Practices Act is triggered, why not just say that up-front. But I mean, I don't think it's something that either of us want to die in a ditch over, but we were just seeking clarification or elaboration on that.

MR GRANT: John Grant, executive manager with the ACA. I would observe that the existence of the competition limits gives a lot of certainty to the market in a way which wouldn't be possible if the competition limit provisions were removed. I guess if the competition limits were removed, successful bidders at auction would be wondering whether or not they might trigger section 50 of the Trade Practices Act. That is clarified for them because of the present arrangements.

The other point I would make on competition limits is in reading through evidence to the commission I thought there was a great deal of comment made about competition limits in a particular auction, the 3.4 gigahertz auction, and I agree that there was contention amongst some parties over the limits that applied there. But by and large the competition limits have been non-controversial, and from our observation - the ACA has no role in setting the limits but from our observation they haven't been controversial. They have been well accepted by the players and, as I say, they have given certainty to the bidders in the auction.

DR ROBERTSON: We have begun to wonder whether we should reconsider this. You haven't been here for the last couple of days but we've had a number of people who - well, when it came to the question of reviewing spectrum licences, you know, when do we do it - in two years, three years, five years, and some people say halfway, so seven years - before the licence terminates? We had Telstra here yesterday who were arguing that the decision should be made on the basis of what is in the public sector interest. My feeling about that is I don't like the expression "public sector interest" any more than I like the term "national interest". I think it's something you can't actually grasp; it's a complete chimera.

But if that did happen, if we did decide, let us suppose, five years before the termination of a spectrum licence to undertake a review and decide whether it should be renewed or whether it should go to auction at the end of the 15 years, and it was done on the basis of this rather difficult concept - I mean, we might have a government in year 1 that takes one view of what is in the public interest and then by the time we get to year 10 it is quite a different set of circumstances a different political party in power. It could be, you know, a pretty arbitrary process.

One way in which you could prevent that just developing into a perpetual licence on the basis of "How do you say this is not in the public interest. It is going to have to be something pretty blatant" then maybe we need to reconsider the competition limits because that is a way of getting a market going. You're actually ensuring that there is competition in the bidding in the first instance which you may not be able to get later on, on the basis of that kind of approach. So I think we're actually going to rethink this a little bit, this issue, because I think it's a worry that you could be giving somebody a licence in perpetuity without much chance of getting it back if you've got this woolly concept involved.

DR BYRON: Can we switch to the question of a single licence time?

DR ROBERTSON: Yes.

DR BYRON: I think I've only just got around to really understanding the three existing licences and am therefore reluctant to see that little piece of insight disappear. But to what extent is the problem that you're dealing with there a reflection of the rigidities and the process for getting spectrum licences manufactured and sort of out onto the marketplace? I understand the simplicities and speed for over-the-counter sales of apparatus licence, although I guess a fair bit of homework has to go on behind the scenes before the actual sale takes place. But are there some possibilities of simply tidying up or refining, streamlining the process for getting spectrum licences up that would largely solve this problem anyway?

MR LUTHER: I would say, Dr Byron, that the rigidities that you talk about part of the problem, there's no doubt about that. Yes, we believe - in fact we argued in our initial submission - that there are opportunities for streamlining the process, and some of those you picked up in your draft recommendation. Yes, that would make things easier and make spectrum licensing, as a life form almost, a bit more attractive compared to apparatus licensing for our clients. It really doesn't matter greatly to the ACA.

However, I'd argue also that that's only part of the problem, or part of the issue. Really, I liken it in a way almost to whether the glass is half full or half empty. I

mean, the discussions that the Productivity Commission gave in its draft report, I think, quite rightly pointed out that there was a danger that if you conflated the two major licence types together then there would be a tendency to move away from the more market-oriented form of licensing, spectrum licensing, and I recognise that that's a danger. I would tend to see the glass being half full though: it gives you the opportunity in fact to bring more market-oriented discipline into the apparatus licensing sector. So I guess that's the other reason why we favour a single licence type.

I might also say a very similar debate is really taking place in other countries, and I'm thinking of the UK and the USA in particular, and the USA is really having this argument at the moment about how to build in additional flexibility into licences for spectrum, and they're doing it with literally a single licence type because they don't even have class licence; they have an unlicensed thing. So we just think that will provide more flexibility that way than the other. Having said that, it's not a life and death issue for us. There are ways of working around both apparatus licences and spectrum licences to get the best of both worlds.

DR BYRON: I find myself, in many other contexts as well as this one, thinking about the different interpretations of the word "licence" in the English language. At one extreme it's a permit to use or a permit to do something, and at the other extreme it's tradeable property. In the case of the spectrum I can interpret a spectrum licence as something that was designed to be property, tradeable, divisible, et cetera, with very few restrictions, and at the other end I can interpret an apparatus licence as being something which is a very prescriptive permit, customised, tailor-made for a particular piece of equipment at a particular time and place and at a particular frequency, and all the rest of it.

I can see how you can have thriving markets for the property type of special licences but it's much less clear to me how you can have a thriving market in something which is very tailor-made, customised for a particular requirement. If you collapse those two into something which is a hybrid, does it risk making all of it sort part-permit, part-property, and therefore less likely to be traded in secondary markets?

MR LUTHER: I think there is certainly the risk if everything congregates at the centre of the continuum, yes; I would agree with that. I don't think that's the proper way of thinking about it though. You would still have things which look very much like a current spectrum licence, even under a single licence type, and you would have to apply all the freedoms and flexibilities that are given to current spectrum licences now. As long as that problem with the middle is addressed, I don't simply see that - - -

DR BYRON: So if somebody wants to buy a spectrum licence, they then go and read the fine print and see whether it's of the apparatus licence type or the spectrum licence type or the somewhere in between type.

MR LUTHER: As I would hope they would do now. If they're buying a spectrum licence now without reading the fine print they could be in for some unpleasant surprises down the track.

MR GRANT: I would note that unlike in most countries an apparatus licence is tradable and it can be used to authorise third parties, and we've recently provided evidence to the commission of just how that is done. I do believe there are many more examples than in the list that we provided. We aren't always particularly aware of how licences are used. We also note that while most spectrum licences are quite flexible, they needn't necessarily be so in particular circumstances. We might wish to construct a spectrum licence that is quite technology-specific, and we gave an example of that in our submission. That was for the space licences.

DR BYRON: Yes.

MR GRANT: Similarly, an apparatus licence is generally purpose-specific, but it needn't be so, and some of the licences - I note the GSM 900 licences, for instance - give a lot of technology flexibility, but I think when you look at the two licence types at the moment, in combination they don't always cater to the needs of the market, and I think that space licence auction illustrates the point rather well.

DR BYRON: But isn't the GSM 900 almost an accidental hybrid that was a prototype of what was some years later to become a spectrum licence? If it had been created five years later it would have been called a spectrum licence. It would have been a bit different.

MR LUTHER: I think that's absolutely right. If we'd created it five years later - anyway, a few years later, yes, we would have created it I think almost certainly as a spectrum licence.

DR BYRON: Do you think it would be possible to have a system for the administrative issuance of spectrum licences in much the same way that apparatus licences are done at the moment, rather than the much more - I suggested yesterday when Peter was talking to me that the checks and balances that were built into the declaration for a spectrum licence, and having to get ministerial approval and so on - I could well understand that in the early days, when the whole concept of spectrum licensing was very very radical and untested, but now that we've got some years of experience with it, I wonder whether some of those checks and balances are still necessary, and that's why I was saying that if the process could be streamlined and

either over-the-counter sale - any thoughts?

MR GRANT: We have been thinking about those very issues, in part stimulated by the commission's thoughts. We agree that in the initial allocation of a band probably there is scope to streamline the process. I think at the moment one of the costs of flexibility is the very prescriptive process laid out in the act, and quite possibly there is room to streamline that, but I think beyond that what I've noticed is once we have conducted an initial allocation of licences, if there is spectrum left over we've got to go through this process all over again, it takes another maybe 12 months to get licences offered once again to the market, and I have thought that perhaps if there are lots left over at the end of the auction we can simply have an arrangement under which the unsold lots are available to the market at a predetermined price for a period of - well, indefinitely, until the lots are sold.

A predetermined price is in effect no different to an apparatus licence fee. They're both predetermined prices. I thought that might be a way of helping us clear the market where we've failed to allocate all lots at the initial auction. So I think there are things like that that we can do. Some might require legislative change. Others, like the one I've described, we could do internally without legislative change.

DR ROBERTSON: This comes down to one of the things that's worried me all along, which is if we're working towards a market in spectrum, then clearly spectrum licences are the way to go, but we're stuck with a mass of apparatus licences which are very complicated and some of them could be fairly easily changed to spectrum licences perhaps, but there are some that would be extremely difficult, and I can see that this single licence approach is in a way a solution to my problem in this regard.

What bothers me, though, is if you're looking at a market, you like to think you're dealing in a uniform product, a homogeneous product, if you like, and here what we're doing is making it more heterogeneous. We're actually moving to a situation where we're tailoring a licence to meet the needs of the potential user and, as an economist, that goes against the grain a bit. I don't know whether you can satisfy me in making me believe that that's not going to be a hindrance to the market.

MR LUTHER: I think it's an issue. I would counsel the commission, though, against assuming that spectrum licences are to any great extent an homogenous product at the moment. They're not. There is a degree of heterogeneity. Each spectrum licence looks different to the other because of the characteristics of the band, so let's not get carried away with the argument, I guess was my counsel.

MR GRANT: I think perhaps a further point to be made is that spectrum licensing is still fairly young. We are still discovering features of the act and features of spectrum licensing. It's only in recent times, for instance, that we found that a

spectrum licence doesn't have to confer an exclusive right on the licensee. In the case of the satellite auction, for instance, we could have used spectrum licences, allowing the two successful bidders, had there been two, to both operate in the same spectrum. A spectrum licence doesn't necessarily confer an exclusive right, and that was something that made us sit up and scratch our heads, wondering had we been misreading the properties of spectrum licences all along.

MR LUTHER: It does draw attention to Dr Byron's point about - do you think of spectrum licence as property? I guess we don't think of them as quite property. They have certain characteristics akin to property, but this idea that you can have two spectrum licences covering the same piece of property casts doubt on the analogy a bit.

DR BYRON: On page 4 you say that the ACA thinks a major difference between the two licence types is the term of the licence. I must confess that the term seemed to me to be one of the very minor, almost trivial differences between the two, in the sense that the dichotomy that I was explaining before - that dichotomy would exist even if both apparatus licences and spectrum licences had 10-year terms or 15-year terms. I see them as fundamentally different, and I can imagine that someone one day might acquire a spectrum licence, become a band manager and that the uses in that band would be hundreds of apparatus licences - sorry, they wouldn't be apparatus licences, they'd be - - -

MR .....: Things that look like apparatus licences.

DR BYRON: And do the same job. They would be commercial relationships with a third party to allow them to use a particular piece of spectrum in time and space within the overall management and constraints of the spectrum licensee's core conditions and all the rest of it. So there seemed to me to be, as I have come to understand them - perhaps mistakenly, but they seem to me to be quite different in major respects, not just the duration of the agreement.

MR LUTHER: We might have overstated that comment a little bit, but if I can add a little bit of colour as to why we made that statement: we have found, especially in the first few years of being out there selling spectrum licences, that the major selling point with industry was the licence term. There are examples of spectrum auctions that we have done where frankly if it hadn't been a 15-year licence term, I don't think we would have convinced the industry to go down the spectrum licensing path. Maybe that's a function of the conservatism of the industry, you know, that spectrum licensing was something new which they didn't understand, so that's the reason, if you like, for the statement. This was the major selling point of a spectrum licence, that we could offer it for 15 years and people suddenly found it attractive and were prepared to look at it as a licence type that they may be interested in, as opposed to

the one that they were traditionally used to.

DR BYRON: In spite of the fact that so few of them ever asked for the five-year version of the apparatus licence.

MR LUTHER: Despite that fact, yes. You're perfectly right to point that out. The other point that we've made to you before but I'll just repeat it again: despite what you say, that you think of them as two completely different animals, in fact they're not as different as you might imagine. We've talked about the GSM 900 which, okay, may have been an historical accident, but there was also the MDS regional licences which looked an awful lot like a spectrum licence in many ways - not in every way but in many ways - and we could do those under an apparatus licence and, as John said, maybe there are ways that we could tailor a spectrum licence to look more like an apparatus licence with fairly detailed conditions and restrictions if that was necessary, say in the case of a space licence.

DR BYRON: Yes, I guess that might lead some people to think that the ACA was "backsliding" - and going back to a more prescriptive, constrained form of licensing rather than the Holy Grail of complete neutrality - you can do whatever you like, as long as you don't adversely affect the neighbours.

MR LUTHER: And I agree with the Holy Grail. I think the ACA does agree with the Holy Grail. All we're doing is pointing out that there may be instances where that notion - you can do anything you like so long as you don't hurt your neighbours - may be best achieved through a slightly more prescriptive approach. Those would be limited, and a space licence may be a very limited example.

MR GRANT: I think that the need for prescription is most likely to arise where the relevant band is to be shared equally between a number of parties, and that was the case with the space licence. In those circumstances I think there probably is a need for more prescription, just to make sure that everyone can live happily together.

DR BYRON: As I said yesterday about good fences and good neighbours.

MR GRANT: Yes.

DR ROBERTSON: A couple of questions occur to me. One of the things that will suffer by having this non-homogeneous product, if we use that as a collective term for multiple qualifications to a licence, is the secondary market, isn't it? Here you have a person with a tailored set of needs, and somebody comes along with new technology and wants that spectrum and they think they can buy it for a price they're prepared to pay, but then they have to come to you to get the licence changed because in some sense or other, one of the boundary conditions, let's say, doesn't fit,

and that would tend to hamper the development of secondary markets.

MR LUTHER: I think we're somewhat at the risk here of exaggerating the differences between our two positions because I certainly agree, Dr Robertson, with your point. I have no difficulty with that, but the notion of having to come to the ACA to get boundary conditions changed, say, is some disincentive to trading, so let's not resile from that. We agree with you on that. But, by the same token, I think you're probably underestimating the degree to which these apparatus licences are traded and have been traded, and there is a quite ready market for certain types of apparatus licences, so, once again, it's not as black and white as the case you make.

DR ROBERTSON: I can see we're dealing in shades of grey, all right. I don't want you to think that I'm nitpicking because I think the ACA has done a great job of pushing out spectrum and making us as close to a market as anywhere, and what we have to look at of course is how we can keep it going.

MR LUTHER: I said at the outset I really didn't see this as being a major difference because there are ways of accommodating what we need anyway, but we just would feel that in the end a single licence type would just enable us to offer a little bit more flexibility to licensees than is currently available. Like I said, it's not a big deal.

DR ROBERTSON: One of the things that's been raised by others and not by us particularly, because we're not in the business, is the question of technical neutrality, and some of the licences actually being applied to particular types of equipment which form the boundary conditions, and some people have suggested that efforts could be made to neutralise that, if you like. Is that possible, do you think, or are those specific cases where the equipment really determines a lot of the character of the licence?

MR LUTHER: We certainly have the objective of making spectrum licence technical frameworks as technology-neutral as we possibly can. We've always had that objective. We are aware that there are some people who have provided submissions to the commission who believe we're moving away from that, but I guess we are in a very similar position to the commission on this - that there are two very extreme ends of the debate here. You've had evidence given at your previous set of hearings that parts of the technical framework were a technical farce, or words to that effect, and other people say every single aspect is absolutely necessary.

DR ROBERTSON: Yes.

MR LUTHER: To be honest with you, we are keeping an open mind about it. We have a couple of objectives here: one is to have the absolute, maximum degree of

technical neutrality that we can reasonably do. The other though is that we would like to make the technical frameworks as simple as we can, so that people know what it is they are buying and I think, if anything, that has been a bit of a drawback at the moment with the way the technical frameworks have been constructed and they are very difficult to understand.

Someone coming in, buying a spectrum licence - and we've had a couple of instances in the 500-megahertz band, which is the first band we sold, where people really came to us and it was very clear they didn't understand what it was that they were buying in the technical framework, so it is how to balance off technological neutrality with the simplicity that we are really wrestling with at the moment. I notice you have asked for more information on this issue and we're just as interested as you are, if not more far more so, on what the outcome is. There are no nefarious or ulterior motives here about trying to destroy technological technicality or trying to push things in particular directions - it's trying to balance those two objectives. The question of spectrum efficiency - some people in this technological debate are arguing that you're actually sacrificing the efficiency with which the spectrum can be used in favour of technological neutrality. I'm not convinced by that argument. It's something we're also trying to grapple with.

DR ROBERTSON: Yes.

DR BYRON: If we have finished those two could I move on to a few other minor points?

MR LUTHER: Sure.

DR BYRON: On page 5 of the submission you point that we have got a statement in there that's not correct. It's, "Spectrum licences have been issued only in situations of excess demand." I want to see if I can edit that sentence to make it correct. If we had said, "Spectrum licences have been offered only in situations where the ACA perceived excess demand to exist" would that be a correct statement?

MR LUTHER: No. We would still disagree with that statement. I believe the commission is really confusing spectrum licensing with auctioning here, which we say in the submission. It's a common misconception. It happens in our discussions with industry all the time. It happens, dare I say it, even within the ACA, where people equate spectrum licensing with auctions and, of course, that isn't true. You can issue spectrum licences through means other than auctions or you can auction apparatus licences.

DR BYRON: Yes.

MR LUTHER: They're two different concepts, so what we would argue is that your statement is true of where we have decided to auction spectrum, where we believe that there was excess demand, but it's not necessarily true - it's certainly not true in our own minds about spectrum licensing. We would quite happily agree with the commission's point of view that even if we had one person applying for a spectrum licence that's sufficient.

MR GRANT: We have allocated spectrum licences in the 800-meg band where there was only the one bidder, and at 27 gigahertz, where there was competition for one of many lots on offer. We conduct auctions where there is excess demand, but we will allocate spectrum licences even if there is no excess demand.

DR BYRON: So if somebody walks in off the street and says, "I need a spectrum
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or parts of licences, so I hadn't envisaged that we would pick up details of leasing arrangements within the spectrum.

DR BYRON: When I think of most other markets where there is regular public reporting of trades and prices - I don't know whether it's the car market, the real estate, the stock market or anything else - they're much deeper and thicker markets, and there's a element of anonymity that comes with any one trade, simply because there are so many others, whereas with apparatus or spectrum or leasing arrangements, if there is only a handful each week, then you don't get that anonymity of being one of hundreds.

MR GRANT: There probably wouldn't be the perception, rightly or wrongly, of the conflict of interest that you've raised with us, with most of those other markets.

DR ROBERTSON: Can I take up a couple of detailed points that come up from our suggestions. As I understand it, you really don't have any major objections to the proposals we've made to the objectives for the act. Would any of those affect your behaviour in any way - that is, the ACA behaviour, not you personally.

MR LUTHER: I think we already made the point in our first submission that we haven't in practice found a great difficulty in sorting through the objects of the act, so I guess the answer would be no, obviously.

DR ROBERTSON: Right.

MR LUTHER: What you're suggesting seems perfectly sensible but I doubt that it's going to impact on us greatly.

DR ROBERTSON: And we could well be forced to changes before we even get our report finished. Yes, I understand.

MR LUTHER: Yes.

DR ROBERTSON: The other one was about this standard that I mentioned earlier, which was the idea of the public interest test. How do you think we could do this? You've asked us if we can help in terms of the consumer. The Telstra submission that we got yesterday seemed to totally ignore the consumer; it was about things that were of interest to Telstra. They're the only people who have attempted, really, to try and define - - -

MR GRANT: We would agree that it's very difficult to define public interest. In fact we have searched legislation trying to find any definition of public interest or national interest, or national significance, but to no avail. Therefore while we agree

you couldn't define what public interest meant, we think it probably is possible to build into the act some guidance to the decision-maker, whether it's the minister or the ACA, as to matters which have to be taken into account in deciding whether a licence should be renewed in the public interest. Such guidance does appear in various acts, including in one of our own, the Telecommunications Act, and in fact there is guidance which is quite possibly relevant in a spectrum context. The guidance provided in a section of the Telecommunications Act refers to the reach of a network, its economic significance, the number of consumers connected to the network and so on, and they're all thoughts which might usefully guide a decision-maker as to whether it was in the public interest to renew a licence.

DR ROBERTSON: Yes. It's a concept that is very difficult to get hold of. I suppose if we did go along with it, which I'm not sure we shall, then we'd have to find some way of defining it a bit more, and that tip on the telco act is probably a good place to start.

MR LUTHER: Presumably even if you don't go along with the concept though, we still have the issue.

DR ROBERTSON: Yes.

MR LUTHER: I would imagine you would have to grandfather the existing ones because people have bought them with that right attaching to them. So we still have to address the issue.

DR ROBERTSON: That's true.

DR BYRON: I guess there's a question of whether you would include a term like that in any future spectrum licences, given that the current ones would have to be grandfathered. What changes might it be desirable to make if a new one is yet to be issued?

MR LUTHER: In terms of administrative and policy ease, if nothing else, I think we would agree with where you seem to be coming out on this, that there are difficulties with the concept and maybe things would be a lot simpler if you didn't have it there.

DR BYRON: With the current spectrum licences the default is that they will be re-auctioned two years before expiry unless - - -

MR LUTHER: Unless it's in the public interest for them to be reissued to the same person, yes.

DR BYRON: But we don't have any way of knowing at this stage whether all of them, most of them or none of them are likely to be found to be in the public interest to be renewed.

MR LUTHER: That's certainly true. It's not only a matter for the ACA. There is also a ministerial clause in that part and the minister has never expressed any views about what is in the public interest. Yes, you're right, we have no idea at the moment.

DR BYRON: I keep coming across lots of other examples, particularly in the natural resources area, where somebody has had a 15-year lease for an oyster farm and made a major investment, and says, "Well, obviously this should be made perpetual," or "I shouldn't have to bid for it again." The same in water, forestry, fisheries, et cetera, where people have had 15-licences, and even when it's said, "At the end of 15 years your licence expires," they're still coming back and saying, "But we thought that - we had a reasonable expectation that we'd get it again for another 15 years." A lot of the threats of litigation in Queensland and New South Wales about water resources are about this reasonable expectation, "That when the licence said 15 years, you didn't really mean 15 years."

MR LUTHER: This is actually a slightly different case to the one you're pointing out but we did have a similar issue with some apparatus licences that we had auctioned, the MDS licences where they're actually auctioned without any explicit guarantees that they would be renewed and people came to us and said, "But we had an expectation that they would be renewed." They actually started to take legal action against us on that. So you're right.

DR BYRON: To me that's an argument for making sure that the licence agreement is very, very explicit; what's in and what's not in.

MR LUTHER: I agree with you 100 per cent on that. I didn't write the initial licence on the MDS licences and if I had, I wouldn't have written it that way.

MR GRANT: We also agree with the commission that the act serves nobody terribly well in that decisions about the future of the spectrum licence are not decided until the final two years. We would agree that decision points should be brought forward. If a power to reissue spectrum licences to the same party and the public interest is retained in the act, then we think it would be useful that the decision was taken considerably earlier than the final two years of the life of the licence. Similarly, if an auction is to be held for the new licence, we agree that that should take place earlier as well.

DR BYRON: I think you're quite right to separate the decision point and the

decision criteria but with regard to the point, one of the things that you've probably seen is that some of the telcos have asked for the decision point to be made five years or even seven years before the expiry of the spectrum licence. What bothers me about bringing it that far forward is that the potential new use and user for the period post year 15 may not even exist or may not be in a position to articulate their case or, if it comes to an auction, to raise the funds and bid at the auction, so it would seem to me to really entrench the power of the incumbent because the alternative is going to be much less defined. Even if you're using a public interest test to say, "We know what we've got now. We don't know what we might have in five or seven years' time, so we'll stick with what we've got now."

MR GRANT: I guess if you have faith in the secondary market, those concerns would be somewhat alleviated.

DR ROBERTSON: Yes. We're still waiting.

MR GRANT: Yes, we are.

DR ROBERTSON: That's why I think this competition limits thing needs looking at again, because if you get it wrong in year one, nothing is going to happen for 15 years and a lot could happen in that time. On this question of interference, have you become aware of any civil cases over this between spectrum licence holders, or have they come to you with their problems for a solution?

MR GRANT: I'm not aware of any.

MR LUTHER: No. If you're talking about spectrum licences, licensees here?

DR ROBERTSON: Yes.

MR LUTHER: I'm certainly not aware of any. I'd need to check. I'm not aware that they've actually come to us with any particular problems with another spectrum licensee. We are aware of cases where spectrum licensees have come to us with an interference problem which turns out to have been really, "We've got a problem," and they weren't sure where it was; and it turns out the problem actually lay not with another spectrum licensee but with devices outside the spectrum licence.

DR ROBERTSON: Is there any tendency for increased interference, or are your devices for preventing it still on the whole successful?

MR GRANT: I don't think it's possible to discern any trend.

MR LUTHER: Just anecdotally - and with no hard evidence whatsoever - I would

say, from speaking to our people on the ground, there is probably a slight increase in tendency in recent years towards greater interference. But, as I say, I've got no hard evidence, Dr Robertson.

DR ROBERTSON: That might even be proportionally a fall, given the increase you suspect.

MR LUTHER: I would suspect that it would be, in fact. Probably the increase hasn't been as proportionate to the increase in use of spectrum. Very often our problems are really with things that you might not expect, almost like rogue devices - things that are not actually intended as transmitters up on a tower and transmitting. Examples are masthead amplifiers on televisions, which are a significant problem for us in the interference complex. Now, they shouldn't be. You know, they're not a transmitter device; but that's been an increasing source of problems for us. Another example is when you walk out of a shop and the alarm starts beeping because you've tripped those alarm things at the front of the store and they also been a source of interference but again they're not a transmitter as such.

DR ROBERTSON: We've also heard a lot about this report by the RCC, which a number of the companies have talked about. We'd like to have a copy of that.

MR GRANT: The RCC met in Sydney last week and the chairman of the RCC and the ACA advised the council that we would be providing that report to you.

DR ROBERTSON: Good.

MR LUTHER: It's just currently being finalised, I think. Despite the fact that it went to the RCC last week, there are a couple of issues that were raised during the debate at the RCC which are being reconsidered this week, on Friday, I think.

MR GRANT: There'll be a further meeting on Friday. Hopefully the report can be finalised.

MR LUTHER: So hopefully in a week or so we could make that available.

DR ROBERTSON: It's a bit frustrating to have people keep telling us this has happened and we haven't seen it.

MR LUTHER: We certainly had every intention of making it available and the chairman of the ACA made that point to the RCC.

DR BYRON: Can I come back to my hypothetical case of somebody who's decided that they would really like to have a spectrum licence over some frequencies that

nobody has ever asked for before, in a remote part of Australia. Would you set a reserve price and I guess then, what would happen if this person says, "That reserve price is excessive"" Can you just talk me through that process?

MR GRANT: We have previously - not in every case, but we have on occasions consulted on reserve prices. There would be opportunity for a prospective licensee to put their views to us about the reserve price.

DR BYRON: Have you ever thought of, for example, putting an advertisement in a newspaper on the web site and said, "We're considering making this piece of spectrum available to somebody in this space at a price of X, Y and Z and unless we get a better offer from somebody within the next 90 days or 30 days, we're going to do that." Is it possible to work that way, to test the market?

MR GRANT: There is nothing to prevent that.

MR LUTHER: We're allowed to allocate spectrum licences under the Radiocommunications Act through an auction, a tender, a predetermined or negotiated price. I'm not quite sure which one that falls into.

DR BYRON: It would have to fall into one of them, though.

MR LUTHER: We haven't actually thought of it and we'd need to - before we did such a thing, I'm pretty sure it would need to be picked over very thoroughly by our lawyers to (a) make sure it was consistent with the act and (b) make sure it was a reasonably robust process.

DR BYRON: Changing now to the question we were talking about before, the renewal of the spectrum licence, if an auction wasn't held to decide who has it for the second period, how do you determine the price?

MR GRANT: In essence that is always a problem for us where we don't have an auction. An auction clearly avoids us confronting that issue, hence we like auctions. However, where we do have to set the price, or indeed where we've got to set reserve prices for an auction, we'll take into account every bit of evidence that we can get. It might be prices paid overseas. It might be prices paid in comparable bands. On one occasion we have engaged a firm from the financial markets to give us guidance about the setting of the reserve prices. We would consider any evidence that we could obtain to guide us in the setting either of the asking price or, in the case of an auction, of the reserve price. We don't use any particular methodology but we will use all information that we can get our hands on.

DR BYRON: But it wouldn't just be an automatic - you know, what you paid for

the first one indexed by CPI or something like that? No?

MR LUTHER: Although that may be one possible way of doing it if we believed that - - -

DR BYRON: But a pretty unsophisticated way.

MR LUTHER: Very; but if we believed that that was a reasonable market price and if it was established in the market, then that's a possible way of doing it.

DR BYRON: I guess I'm still worried. When some of the people in the industry have suggested if the decision criteria is going to be an option and the timing of the decision is going to be five or seven years before the expiry, I really worry about new entrants being in a position to bid seriously and then sit on their hands and wait for five or seven years.

MR GRANT: Could I respond to that? I believe that what the Radiocommunications Consultative Council working group is more or less agreed on is not that an auction be held five or seven years prior to the expiry but that a decision be made five or seven years before expiry as to whether the licence is to be reissued in the public interest. If the RCC working group's recommendation was to be accepted, I imagine that the way it would work would be something like this: we come to year, let's say eight or 10, of the spectrum licence; the minister would make his decision as to whether the licence was to be reissued in the public interest; if the answer is, "No, it's not to be reissued. The spectrum has got to be re-auctioned," then I imagine that we would hold that auction - this is the way it currently stands - in the last two years of the licence or, if the commission's recommendation were to be picked up, maybe three years before the end of the licence period.

DR BYRON: Yes.

MR GRANT: It's not to say that an auction would be held at the mid point. I think what the working group members are saying is that the industry is suffering from the lack of certainty; that in a 15-year spectrum licence, the initial roll-out of infrastructure would be done in the first five years and ,the way that the act is constructed, there would be no decision made on the future of that licence until the final two years. That leaves an awfully long gap, a period of uncertainty. The working group members were of the view that that served neither the licensees nor the consumer well. I think their views about how the act might be restructured were all based around getting greater certainty into the process.

DR BYRON: But the industry and the working group, I imagine, basically reflects the incumbents, the people who are in the industry today, not the people who might

be in it in five or 10 years' time. If you're already in it, what you want is certainty. If you're outside and want to break in, what you need is something quite different. It seems to me that whole question both of timing and criteria for the decision - if you do it one way, you can heavily bias it in favour of the people who happen to be there at the moment. There's probably a different way that it could be biased to maximise the opportunities for new entrants. Because we don't know who the new entrants are or might be, because maybe those companies don't even exist yet, their voice is not being heard in the current discussions.

MR GRANT: Sure.

DR BYRON: It's just that balance between those who are in there now and those who might be in there in the future - is where I'm having trouble.

MR GRANT: Although I would point out that the working group membership included several current spectrum licensees who arguably have a lot at stake in trying to change the current arrangements, improve the current arrangements; but the working group also included quite a number of smaller player who have only apparatus licences. In that regard there was quite a diversity of view. Indeed, when we provide the working group's report you will see that on some subjects there was no unanimous opinion; there was quite a diversity of view.

DR BYRON: Device registration and registration boundaries and all those sorts of things - I think it's not unfair to say that we're still grappling with questions of neutrality, device registration, boundary conditions and how all this fits together to - assumed uses. Given that we're all agreed on what we're trying to achieve is the greatest technological neutrality, subject to having the appropriate boundary conditions, is there a risk that the assumed use really undermines the neutrality goal?

MR LUTHER: Yes, and yes, there is a risk. In an idea world you want something which is completely transparent to the assumed use, so it can be used for fixed service or a mobile service or radio navigation service, without naming a whole bunch of things. Our difficulty has been coming up with the set of conditions which allow that, but at the same time don't unnecessarily harm the most likely users of the spectrum. We have had examples where that's been alleged as being the result of the technical frameworks. So we've had people come to us and say, "You might have made them technologically neutral, but it's at the cost of the useability of the spectrum." So, yes, it's a risk.

DR BYRON: Or if the boundary condition is the other way then it reduces the neutrality.

MR LUTHER: Yes. I think the fact that you're having difficulty grappling with

this and we, in the ACA, are having difficulty grappling with this and the Americans in their own completely different framework, are having difficulties grappling with this, indicates that - - -

DR BYRON: It's difficult.

MR LUTHER: (a) it's difficult and (b) that it's at the cutting edge of developments in this area. There isn't any sort of degree of unanimity about the right way to go unfortunately.

MR GRANT: But we did agree with industry last week that we would conduct a workshop to examine issues like this and we'll do that, I would suggest, probably in the second half of this year. The ACA itself doesn't have a firm view and our position is that we need to keep exploring and asking questions and certainly we want to engage the industry in that debate.

On the issue of device registration similarly we're asking: are we doing things as well as we could? At the moment are we being too prescriptive? Does every device need to be registered? Is it possible to simplify device registration to require fewer details? Should we in fact be requiring an interference impact certificate with every device registration? Another option, for instance, might be to say, "Well, licensees do not need to provide us with any interference impact certificate," rather they can take a risk management approach and decide whether or not they'll get an interference assessment done.

What would then happen, for instance, is that in the event of a dispute we would ask a licensee to produce an interference impact certificate and the licensee would be required to produce one. But these are issues that we want to explore with industry and we would look to take those up at this same workshop later this year.

MR LUTHER: I think, Dr Byron, you're right - we all have the same common objective here. It's just the most efficacious means of reaching that objective. We have people who tell us that there is no need to register any device at all, and in fact the device registration process is (a) unnecessary and (b) detracting from the attractiveness of spectrum licensing as a concept. Now, on the other hand, you've got people who argue violently the other way, who think it's absolutely necessary and no, it's not too onerous. All we're saying is that I think we're in agreement about what the end objective is, but we'd like to work with people about the best way of achieving it.

DR ROBERTSON: Do you have any closing comment that you wish to make - either of you?

MR GRANT: I think that we would echo our opening comments, that we really

have found that the commission's inquiry has stimulated debate within the ACA and within industry, and between the ACA and industry. We have found it extremely useful to probe how we can get more out of the means that we have for managing the spectrum, so we consider ourselves indebted to the commission.

DR ROBERTSON: We can have a polite finish in that case, because I had already decided I was going to express my appreciation to you and your colleagues for cooperating with us, providing information and for engaging in some pretty frank and open discussions. Thank you very much.

MR GRANT: Thank you.

DR ROBERTSON: The meeting is now closed. Do we have any visitors who would like to speak? I don't think we do. The meeting is closed, thank you.

AT 2.50 PM THE INQUIRY WAS ADJOURNED ACCORDINGLY

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