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TRANSCRIPT OF PROCEEDINGS

PRODUCTIVITY COMMISSION

DRAFT REPORT INTO THE BROADCASTING SERVICES ACT 1992

PROF R.J. SNAPE, Presiding Commissioner
MR S. SIMSON, Assistant Commissioner

TRANSCRIPT OF PROCEEDINGS

AT SYDNEY ON FRIDAY, 10 DECEMBER 1999, AT 9.09 AM

Continued from 9/12/99

PROF SNAPE: Okay, welcome to this, the fifth day of the hearings in Sydney on the draft report of the Productivity Commission on broadcasting. Copies of the draft report have been available since 22 October. If anyone present hasn't received a copy and would like one, they should contact members of the commission staff who are present.

The commission wishes to thank the people and organisations who have responded to the draft report, either in further submissions or in arranging to appear at the hearings. The submissions are available here today for viewing and are on the web site of the commission. These submissions and comments will help us to improve the report which will be submitted to the treasurer early in March. The timing of the release of the final report is under the control of the government. As in the case of the earlier hearings, transcripts are being made and should be available on the commission's Web site within three days of the relevant hearing. Copies will be sent to the relevant participants. At the end of the scheduled hearings today I shall invite any persons present to make oral presentations should they wish to do so.

Now I turn to the first participant for the day which is Fox Sports and ask a representative of Fox Sports to identify himself for the transcription service and then to speak to the submission. Thank you.

MR MARQUARD: Hallo, John Marquard from Fox Sports. Thank you for the opportunity to be here again. I hope you have received a short supplementary submission regarding anti-siphoning.

PROF SNAPE: We have and we have read it.

MR MARQUARD: Great. If I can just run through that very briefly. Fox Sports as an Australian prescription programming provider is of the view - and being involved on both a practical level in buying sporting rights - believes that the anti-siphoning regime currently operating in Australia should be abolished because of its inherent anticompetitive effects and we note the Productivity Commission's analysis and discussion of it in its draft report. We are of the view that there is no real reason to maintain the list and the regime in its present form and that when the list was first adopted, there was some concerns about pay TV which at that time wasn't then operating in Australia. We believe some of those concerns haven't proven to be true and that rights holders should be left to freely determine the way in which they sell those rights.

We have a view that rights holders will ensure that they are sold and made available to a majority of the Australian population through free-to-air networks, independently of a regulatory regime. Statements to that effect have actually been made in the public forum by each of the major stakeholders. Having said that, we are aware that it is unlikely I think in the current climate that that as a political matter will actually occur. Having said that, we then say, well, let's have a look at how it can be reformed and we endorse the approach taken by you in your draft report that it needs to be amended in a way in which pay TV operators should be only restricted from

acquiring free-to-air rights.

To the extent that is what your wording on page 234 of your report, when you say "neither be permitted to negotiate contracts to exclude the other form of broadcasting" - to the extent that what you are saying there is that pay TV operators should be restricted from acquiring free-to-air rights but not restricted from acquiring pay rights, and free-to-air operators should be able to acquire free-to-air rights to listed events freely but not pay TV rights, we think that is a sensible approach.

In our submission we have provided information about the United Kingdom approach which is not dissimilar. There are some slight subtle differences because of the way in which they split them. But we do ask you to note the way in which it is done in the United Kingdom which is, we think, certainly a more refined approach than that used in Australia. The other really interesting thing about the United Kingdom approach is the extent of the actual list itself, which is our final point of our submission, and that is that we think that the list itself needs to be amended as an integral part of any reform, because the list right now is incredibly long. I think in the earlier submissions we make reference to how many sporting events it covers and we say the list itself should be amended. You will note in the United Kingdom it really only covers matters and events which are and can be said to be of truly national importance and I think some of the events which are now caught, you would have to really question, because of the fact that they are not shown on free-to-air television and historically have not been shown on free-to-air television.

As you know, there have been some anti-hoarding provisions which have gone through the parliament recently. In our view, they are not going to make any material difference because of the way in which rights are bought and sold. There is no sublist which has actually been set up by the minister. In our view, that won't make a difference really to the anticompetitive effects of the scheme, but I'm happy to talk to - to discuss or answer any questions you have about either the submission or the list in general or the scheme as it operates.

PROF SNAPE: Yes, thanks very much, Mr Marquard, for that. I'm wondering why one - I mean, if one follows the way that we indicated our thinking was going, to have a list so that neither could acquire the rights that excluded the other - some of our thinking I think had been that that could apply to all sports, so that the list would in one sense include all sports that would be covered by that provision. Now, if they are minor sports, presumably both wouldn't want to have rights anyway. So why is it necessary to have a list at all? Why not just say this applies to all sports?

MR MARQUARD: We actually gave that some thought I think last year in some discussions we had had. Logically you certainly could argue that. However, you would need to take into account that some sports are developed as a television production in conjunction with a broadcaster and either free-to-air or pay may take the view there is some sort of proprietary ownership in those. I'm thinking of any sort of minor sport in that sense.

The other thing though is that as a philosophical matter, is that the way that you want to approach something - to prevent a broadcaster or a form - to impose a regulatory restraint overall, carte blanche, across the whole spectrum of sports rights. Surely if you are going to have a regulatory restraint as is contemplated by anti-siphoning lists, that you only want it to apply to major events. Why should it apply to television as a whole when it doesn't apply to anything else? In other words, this is something which we are saying we need because there are some social policy reasons to have, to ensure that events don't migrate from one form of television to another. But the concept of, if you like, exclusivity - you don't say the same thing about movies, you don't say the same thing about any other form of documentaries or drama or business television shows or anything - that have this form of regulatory constraint. It is something that I think you would have to - it's a bit of a leap to say it should apply generally as opposed to events of major importance.

MR SIMSON: Apart from that last point you made, the philosophical point, could you just clarify the previous point that you made. Is what you are saying that in some cases sports are produced, is in effect a joint venture or a commercial venture between a broadcaster and the sports rights owner?

MR MARQUARD: Yes, there are some things - just to give you two quick examples - Fox Sports has produced an event called Test of the Toughest, which is a sort of an event where we take people out into the wilds and, you know, get them to do a myriad of things. That is really our own property which we developed. To say that event should be available - and we cannot really own all those rights, when we have actually produced it. Similarly, there are other events which are often produced which free-to-airs will say, "We want this exclusively because it has a selling factor to everybody saying this is the only place to get it" - and that applies to free and pay TV.

I think what we are saying is that if you are going to have the sort of imposition, then you should say, well, that this should apply to events which are clearly of some kind of - - -

MR SIMSON: So you have got to have a list in that situation.

MR MARQUARD: I think you do. I mean, I think it would perhaps need some more thought and discussion.

MR SIMSON: I am clear on your point now. Just help me here: what is the longevity in terms of the anti-siphoning legislation?

MR MARQUARD: 31 December 2004 is the current - - -

MR SIMSON: And that's a review slot, is it?

MR MARQUARD: That arises because when the list was first promulgated, the minister basically set out in the notice in 1994 that any rights acquired in the period from that date until 31 December 2004. There is nothing to stop the minister again,

under the current regime, of immediately or at some point in time, saying it will also apply from any events from 1 January 2005 onwards. But currently any events which are held in the period from effectively mid-1994 till 31 December 2004 are caught.

MR SIMSON: I mean, is there enough history in any of the overseas experience to indicate whether this anti-siphoning regime principle will be of long standing, as opposed to a transitory mechanism during the, quote, "birth", unquote, of a new industry?

MR MARQUARD: I think if you look to developed markets, in the United States they did have an anti-siphoning scheme and it was actually thrown out by the courts, given the constitutional validity of it there. In the UK I think this particular scheme that's now operating has sort of broad acceptance, even though they are somewhat more advanced in terms of the pay TV penetration and having pay TV as a concept in that environment. So I can't speak about any other areas. Like, I can't actually assist you in that, I'm sorry.

PROF SNAPE: I think, speaking for myself anyway, my own thinking in this has been - and I think my colleagues' thinking - has been in arm's-length transactions, like the test matches where the cricket teams and the cricket competition is not owned by private enterprise, and so it's an arm's-length transaction. But of course, as you are saying, one has to think also, under current possibilities, of relationships that aren't at arm's-length in that way.

Switching to the UK example if I may, let us suppose that News Ltd had been successful in purchasing Manchester United, and let us suppose that Manchester United, as it often is, was in the cup final, what would have applied in the UK then as far as anti-siphoning? Insofar as there may have been a relationship between Manchester United and News and that may have incorporated the News television service in Britain having the rights to Manchester United matches in general, and having under the list exclusive rights to Manchester United games in general, what would have happened then when Manchester United was in the cup final, with the cup final being on the list?

MR MARQUARD: Well, the answer to that is very simple, is that the FA Cup final is actually caught on the list and it is one of those events to which the rights cannot be acquired exclusively by one form of broadcasting, be it the BBC or not. The second point though is that, as is the case in most areas you have, Manchester United doesn't individually sell its rights to broadcasting. They are aggregated with all the other members of the particular competition in which they are playing, be it the Premier League or whatever. In that sense, as you may be aware, there was a recent case brought in the UK regarding the validity of the way in which the pooling of rights was sold by the Premier League and the Restrictive Practices Court in the UK actually found that it was valid to do that.

Interestingly though, there was a comment made in the court case by the Premier League that come the renewal of the rights in 2001 in the UK, that they will

not be selling it exclusively to subscription television in the way that they've sold it to BSKYB this time. They are actually going to break it up just because of the particular way in which that market has developed so there is some evidence, I would suggest, there that the time period, if you like, of selling it to subscription television has created some of the impetus, I think, for anti-siphoning. In this country when it was first sold, it created a bit of a furore. That has been a sort of transitory period in the market itself and the soccer market there has developed to such a point that the Premier League itself is thinking of bundling those rights in a different way, and I think post-2001 you might see that develop in another way. There are a number of people who have expressed interest in acquiring those rights, as I understand, in the UK, including Mr Gates, and looking at a whole lot of Internet and other options. Where that goes, I don't know. I wish I had the answer.

MR SIMSON: Mr Marquard, since we last had a discussion at the inquiry, the first time you came along, has there been an noticeable change in the actual administration of the anti-siphoning in terms of perhaps in the spirit, if you like, of the administration of the anti-siphoning that has overcome some of the difficulties that you explained last time was occurring?

MR MARQUARD: Not really, we have had to recently again go to the minister and request something to be delisted; in this case, it was the New Zealand cricket tour in 2000 - Australia are going to New Zealand to play a tour in February and March - on the basis that no free-to-air operator had been interested in acquiring the rights. Now, it's a fairly long-winded process in that we have to show the ABA and the minister's office that everyone has had a fair and reasonable opportunity to require the rights, so we had to create a paper trail that's a mile long. They won't assess it until such time as they have got paperwork from each of the free-to-air operators. The free-to-air operators, I must say, are pretty mindful of that fact, and can delay the process for some time, so it actually takes two to three months to do it. Because of that, in a practical matter, it's much more sensible for us to actually give up some rights, if you like, to give them to the free-to-air or to come to a commercial deal with them that allows them to have those live rights which impacts on our ability, if you like, to exercise those - - -

MR SIMSON: To just be clear on that last bit, in effect you're sharing live rights?

MR MARQUARD: Under the legislation and the way in which it has been interpreted by the courts, the free-to-air operator must have the live rights to the event.

MR SIMSON: Yes.

MR MARQUARD: So that means that we have got to make sure that in any of the rights that we acquire, before we actually can program and market and schedule the event, that a free-to-air operator has the particular rights. In some cases, the free-to-airs may actually not be very interested in them but it detracts from our ability to market and promote them as something which is exclusive, even though they are

not even going to show it, and in some cases we may have to tip in more into the production, we may have to tip in more into the delivery of a particular event to try and ensure that they have the rights because they won't take them in any other way.

MR SIMSON: What do you mean they won't take them? They won't do the deal with the New Zealand Cricket Board or whoever it is?

MR MARQUARD: In a practical sense, we often have to buy the rights - to get back to my original point about taking them off the list, the only way - just to give an example, say there's the Hong Kong Sevens, if I only buy the pay TV rights, I then have to go to the rights holder, be it IMG or CSI or somebody and say, "Have you sold the free-to-air rights?" If they haven't sold the free-to-air rights, I then have to approach them and say, "Well, I need paperwork from you showing that every free-to-air operator has had the opportunity to acquire the rights," which is more tortuous, if you like, than, "If we acquire the rights, don't schedule the thing," then approach everybody, as we have done on previous occasions.

MR SIMSON: So you reverse it - - -

MR MARQUARD: And offer it to them and say, "Are you interested in it?" and there's no profit sought by us in any way. We're just trying to offload the rights, if you like.

MR SIMSON: Okay. But let's say that Nine said, "Well, we hadn't thought of doing that, but that's a good idea. We'll take the live rights," then you can't show it.

MR MARQUARD: No, we can, because they then buy the free-to-air rights, but we can them still sell the pay TV rights.

MR SIMSON: But what if they purchase the free-to-air rights first?

MR MARQUARD: That would be fine.

MR SIMSON: They would have to deal back with you?

MR MARQUARD: No, they don't have to deal - there's no corresponding obligation on them to deal with us. They could if they elect to do so.

MR SIMSON: No, that's if they're showing it.

MR MARQUARD: Even if they don't show it, there's no obligation - the anti-siphoning regime doesn't require the free-to-air operators to actually show the events. That's been part of the problem.

MR SIMSON: But in terms of you wishing to have an event delisted, a specific event delisted, if you understand it is their intention not to show the event, you can then approach to have it delisted, can't you?

MR MARQUARD: Correct. But as I said, to do that, we would then have to show - - -

MR SIMSON: So there are two or three different types of processes you can go through, isn't there?

MR MARQUARD: Yes.

MR SIMSON: Depending on who actually owned, if anyone, the original free-to-air rights?

MR MARQUARD: Yes, and we have to determine that as well. We have to be aware of that. So it is complicated and it just does take time.

PROF SNAPE: A matter we discussed I think at the previous occasion was what effect it would have on the selling price of particular events if there were to be non-exclusive rights as we have been exploring and we have had different views on that. Unfortunately we still haven't got a submission from any sporting organisations, although we are hoping to have it early next week.

MR MARQUARD: Good. May I ask whom? Is that public?

PROF SNAPE: It's on the schedule, I think, isn't it? The AFL.

MR MARQUARD: The AFL, okay.

PROF SNAPE: So we are hoping to have that on Monday or Tuesday and we will be able to ask them, but so far we have had - from no sporting organisation. Have you got any further thoughts from last time on what you think the effect upon the selling price from an organisation would be of exclusive rights versus non-exclusive rights?

MR MARQUARD: I think the market for sports rights is fairly buoyant at the moment. I don't see any evidence that it's heading in any direction other than a positive direction for major sporting organisations. If you look at sports rights over the last 10 years, they have gone north in a big way.

PROF SNAPE: But generally they're exclusive rights, aren't they?

MR MARQUARD: Not at all. Just to give you an example, two major events held this year, the World Cup Rugby, the free-to-air rights were sold to Channel 7, the pay TV rights to us. The amounts are obviously commercially confidential but they are big numbers. Similarly, the World Cup cricket, again, Nine had the free-to-air rights and we had the pay rights. Major sporting organisations often now sell through agents who are very commercially savvy and have worldwide organisations. They will split the rights often as a matter of course - - -

MR SIMSON: And get more than they otherwise would.

MR MARQUARD: - - - certainly in other markets and they actually get more through that mechanism.

PROF SNAPE: That's the relevant question. Is it going - - -

MR MARQUARD: Then the other thing that I noticed which we certainly addressed in our submission - sorry, in the previous submission made by News Ltd - is the question which has been raised by some of the free-to-air operators which says that if you do go down this dual rights approach, you are going to see that the free-to-air operators will not purchase the rights to an event; in other words, they will become exclusively de facto on pay. That just doesn't happen; it doesn't happen (a) in Australia and it certainly doesn't happen overseas. To give you an example again, major events, World Cup Rugby, all of those events were shown both on free and on pay simultaneously. Going back for the last few years, the Iran, Australia qualifier was shown on pay TV on Optus and on SBS at the same time. SBS had its highest ever ratings on it. It's not something, in other words, which causes free-to-airs to baulk at getting something because it's also going to be available on pay. A similar thing happened to the World Cup cricket; it's happened with a number of events where they have been shown on both free and pay TV. That's the case overseas as well and there's no doubt about that.

MR SIMSON: What about the smaller sporting organisation? Again, a line has been run that if there's not exclusivity, it's going to be difficult for smaller sporting organisations to be able to find a broadcast sponsor. The events that you have mentioned are generally pretty high profile events.

MR MARQUARD: True.

MR SIMSON: What about smaller events conducted by smaller associations?

MR MARQUARD: Let's look at something like netball. Every match played by the Australian netball team is caught by the anti-siphoning list. I would say that the anti-siphoning list actually makes it harder - and they're certainly not in my current or in my previous life at Sports Vision - we had an occasion to actually want to purchase the rights to a netball event but didn't do so on the basis that it came up right at the last minute and we knew there'd be no chance of getting a free-to-air operator or to get it delisted in that short time. So I would say the smaller organisations currently don't have that broadcasting relationship anyway and are finding it difficult for reasons independently of any anti-siphoning scheme. The fact that you're splitting off the rights and making it easier for people to purchase one form of broadcasting I would say would make it easier for those codes to actually get on television or a form of television.

MR SIMSON: Could you talk with us about sport on pay television? We're clearly

not trying to pry into your business, but just give us a feel as to sport on pay television and the extent - - -

MR MARQUARD: Where it's going or - - -

MR SIMSON: Where the genre is going and whether it's up with expectations.

MR MARQUARD: Sport is clearly a major driver for pay TV and I think that is recognised both in Australia and overseas. In Australia we now have five sports channels across the three major platforms, two Fox Sports, two C7 channels which are the Channel Seven subsidiary, and Sky Racing. Sky has been around for the last year, devoted to racing. Speaking for ourselves, Fox Sports, we are broadcasting 13,000 hours of sport a year which is a pretty big number; more than 3000 of that in 1999 has been live. It is something which has been very successful because there is a demand I think in the Australian population for sport and for live sport, both domestic and overseas. It's something which we say has not actually been satisfied by free-to-air operators traditionally because there is enough sport domestically and worldwide to satisfy that demand, as I've said. It is a very important thing and is continuing to grow. I think it has been one of the success stories, if you like, of pay TV.

MR SIMSON: Of the 13,000 hours, how much of that would be Australian sport roughly?

MR MARQUARD: I'm trying to think off the top of my head; a large component of that, because Australians like to see Australian sports. We have relationships with a number of sporting codes, diving, gymnastics, athletics, swimming, all domestically, as well as rugby league and rugby union, so I don't know off the top of my head unfortunately.

MR SIMSON: But of that significant or large proportion of Australian sport, how much of that would not be shown on free-to-air? I'm not talking about news grabs, I'm talking about as a program segment?

MR MARQUARD: Most of it.

MR SIMSON: Most of it?

MR MARQUARD: Without doubt, most of it. To give you an example, rugby league - a good example - there were last year eight games of rugby league a week. The Nine Network elected to show two games a week.

MR SIMSON: And you showed what?

MR MARQUARD: We showed eight games a week. We showed six effectively first run or live and then the two repeat - - -

MR SIMSON: Two delayed?

MR MARQUARD: Yes. I mean, because of the anti-siphoning list, Nine has the opportunity to show all of those events. That's the law. It must have the right to show that stuff.

MR SIMSON: So they pick the two they want to?

MR MARQUARD: They pick the two they want and pay TV then has the remaining - in the 2000 year, as a result of yesterday's decision, there will be one less game, so there will be seven.

PROF SNAPE: When you said "the remaining", you do in fact do the same that they do as well, so you do all of them?

MR MARQUARD: Yes, we replay the games which are shown by Nine, but the other ones are shown - and that is the case with a lot of other things. For example, the sports which don't traditionally get as good a run on free-to-air, things like gymnastics, athletics, diving, swimming - unless it's a major swimming event - we show those regularly throughout the season. The same is the case with our rivals. C7 show the Sheffield Shield and you can turn it on pretty much every week, as I understand it, and see that. You don't see any of that on free-to-air television.

MR SIMSON: Mr Marquard, we're having this debate with a number of your, if you like, industry colleagues in the last few days about the extent to which multichannelling is substitutable for pay TV, or if you like, the extent to which if the government to change its mind as we suggest they do in the draft and allow multichannelling, the extent to which that would untangle your business or be a threat to your business. In terms of the nature of pay television and the program schedules and the way it's put together, how different is that to what you would envisage to be multichannelling on free-to-air?

MR MARQUARD: To the extent that a free-to-air network was able to have a sports channel, part-time sports channel as part of - I suppose it may not necessarily look different from a Fox Sport because they would be able to program other genres on another channel and use that exclusively for sport.

PROF SNAPE: You're thinking, say, 9B, okay?

MR MARQUARD: Yes, 9B is the sports channel and they could run, you know, the cricket test on there followed by something else in the evening and so follow it up with some golf. I think that whole question comes to a broader question about how the regulatory environment looks because a free-to-air broadcaster would not, I suppose, be able to bundle in the way that a Foxtel or an Austar or a Cable and Wires, Optus, bundles those channels together and the range, but it certainly would have a very big effect on a Fox Sports if they were given that opportunity with a regulatory regime which - there was a spectrum gift, if you like, as well. I mean, there is a whole

raft of issues.

MR SIMSON: Yes, I understand that, but if you could just repeat - so a key issue here in terms of the threat that multichannelling would pose to pay if a change were made is, (1) the number of channels that the free-to-airs were able to multichannel. If they were able to multichannel with 32 or whatever that Foxtel has got, or the 40, whatever it is, in other words if there are a lot of multichannels on free-to-air, that presumably would be a more significant than if there were just a few because as you have pointed out, people buy a bundle when they buy from Foxtel and as I - - -

MR MARQUARD: I don't necessarily think it's only the number because you can't just say 40 channels allows - because pay TV can offer 40 and free-to-air can only offer four. I mean, if you look at the key things, and I think, you know, you say sport, movies, documentaries, and other things that the key drivers of pay TV and cause the - - -

MR SIMSON: So the four or five main - they could cherry-pick - - -

MR MARQUARD: Yes, sport would be - and given the current regulatory environment, and we would say that the free-to-air has given overall of course a whole range of issues as has been addressed in some of our submissions by both the industry, that there is a difference in the way in which the two industries are treated, and continue to be treated. I think we were talking earlier informally about things like advertising and so on. I mean, there are constraints imposed on pay television which logically shouldn't be there because they just don't have a place, I think, in the current broadcasting environment.

PROF SNAPE: But that would be your one advantage, would it, a prime advantage, of pay television over free-to-air multichannelling, the 9B sports channel that we were talking of before, that you don't carry many ads, and so it would then be a question of how much is worth to you in terms of subscriptions, not to be carrying ads?

MR MARQUARD: Yes.

PROF SNAPE: Not to have a broken - - -

MR MARQUARD: That theory has certainly been advanced, the fact that there are less advertisements on a pay service, and the fact that we don't break up, say, a half of soccer in the way that the free-to-air network might, but the whole point about having a licence condition imposed on pay TV operators which prevents them from having more than 50 per cent of advertising revenue - their revenue derived from advertising - is incongruous in our - - -

PROF SNAPE: I understand that. It's not exactly biting but - - -

MR MARQUARD: No, it certainly has, as I think I mentioned to you, it would be

a lovely problem to have.

PROF SNAPE: Yes, but nevertheless if you are seeing and just addressing the point which Mr Simson is putting to you, is what competition would come to you from multichannelling and whether that would wipe you out basically.

MR MARQUARD: It would have a significant effect.

PROF SNAPE: The one advantage, or a prime advantage that you have, is that - whereas they have to break up their thing in order to survive because that's their sole source of revenue, is the advertising, it's a minor source for you, and indeed, it's an advantage that you have of not being - - -

MR MARQUARD: You could say it's an advantage but whether people are going to pay for the privilege of - - -

PROF SNAPE: Well, that's my question, yes.

MR MARQUARD: I am saying that might be open to doubt.

MR SIMSON: Just before you go on, could I just pursue this question of - a philosophical point. I understand you have got a particular self interest here, but I mean, a big problem we have, which we flagged in the draft report, is that really multichannelling which has been shown to be an important driver of uptake of digital services overseas, is basically locked out of Australia with the exception possibly or probably of the ABC and SBS, is locked out for some years. If we were just to take it at face value, for example, what Mr Branigan told us yesterday as to what's going to be happening to datacasting in terms of the definition of that, and then we put on top of that the question of multichannelling or the policy on multichannelling and two potential drivers of digital uptake are either locked out or constrained.

Now, I understand you have a higher level of self-interest in this but could you comment on that because I mean, we have got kids who would like to watch this sort of stuff maybe at some stage of their lives but that the time-frame just seems to be being pushed out.

MR MARQUARD: It's difficult for me to comment. I think as everyone knows, that decision has been made in the framework of an overall give and take about what has been granted to the free-to-air networks in return for being locked out of multichannelling to put it bluntly, and the use of that digital spectrum, and the prevention of a fourth free-to-air network and a whole lot of other decisions that have been made by the government. Yes, we do have an interest, and, yes, it would have some affect on us no doubt, but I don't think you can look at that sort of question in isolation, as you are trying to do. You're looking at it in the whole broader range and I think you need to assess the wider implications. You can't look at any of these things in isolation.

PROF SNAPE: In our draft, as we said, we have been told many times, and you're telling us again, that the whole structure of policy is a series of quid pro quos. We in our draft report were trying to extract from that series of quid pro quos and look at good principles of policy with the consumer as the benefit to all Australians, and the trade-offs seem to be inhibiting that. Now, it's a matter of how to extract from that framework which is what we have been trying to provide for that, but of course any part of that looks at their own brick in the building and tries to preserve it. What is Fox Sport's position on a conversion to digital? Are you in fact planning with the conversion to digital? Digital subscription, I mean, of course.

MR MARQUARD: Currently the cable operators have an analog service. I think there have been public comments made about a possible conversion. The timing of that and the actual decision is something which needs to be addressed to Foxtel and Cable and Wireless Optus. The satellite service is actually a digital service and there are certain opportunities that present themselves from that regarding interactivity and other things, and Austar have certainly talked about that, publicly and in their prospectus, about the future of those sort of services. We certainly are - yes, we are capable of delivering and now delivering in that form to them anyway. It is easy for us to adapt to that, yes.

PROF SNAPE: You're capable already to do that.

MR MARQUARD: Yes.

MR SIMSON: Mr Marquard, just looking at your competitive environment, you're on a few-year time-frame. You're playing in the pay TV space.

MR MARQUARD: Yes.

MR SIMSON: The free-to-airs are playing in a free-to-air space.

MR MARQUARD: Yes.

MR SIMSON: The free-to-airs may at some point in the future play in a multichanelling space. There may be also some datacasting space that's occurring over the digital spectrum.

MR MARQUARD: Yes.

MR SIMSON: What are the other spaces where you see competitors? I'm talking about, for example, Internet - what are the other competitive bits that you have on your whiteboard when you look at these things?

MR MARQUARD: I think the possible video streaming and Internet development is certainly one that strategically occupies some of our time because there is a certain capability of doing that now, and not delivering it by television. I think to paraphrase somebody else, our main competitor threat probably comes from somebody sitting in

a garage who is producing some device right now that is going to throw us all out of the water.

MR SIMSON: Are you talking - - -

MR MARQUARD: Yes. I mean, there are certain other delivery mechanisms which are linked through a television form in an interactive environment which would certainly change the business, not necessarily badly. It's one of those things you're looking into a looking glass and you just don't know where it's going to lead. This whole approach, as you know, does throw up a lot of things.

PROF SNAPE: I think I'm through. Thank you very much, Mr Marquard, for making this additional submission, and the last one, and for appearing and helping us.

MR MARQUARD: Thank you very much.

PROF SNAPE: Is Sony present? Sony is not present. Philips is though. We now turn to Philips. We have received a page summarising the points which are going to put to us but first of all we would like the representative from Philips to identify himself for the transcription service.

MR KOSOROK: Ciril Kosorok.

PROF SNAPE: Thank you. The position in Philips?

MR KOSOROK: I'm the information and digital technologies manager.

PROF SNAPE: Thank you very much. I should mention that the microphone in front of you is only for transcription. It isn't amplification as you probably noticed, so if one can project voices a bit for the audience. Thank you for the notes that you have given us here. Would you like to speak to them please.

MR KOSOROK: Basically Philips agrees with the draft report, especially in relation to chapter 6. We still strongly believe that the best option for Australia to move to digital television is basically standard definition, basically the UK-type format, with some minor variations for Australia. We also agree with the commission that basically we believe that HDTV at this present time, with AC3 multichannel sound, is basically a home theatre application and not a television application as most Australians would know it in their lounge room.

The question of simulcasting which was raised in chapter 6, there was some doubt cast as to whether that is possible. The recent NTL submission covered that subject quite well and discussions with other Philips' offices around the world, because Philips is in a unique position where it supplies glass-to-glass product from the studio to the consumer. The various discussions I have had have also indicated that simulcasting is possible. But in regards to simulcasting, we are saying that if we do have simulcasting - and that is our second option - that it would only be 576i, which is standard definition, and 576p which is the lowest - or the first form of HDTV - and the difference between the two is that one is interlaced, which makes it standard definition, and the other one is progressive or non-interlaced, which makes it high HD. There is a huge picture improvement between the two.

One of the other advantages, as we have said before, is that by doing a 576i and 576p simulcast we also have the advantage that current picture tubes are able to display this resolution without any issues, because one of the issues that we have had for some time is that HDTV in its highest form, which is 1920 by 1080i, is impossible to achieve on current picture tube technology, the reason being that trying to fit 1920 pixcels across the screen with a dot picture of .7 of a millimetre requires a screen of about 1.3 metres in width, which diagonally measures about 1.5 metres.

MR SIMSON: Getting bigger all the time.

MR KOSOROK: Yes.

MR SIMSON: Can you shrink those pixcels?

MR KOSOROK: We can shrink the pixcels, yes. We can shrink them to .6, .5, .3 if we want to, but no-one has done that yet and the cost implications would be horrendous.

MR SIMSON: I thought we were talking 90 centimetres last time.

MR KOSOROK: Yes, but that's 90 centimetres - but what they do in those situations is not actually project a true 1920 pixcel resolution.

PROF SNAPE: It's a matter of fitting the 2 million pixcels on a screen to get the full effect.

MR KOSOROK: Yes. So the normal situation that's happening at the moment - and this is in the case of the US experience - there are products out there, like Philips digital natural motion, Sony digital reality creation, using hundred hertz technologies to improve the picture. What they basically do is they receive the 1920 pixcels, down convert it to 576p and then do some regurgitation to actually display it on the screen.

PROF SNAPE: What about 720p?

MR KOSOROK: 720p at the moment is an issue from a manufacturing point of view.

PROF SNAPE: Perhaps I'll just give a little lead into that. We had two strongly divergent views on 720p yesterday. We had facts saying that there were major technical problems with 720p so that it was quite an uncertain matter on a glass screen of receiving it. We then had 7 in afterwards and their technical man then was saying that there wasn't any problem and indeed that CBS in the United States was in fact using 720p. I notice that you haven't mentioned 720p in your submission.

MR KOSOROK: We have in our - - -

PROF SNAPE: In your original one you did but not in the sheet that you've got - - -

MR KOSOROK: Not in this one, no.

PROF SNAPE: Is it Philips' view that there is or is not a problem with 720p?

MR KOSOROK: 720p at the moment is really an ATSC type resolution, because it's running at 60 hertz. This is at 50 hertz.

PROF SNAPE: So it's in the States as a States standard.

MR KOSOROK: Yes. When we try and do that conversion down to 50 hertz, which is the time-frame that we see in Australia, there are some issues with line frequencies but they're not insurmountable issues. They can be resolved as the technology that's there, because we have been doing that in monitors for eight or nine years.

PROF SNAPE: So it's not as if the technology is there but hasn't been applied. You're saying the technology is already applied.

MR KOSOROK: The technology is applied in other spheres of consumer electronics, mainly in monitors, because monitors have the unique ability of being able to - what is known as multisignal autoscan - so that no matter what frequency you throw at it, as long as it has got the right sort of signature to it the monitor will automatically scan to it. I can't see any reason why that sort of engineering cannot be applied to 720p.

PROF SNAPE: Does that add much cost?

MR KOSOROK: Initially I think it would be at a premium, because it would be something different they would have to go and play with. But eventually I think that will be part of the scheme, that it will just happen that way.

PROF SNAPE: On a monitor are we talking - or at least on receiving equipment - are we talking an extra $100 or an extra $1000?

MR KOSOROK: Possibly from a manufacturing point of view I would say about 50, 60 dollars, yes.

MR SIMSON: This is for the receiver or the set-top box?

MR KOSOROK: This is the receiver.

PROF SNAPE: So 50, 60 additional to, say, one that was doing 576?

MR KOSOROK: Yes.

PROF SNAPE: And that's at the manufacturing level so we could put a factor onto it, perhaps up to - under $200 perhaps.

MR KOSOROK: Yes.

MR SIMSON: From a viewer's perspective, a consumer's perspective, what's the difference in your view between 576p and 720p?

MR KOSOROK: I think that if we go 576p and 720p I would say 99 per cent of users would not know the difference.

MR SIMSON: I'm talking about users, by the way, who have purchased a receiver. I'm not talking about obviously users who are simply using a set-top box to convert the signal to their existing box.

MR KOSOROK: Even users that have got an IRD would - - -

MR SIMSON: What's an IRD, sorry?

MR KOSOROK: Integrated receiver.

MR SIMSON: That's a new receiver?

MR KOSOROK: Yes. I have grave doubts that they would be able to tell the difference.

MR SIMSON: Between 576 and 720p?

MR KOSOROK: Yes.

MR SIMSON: Again just to put it on the record, the difference between 576p and 1080i, for someone who has bought the right equipment, the right receiving equipment?

MR KOSOROK: Well, 1080i is basically the highest of the high and it is really only suitable and you only get the right output out of that sort of device when you're displaying it on an extremely large screen. So if you're displaying that on a huge screen, you know - 2.4 metres by 1200 high or something like that, which is the standard sheet of plywood that you get in a hardware store, to give you some idea of how big it is - in that regard you would actually see a perfect picture. But if you were going to view that on a 28-inch or a 32-inch CRT type based monitor, you couldn't tell the difference between that and 720p or 576p.

MR SIMSON: What do you say to be the prices of the 576p integrated receiver, a receiver suitable of capturing 720p, and a 1080i?

MR KOSOROK: The costings that we have done to date have been based on standard definition only, which is 576i. We've already made it public to say that for a 28-inch wide screen with built in surround sound, we have already said that the price will be $2800. For a 32-inch wide screen, standard definition again, it would be $3400. The other costings we have, we have sort of played around with some figures - not very accurate - but if we need to go to 576p, for instance, we estimated the cost to be about 5500 to 6000 dollars.

PROF SNAPE: These are retail?

MR KOSOROK: These are retail prices, yes.

MR SIMSON: And 720?

MR KOSOROK: 720 would most probably add another 3 or 4 hundred dollars to that amount.

MR SIMSON: That's all?

MR KOSOROK: Yes.

MR SIMSON: And 1080i?

MR KOSOROK: 1080i would again be about the same price, because what we would do is - we can't display 1080i on a 28-inch screen or 32-inch screen, so we would get the 1080i information, down convert it to 576p or 576i, and then display it.

PROF SNAPE: So it in fact would be displayed at - - -

MR KOSOROK: 576.

PROF SNAPE: 576 - so you wouldn't in fact be getting the better - - -

MR KOSOROK: You wouldn't be getting the benefits, yes.

PROF SNAPE: You wouldn't be getting anything better. You would simply be down converting it.

MR KOSOROK: And the current trend in the television world is that picture tubes still rule the TV market. There are new picture tube plants coming up still, manufacturing tubes. They are all based on standard definition, completely. Like I said before, there are now some technologies that are coming out to actually make a standard definition picture when we're in the digital regime, very close to a HD picture, by using technologies like a hundred hertz, which gives it a non-flicker type situation, or using a product like digital natural motion or Sony's digital reality creation type electronics which does all the manipulation of the signal prior to it actually being displayed on the screen.

MR SIMSON: To what extent - I hope I'm reporting this correctly - but some of your critics have said that to an extent your comments in this whole area are within the framework of the equipment that you've got available to sell and that you're talking your book around the product set that Philips has available, whereas some other manufacturers, who for example are advocating 1080i, have a different product set, they're positioned differently in the marketplace. How much of what you're saying is being driven by self-interest as opposed to technical independence, if I could put it that way?

MR KOSOROK: I believe that all receiver manufacturers at the moment are in exactly the same boat that we're in, in that we have got product, we have the expertise. We have an HD product in the States so that the question of us not knowing how to make an HD product is not relevant. Our view on this whole scenario is based on what will the consumer buy. That's our primary driver. The fact that we have got this product already in Europe and it's being sold in the UK, that's really nice but that's not what's driving us. What's driving us is basically we know that our consumers will pay 8 to 13, 14, 15 hundred dollars for a current television set. If we go to the digital regime there's going to be a premium and we think that that premium will be about 2800 to 3000 dollars and anything above that, they just won't buy.

MR SIMSON: Have you got research to show that or is that just - I mean, please don't read me wrongly. You've got an enormous amount of experience in the consumer marketplace. I'm just wondering how scientific this - - -

MR KOSOROK: Well, it's based on GFK figures.

MR SIMSON: What does GFK stand for?

MR KOSOROK: That's the industry data collector of television sales. They break it down to the different screen sizes and what people purchase, what the average prices are etcetera etcetera. It's not a Philips collection agency. It's an agency that all the TV receiver manufacturers submit their data to on a monthly basis and then it gets correlated and gets published. If we look at those sort of figures and what we actually sell and move within our Philips division, they are the strong indicators of what we base our business model on.

PROF SNAPE: We've heard that 1080p is the international standard for exchange for format of programs.

MR KOSOROK: Yes.

PROF SNAPE: Does that make 1080p, or 1080i more particularly, a more logical display format for digital TV?

MR KOSOROK: Not for the average consumer, no. I mean, the interchange is basically saying that from broadcaster A to broadcaster B they can send information, they know it's to a particular standard. That does not necessarily then have to translate to, "Well, if we're moving data in that standard we should also transmit it."

MR SIMSON: Why is the debate or the speculation of recent times in Australia around a simulcast - or triple-cast, this fax calls it - been around the 1080i combination with the 720p combination, as opposed to a 1080 combination with a 576 standard combination?

MR KOSOROK: You can't simulcast for 1080i because there isn't enough room to put a second picture in there. With 720p and 576i you could do the simulcast but there would be very little room left for datacasting. If you do 576i and 576p, 576i takes approximately five megabits; 576p, which is classed as an HD picture, takes approximately 10. That gives you 15 and you've got about four left over for datacasting, four megabits. And we believe the driver for digital television is not going to be picture and sound, it's going to be a combination of picture, sound, ancillary services, datacasting and access to as many different types of products as there are possible.

MR SIMSON: So 720p, 576 combination, doesn't leave much room to do much else. Basically it eats up most of that seven megahertz.

MR KOSOROK: Yes. And the reason that Philips have said in their submissions as a simulcast being the second option is that we've had strong feedback from many within the industry saying that HD is a mandatory obligation from the government and there's absolutely no way that that's going to be redressed or changed, so you've got to make some compromises.

PROF SNAPE: What's the feasibility of flat panel screens and - - -

MR KOSOROK: Dropping in price?

PROF SNAPE: Dropping in price and becoming a retail option for the average punter.

MR KOSOROK: It was only last week that we had an opportunity to actually disassemble our first flat panel screen - because Philips have got flat panel screens. They have basically been designed for the US market. We looked at the electronics inside of it and we would have thought, just from a technical position, we figured it was going to be at least 10 or 12 years that that sort of product becomes anything except for people that really want that sort of product, but it will not replace television per se.

PROF SNAPE: So glass rules for a long time?

MR KOSOROK: Glass rules for an extremely long time.

PROF SNAPE: And rear projection?

MR KOSOROK: Rear projection is the same issue. We make rear projection TV sets. The sales of rear projection amounts to about 1 or 2 per cent of our total sales of television sets. Again it's a home theatre application for people that want to have really big TV sets and want to spend the extra dollars to actually enjoy the complete benefit of what can be on offer.

MR SIMSON: We heard from FACTS that India, China and Singapore are likely to

include high definition in their DVB systems. Is that right?

MR KOSOROK: The fact that these countries have chosen DVB-T as their transmission and reception system, HDTV is automatically part of that specification. So that can be true if you want to look at it from that point of view but the fact is that Singapore at the moment are in the process of actually setting up a group similar to the Productivity Commission, but from a more technical point of view to establish what transmission they should have, what reception they should have etcetera, etcetera, etcetera. So they haven't actually said anything about what they will do as far as 1080i or 576p or anything like that. All they have said to date is, "We've selected DVB-T as our preferred system," but from there onwards nothing has been done.

MR SIMSON: Mr Branigan yesterday tabled a quotation from a Taiwanese group for a set-top box for approximately $US220. I'm sure you're familiar with this - or are you familiar with it?

MR KOSOROK: No, I'm not. I was in Taiwan all this week, came back yesterday. I actually wasn't looking for set-top boxes, I was actually on a - - -

MR SIMSON: The company's name was EFA and the quotation which he tabled showed a $US220 FOB price for the set-top box and this was a substantive piece of evidence that Mr Branigan tabled when we asked or challenged him to provide support for what a set-top box would be. Could you comment on that and do you know about the group?

PROF SNAPE: It was a box which would decode both HD and SD, and in fact in HD it was do it at the three levels that we've been talking about, the 1080 and 720.

MR KOSOROK: And would the box output to just 576 standard definition only?

PROF SNAPE: I think it was not clear what it would output to. Yes, it was a set-top box for an existing - - -

MR KOSOROK: For an existing set - so output again at PAL level only. I'd like to see the quote. We've done a lot of research globally looking for someone that has this sort of technology already available. While I was in Taiwan I actually asked the Taiwan office because I was visiting the monitor factory to actually see if EFA in Taiwan exists. We couldn't find such a manufacturer unless they exist under a different name that we couldn't find in the business records.

PROF SNAPE: You couldn't find the manufacturer in - - -

MR KOSOROK: We couldn't find the manufacturer because the only information I had was what I saw on the Internet. I think it was a news report from The Age or the Australian that said EFA Taiwan. So I went through my purchasing department and I said, "Can you find this manufacturer for me please," and they spent about an

hour looking and they said, "We don't have such a record, they may be trading under a different name." If you can provide further details we can then let you know.

PROF SNAPE: I think we passed it on to a member of staff yesterday and we're having a bit of trouble locating that.

MR KOSOROK: Because Philips has also released a digital receiver chip set in the States, but this chip set is specifically being designed for the ATSC market and not for the DVB-T market. This chip set can be modified for the DVB-T market, however, it needs to be redesigned, it also needs to have new software written for it for DVB-T and the minimum order quantity for that chip set - and we're talking one chip - is 100,000 pieces. When we look at 100,000 pieces we say, "Okay, we need to commit to 100,000 pieces to actually make a product and then go from there," and provide either HD or SD or something in between. Going on the US experience currently, we would be very hard pressed to make a business model that would make sense.

PROF SNAPE: Okay. We might come back to that in a moment. Could we switch our attention to Dolby. Dolby will be appearing later, but they in their submission have suggested that the licence fee for consumer decoding equipment would be pretty low - negligible in fact - for the AC3 multichannel sound. FACTS also say it would be included at virtually no cost to the consumer. Your earlier subscription suggested it would add substantially to the cost.

MR KOSOROK: Before we go there, I've just got a press release that was issued by Singapore Broadcasting Authority on 7 December, the details, the Road Map Into Digital.

PROF SNAPE: Okay, thank you very much. We'll get that incorporated.

MR KOSOROK: In relation to Dolby AC3, our submission was based on the premise that the best option for Australia would be SDTV. SDTV naturally comes with MPEG audio as a chip set that is already designed to decode pictures and decode sound. We still believe that to add the extra Dolby chip would mean a redesign of a currently available SDTV chip set which would add extra cost to the consumer. Just like in the DVD arena, we have anecdotal evidence to suggest that most users of DVD players don't buy the accessory equipment to actually enjoy multichannel sound, they just plug it into their TV set. So that was the premise of our thoughts about Dolby AC3. We think that Dolby AC3 and HDTV go hand in hand, but it is a home theatre application and not a standard definition type television in the lounge room corner.

PROF SNAPE: I suppose one can say, as people have, that you may be buying a CD that can give you reproduction at various levels and of course to get the best effect you buy very, very expensive equipment, but you nevertheless can still receive it on less sophisticated equipment, to say that it doesn't necessarily mean that you have to go to the highest level.

MR KOSOROK: But if we're talking about stereo sound on AC3 and stereo sound on MPEG audio, it's the same.

PROF SNAPE: It's the same, so that you've already got it.

MR KOSOROK: You've already got it, why add extras.

PROF SNAPE: That's the point, I guess, how much extra?

MR KOSOROK: From a manufacturing point of view I've got no idea at the moment, sorry. It's not something that we actually went into very deeply.

PROF SNAPE: So we're not sure what the extra would be?

MR KOSOROK: No.

PROF SNAPE: Okay. When you were giving your opening remarks we sort of cut you halfway, I think, and engaged you in discussion. Do you wish to continue where you started.

MR KOSOROK: Yes. I think I finished where we were talking about the current trend in television is still picture tube based. Picture tube based televisions cannot display 1920 pixcels unless we start making some real expensive equipment to do that and we use other techniques that actually takes a standard definition picture and enhances it to give it a look and feel of a very high quality picture. This is also supplemented by other technologies within the consumer electronics industry like the DVD player. The DVD player does not offer HD pictures, it offers standard definition pictures and it's been gobbled up all over the world at enormous rates. In fact in the States in the last quarter they managed to sell over 900,000 units. We're having similar successes here in Australia. We cannot get enough stock. We get the stock in and it's out the door just about the same day.

The advent of DVD recordable again will be in standard definition, it won't be in high definition, because high definition brings a whole new genre of technical issues that need to be resolved and these are such early days that I don't think those sort of things are being considered. China hasn't made any decisions about digital television in respect to which standard they're going to adopt. They're still sitting on the fence and doing some evaluations. A recent correspondence that I had with the China office, basically they've set up a group that will look into SD, HD and display formats. They will look at the video encoding group, they will look at audio coding, channel coding and frequency planning to see if they can use single frequency networks etcetera to implement into their system. But before they make any final decisions it will be at least a year away. There is also the feeling amongst the Philips office - and this is amongst the Philips office only - that China will basically go and invent their own system by doing a cut and paste.

PROF SNAPE: That's been a very, very helpful submission and discussion that

we've had. We're having a little bit of trouble locating that quotation and we may find it shortly. We thank you very much for your participation and the submission. You'll see that we drew upon your submission in the draft report and used some figures there. There was something that came up yesterday - on the 7 - that I must just turn to for a moment. You gave in your earlier submission some prices of set-top boxes in the UK and you quoted your own model DTX7370 and you quoted a Pace model DTR730, both of which were 199 pounds on your quotations.

MR KOSOROK: Yes.

PROF SNAPE: Seven people had been in Britain more recently and said they couldn't find anything under 299 pounds - or was it 399 - anyway it was substantially more than that. What you quoted here are set-top boxes which are readily available.

MR KOSOROK: These are set-top boxes that are readily available in the UK. That was based on magazine articles that we read from the UK. I recently rang just a store at random in the UK and asked them for some prices of the Philips models and the price that we got for the set-top box was 249 pounds. That's if you bought it outright.

PROF SNAPE: 249?

MR KOSOROK: 249, yes.

PROF SNAPE: So that was a retail price of 249 buying it outright?

MR KOSOROK: Outright, yes, without going to subscription.

PROF SNAPE: Okay. Well, that's a little bit different from what was in here, which was a retail price - - -

MR KOSOROK: Of 199.

PROF SNAPE: Again without subscription.

MR KOSOROK: Yes.

PROF SNAPE: So you'd suggest that perhaps the price has gone up 50 pounds.

MR KOSOROK: Well, like I said, the original price was based on articles from UK hi-fi magazines and they all indicated that the boxes were 199 pounds, and that's what I based my research on.

PROF SNAPE: Okay. So maybe it's 249 now - - -

MR KOSOROK: 249, yes.

PROF SNAPE: Pounds is what you were quoted, yes.

MR KOSOROK: But basically the structure that exists in the UK, and I'm sure you're aware of it, is it's based on a subsidy system where as soon as a consumer purchases the box and subscribes to a pay TV company, then the pay TV company pays the manufacturer their cost of the box.

PROF SNAPE: We were trying to get one that was not attached to a subscription.

MR KOSOROK: That is the case with those. You can buy them outright without attaching it to a subscription.

PROF SNAPE: And that was the 249 pounds price that you said - - -

MR KOSOROK: Yes.

PROF SNAPE: Good. Okay. Well, thank you very much. We'll now break for 10 or 15 minutes and resume at 20 to 11. Thank you.

PROF SNAPE: Right. Well, we'll now resume the hearings and we welcome Dolby and their representative. We thank you very much for this very substantial submission and comments and thank you for taking the trouble to come out from the States for this hearing. We thank you very much for that effort. If the Dolby representative would now identify himself for the transcript service and then we'll get under way.

MR TODD: My name is Craig Todd. I'm with Dolby Laboratories. My title is senior member of the technical staff.

PROF SNAPE: Thanks very much, Mr Todd. Would you like to speak to your submission?

MR TODD: Yes. I thought I would just briefly go through the submission we made and make the points verbally and then perhaps quickly go through the attachment list, explain why we attach these items and what their significance is.

PROF SNAPE: Thank you.

MR TODD: And then we can get into a somewhat broader discussion. We can have an interactive discussion as we go along. Besides the audio issue, I do have some expertise in the video issue and digital television in general. I've been at this about 10 years and been all over the world so I'll be happy to share any expertise I have with the commission.

PROF SNAPE: That would be very helpful, thank you. As you see, we are seeking expertise and often get conflicting views.

MR TODD: Dolby is a company. I mean, we specialise in creating new technologies in the audio field and providing a path all the way from the production of the content and through its creation, production, distribution and final delivery to a professional venue like a cinema or to a home venue like a television set or a hi-fi system. We've been in business about 35 years doing this. It's really all that we do. We don't make light bulbs or television sets. We manufacture professional equipment, and in the consumer field everything we do is licensed so we provide the guts of the technology to many different manufacturers.

We were not aware that this inquiry was under way until fairly recently when we saw press reports and then found the draft report on the Internet, and we were a little disheartened at some of the conclusions in the report and when we looked at the record, at what input you had, we saw how you could have arrived at those conclusions because there was no input reflecting our side of the story. So in our submission we're trying to correct that omission and oversight in our part. The things that we objected to or found not correct were: characterisations of the Dolby technologies proprietary versus other technology which is world standard; characterisations that the Dolby AC3 technology is very costly, it's going to drive product cost up significantly; characterisations that AC3 is not DVB, that DVB is MPEG audio and to use AC3 would be a funny, odd DVB system. Also there is a

characterisation that Dolby audio is really only for the high end home theatre with lots of speakers and so forth, and we think that is false as well.

So in terms of the technology, we originally developed AC3 as a proprietary system for the cinema. We quickly saw its application to the home environment and the high definition television system that was being talked about in the States so we evolved it into a consumer system, added necessary features to bring real value to consumers, features like controlling the loudness variations from program to program, controlling the dynamic range so that one consumer can listen to the cinema-type sound while another consumer would listen to normal television compressed dynamic range all from the same transmitted data stream.

To get into standards like US high definition television, we had to open up to standards bodies and it was standardised in the United States by the ATSC, Advanced Television Systems Committee. It was accepted by the US Grand Alliance HDTV consortium. Their decision was accepted by the FCC Advisory Commission, the so-called ACATS. It was ratified by the FCC. Since then the technology has gone to IQR who sets international standards for broadcast worldwide. They've made it the subject of a recommendation. That gives it international standardisation status. In all these standards efforts, we've had to make the normal submissions that we would licence it openly, fairly, without discrimination. There's really no difference in this technology than MPEG video, MPEG audio, COFDM transmission, GSM telephones. Any of these modern technologies consist of a number of inventions which are patented but before they're put into standards, the patent holder is asked to commit to open and fair licensing. So we have done that.

The multichannel sound: our intent with this system is to allow the delivery of one encoded bitstream that can serve the entire range of the audience from the lowly portable monophonic television up to the high end home theatre that wouldn't have to send separate bitstreams, one for the low end stereo listener, another bitstream perhaps as an option to the home theatre listener. That's redundant transmission of information. Digital television is only practical if we remove redundancy from the signal, send the information once, the minimum amount of information. AC3 is best of course when reproduced by multiple loudspeakers in a nice environment. However, that's not always practical.

Recognising that, new techniques have been invented. A technique which we call Dolby Virtual - other companies have different names for it - allows you to reproduce the sound of simply two loudspeakers and yet if you're sitting between the loudspeakers you'll hear a perception of actually speakers to the side and behind you. You sort of get a multichannel effect even though you don't have multiple loudspeakers, and it's a very useful effect. Many companies are now introducing that in products and many of the new digital video disc players have that kind of feature built-in, recognising not everybody is going to go out and buy multiple loudspeakers yet they want their customers to get some of the multichannel effect.

Another technique, which was actually invented here in Australia by a company

called Lake DSP, can process the signal for headphones such that you can put on a pair of headphones and instead of hearing kind of funny headphone where it sounds like the sound is right next to your ears or inside your head, with signal processing they make it appear as if you're sitting in a room with physical loudspeakers around you. Again, it's not as good as the real room but it is a genuinely useful effect. So the Dolby headphone technique, the Dolby Virtual technique brings the multichannel effect to more than just the home theatre listeners.

In the development of these coding systems, historically MPEG audio came first. In the very first applications AC3 was not ready so MPEG audio was adopted first. We were a little bit late to market. However, MPEG audio was originally created as a two-channel stereo system. We basically changed the playing field, moved the goalposts and said, "No, the intent is not two-channel delivery. We've had that for the past 20 years." The reason the world went for monophonic to two channels when they went to more than one came down to the fact that we live in a three dimensional space. The first stereo delivery media was a physical phonograph record, a three-dimensional object. One of those dimensions, the length of the groove, had to be used for time and that left two other dimensions to be used for signals. So it was only possible to put two discrete signals on that physical phonograph disc. So that's why we've had stereo all these years, and people have just been copying audio's two channels. We simply copy that in every new format.

Dolby broke that mould and said, "No, let's stop and think what should audio deliver." The most important signal source is the one in the centre, the voice where people speak from. Next of importance is the side to widen it out and then next of importance is generate a surround effect with rear channels. So the AC3 technology was the first really practical multichannel system. When the MPEG proponents discovered that they had the wrong thing, MPEG developed an add-on multichannel to the MPEG stereo and this was their undoing. The original system didn't anticipate multichannel. This add-on in a quasi compatible, what they call backward compatible fashion, had some constraints in the design and could not achieve the efficiency that we had achieved, so they required a higher bit rate to achieve the quality. That plus the fact that Dolby is so strongly supportive of our technologies, because that's the only thing we do, that is our business, led to digital video discs to adopt our technology, laser disc, Australia BRACS and digital television. Now our technology is being adopted back into Europe on digital video broadcasting.

ProSieben, a broadcaster in Germany has announced they're going to transmit the AC3 bitstream as a simulcast because they started with MPEG audio, they have to keep that stream alive - they're going to do the inefficient thing of sending two separate bitstreams of similar content. In the United States the two satellite providers, EcoStar and Direct TV, which started service with MPEG audio, they have both added Dolby AC3 as parallel transmissions. It's not efficient but it's the only choice they have because they have to continue to serve the older receivers.

With the great market we have achieved of the Dolby digital technology, the costs have dropped substantially. I mean, if you have an existing design that simply

has MPEG audio and you want to bring that box into Australia and Australia needs AC3, yes, you can argue, "Gee, I have to redesign it, I have to add another chip," and so forth, "and that's burdensome to me." If you look at it from scratch, you are going to build a chip with all the video processing, all the audio processing included, and the extra silicon area for the AC3 function really has become negligible. So the physical cost is trending towards insignificance.

The royalty cost is present, it's on the order of 50 cents, but we have to get something out of this. We are running a business, supporting all of this. So we think that is quite a reasonable charge. Spectrum efficiency - if Australia went the route suggested by Philips of mandating an MPEG stereo transmission, you would be faced with the inefficiency that ProSieben of Germany, Direct TV and EcoStar in the States are faced with. You would have to always send the stereo stream and when you wanted to send multichannel content you would have to simulcast the same audio in AC3 but with more channels.

All of the bits spent on the stereo MPEG transmission are basically wasted bits. It's a wasted spectrum. But you would have to do that if boxes go into the field that can't decode the AC3 stream. So we think, looking to the future, it may be slightly awkward for some parties at present, but for the future there is a strong benefit of using the AC3 technology as the primary audio. It's more efficient, even if you are just sending stereo - you will use fewer bits. If you are going to send multichannel as an option for some listeners to enjoy, it's far more spectrum efficient to send one AC3 stream and let all listeners use it, than to simulcast AC3 and MPEG audio. Plus, the feature set built into the AC3 technology is genuinely useful to consumers - dynamic range control, whether the quiet to loud sound range is wide in a home theatre environment or very narrow in the casual TV listening environment - we have provided answers to those kinds of problems. Shall I go through the attachments briefly?

PROF SNAPE: Yes, briefly, and then we will come back to that, thank you.

MR TODD: Attachment 1 is a little bit of information on this virtual surround technology, where a pair of stereo loudspeakers can produce the subjective effect of multiple loudspeakers. Attachment 2 is a listing of quite a few companies that have come up with these kinds of techniques and these are companies which we have approved the use of their design technique on top of the AC3 delivered sound. So we bless these as, yes, they work.

PROF SNAPE: That's to be interpreted - these are adaptations of AC3 or incorporating - - -

MR TODD: What these are, are post-processing of AC3.

PROF SNAPE: Incorporation of that, is it?

MR TODD: In other words, you do the AC3 decoding, you come up with the five

signals, and then you go into these processes and it comes back out as two signals for your speakers. Attachments 3 and 4 are described as Dolby headphone technology. This was designed here in Sydney. They wanted this to reach a broad market. So they brought the technology to Dolby and we are acting as their licensing agents since we have a large licensing business around the world, and we have been showing this technology to all the major consumer manufacturers who have gotten quite excited about it. They say, "Hey, this is really neat. We're going to build this into our products." So we think early 2000 we will begin to see some of these products come out.

Attachment 5 is probably more than you ever want to know about AC3. There is a lot of technical information. Buried in there is some information on the feature set - things like loudness control and dynamic range control that you might find interesting. Attachment 6 is some publicity about direct TV launching, the Dolby digital service. Attachment 7, this goes to one of the points that I objected to, that Dolby is not true DVB, but DVB has included Dolby in the standard. In fact, it was the Australians who pushed this through DVB - actually did all of the documentation and led the technical work. In fact, Australia was responsible for editing and cleaning up the DVB standard - finding all sorts of omissions and mistakes and bugs in their standard for them and I note that.

Attachment 8 is an announcement - when Singapore chose DVB they made specific mention that they wanted Dolby digital audio as part of their DVB system. Attachment 9 is the announcement from ProSieben that they are going to add AC3 to their transmissions in Germany with DVB. In fact, at the IFA show in Munich at the end of August, 1 September, there were quite a lot of equipment makers demonstrating with the ProSieben test broadcast, showing set-top boxes with Dolby AC3. That's reflected in attachments 10, attachment 11, that these European boxes, you know, standard definition boxes, are moving now to include AC3 as a fundamental part of their design.

Attachment 12, France is interested in adding the DVB. Attachment 13, I'd like to say a couple of things about the digital video disk format. When that format was designed there were the two flavours - the NTSC flavour for the US and Japan markets and the PAL flavour for Europe and other parts of the world. In the NTSC version they specified AC3 audio. In the PAL version they specified MPEG audio. But in either version you could include the other audio as an added option if you chose.

We found that most of the manufacturers and the content producers wanted to use the Dolby AC3 soundtrack on the PAL disk. They did not want to waste data capacity, including an MPEG audio stream, which the spec mandated that they do. There was a squabble of some companies - you know, Philips very predominant - saying, "No, you must use MPEG multichannel for the PAL disk." The PAL disk launch in Europe was delayed about a year while the audio squabble took place. Finally, the DVB forum, which is mostly manufacturers, changed the specification and said, "We want to add a second decoder to the PAL boxes so that we can get on with

it - making disks with multichannel content with Dolby AC3." So attachment 13 just is a couple of news headlines reflecting that fact.

Once AC3 became part of the PAL DVB standard, the inevitable happened that all of the content was manufactured with Dolby AC3 and there is negligible content in the world with any MPEG multichannel or DVB.

PROF SNAPE: Our copies of attachment have suffered by going through multiple faxes I think and - - -

MR TODD: Should I go back and get a cleaner, readable - where the subtext is readable.

PROF SNAPE: At the moment I can't read it, no. Thank you.

MR TODD: I will do that.

PROF SNAPE: And the staff will have a word with you after perhaps.

MR TODD: Attachment 14 goes to this business of, you know, offering free and clear licensing and at the back of the MPEG standards book you find this annex where all kinds of companies have gone on record as saying, "Well, we may have patents and we're offering to license them."

Attachment 15 is our customary letter to the ITU. Before they issued their recommendation they had to cover their bases and say, "Yes, we will license this freely and clearly." Attachments 16 and 17 go to the cost issue - maybe mention 17 first. The information in 17 came from a design house that does specialised very optimised integrated circuit designs and these folks have done one of the best MPEG audio IC designs in terms of minimum silicon area. They have also done an AC3 optimised silicon design and they have designed combination MPEG and AC3 decoders. They were willing to share their expertise of the results of how big the chips are, using their designs. It turns out in terms of a standard definition MPEG video decoder, a combined MPEG audio Dolby AC3 audio decoder is about 3 per cent of the chip area, which if the chip is $10, that's about 30 cents worth of silicon.

Their expectation of the video chip as a high definition decoding chip, the silicon area would drop to about 1 per cent of the total. Again, if that's a $20 chip, now we're talking 20 cents for the combined audio function. That's with today's .35 micron technology and that figure is almost getting out of date. Silicon technology is now about half that feature size, leading to chips of about a quarter of that size.

Attachment 16 is an actual data sheet of a combined high definition television decoder for the US system that produces standard definition output. So it would be a key component of the US set-top box to provide display of the US signal on a

standard television. It does AC3 decoding on the same chip. This is an example of a product using that chip. This was introduced in the US about a month ago. It's to allow digital television plus analog television to be inserted into your computer. About half of this card is the radio frequency tuning portion for both analog and digital. Another portion of the card is the interface to the computer system. You can output to a conventional television display to connectors.

The entire audio-video decoding is this little corner down here and this chip is the one mentioned in attachment 16. So this chip, high definition in, standard definition out, AC3 in, base and audio out. This only works for the US HD system - would not work for Australia. I have been in contact with the people who designed this chip and they shared with me some more recent information they have started making public, of the next generation of the chip. This was not in our attachments but I can offer a copy now. The next generation chip - I mean, it's not going to look any different - it's just a chip. It will accept ATSC bitstream in for the US. It will accept DVB bitstream in for Europe, Australia, other places of the world. It will accept standard def or HD bitstreams in. It will produce HD or standard def output to display. It will decode MPEG audio. It will decode AC3 audio. It will accept a bitstream from a digital video disk player and all of those are handled on the one chip.

PROF SNAPE: Do you have a cost on that chip?

MR TODD: I don't. It's occurred to me it would be a nice question to follow up with them - would they be willing. Sometimes they're not willing to publicly reveal the cost because they will negotiate with 10 different customers and end up selling it at 10 different prices.

MR SIMSON: Could you just estimate what you think it might be?

MR TODD: I would imagine this chip would probably cost in the order of $30. This is a $300 retail item.

MR SIMSON: US?

MR TODD: Yes, US. Today this is the only product like this on the market. It's only been on the market one or two months. We expect many more of these kinds of products to come on the US market, some using the same chip, some using chips from other manufacturers, and many other companies making chips like this have reference designs for products like these. When the competition hits, hopefully this will drop to a couple of hundred dollars and the chip price will probably have to fall to $20. When the follow-on chip comes out - I'm guessing - it might be 40 or 50 dollars initially and then a year later, $20, and a year later, $10. That's the kind of slope chip prices are on.

MR SIMSON: So just in layman's language, that piece of equipment facilitates - I think you said - over a PC - - -

MR TODD: This design is for a PC but two-thirds of this design is applicable to a set-top box. You would have to add a $5 control microprocessor to drive it.

MR SIMSON: So it's a - - -

MR TODD: Sort of a set-top box on a PC card. A set-top box would need a power supply and a chassis.

MR SIMSON: How do I take my television input there? Is that via cable or is that via - - -

MR TODD: This is for antenna input.

MR SIMSON: For digital input?

MR TODD: Both analog or digital.

MR SIMSON: So that will tune to, I think you said, HDTV?

MR TODD: This one is NTSC, VHF, UHF and digital TV, VHF, UHF.

MR SIMSON: What standard of digital TV?

MR TODD: ATSC.

MR SIMSON: Which is?

MR TODD: The US system.

PROF SNAPE: So it's not DVB?

MR TODD: This particular chip will not do DVB. About a year ago when they were designing this, I asked them, "Would you have a DVB version of this chip?" They said, "Well, it's software. We'd have to redo some software and if there's a market, we'll do it." I think they won't do it for this chip; they have done it for the next chip. You know, this is old news. They're not going to update this one. The fact is, it is expensive to make chips - you know, $100,000 or more - and they don't want to make a different version of a chip for different parts of the world. They want to make one and let everybody use it. In the future, they won't make the standard definition decoder at all. It will be simpler for them to make every chip do HD because it's only one part that serves the world market.

PROF SNAPE: For HD up to any level?

MR TODD: Yes.

PROF SNAPE: We were speculating before on the cost of the chip. What about the card as a whole, the unit as a whole?

MR TODD: This card, as I said, is retailing for 300.

MR SIMSON: US?

MR TODD: US, right now.

PROF SNAPE: Retail.

MR TODD: It's the only card like it on the market. It's been on the market one or two months.

MR SIMSON: Because it integrates - - -

MR TODD: It's the first one to hit the market. I know of a competitive chip maker who claims half a dozen companies will come into the market with similar cards based on their chip and competition will only drive the prices down. I clipped out a couple of things from the newspaper in the States last Sunday. A digital video disc player, a GE brand, $US180, and they will give you a $50 rebate if you agree to rent so many DVDs. If AC3 technology was expensive, you couldn't be producing DVD players retail at $180.

Those who want the home theatre generally buy a stand-alone amplifier unit that can drive the multiple speakers, that has audio/video switching; these things are called audio/video receivers. The typical unit now is a Kenwood unit. It does Dolby digital, decoding the full five channel. It has five 100-watt power amplifiers to drive the speakers. This is $US300 retail. The AC3 function is a very small part of this unit; it's mostly the power amplifiers which is where the money is, so this is not expensive stuff, even if you want a home theatre.

PROF SNAPE: Thank you very much for that. You mentioned a licence fee of about 50 cents but you also mentioned that sellers of products are likely to differentiate between markets in their charges.

MR TODD: Dolby does not. We treat all of the licensees fairly and that's part of the commitment to a standards body, the non-discriminatory licensing.

PROF SNAPE: So it's a non-discriminatory licence. So at the consumer end, you have been talking about the cost of the incorporation of it there and you have been giving us a bit of a feel for that. I will come back to that in a moment, but I thought probably a thrust, if I understood it, of your earlier remarks was that in fact you think it would be preferable if we were starting from scratch just to have AC3 and not MPEG as well.

MR TODD: That was the original Australian wish. However, realising that one

Australian broadcaster in particular, SBS, brings in a lot of programming from outside Australia that may already be encoded with MPEG audio, they wanted to be able to feed that out terrestrially without having to decode and re-encode the audio. If you do a decode/re-encode, you do take a small quality hit, so that is a technical reason to keep the MPEG audio in the box.

PROF SNAPE: So we therefore, on the basis of that argument, go for both rather than just one or the other.

MR TODD: Most of the broadcasters have indicated they would use the AC3 capability.

PROF SNAPE: They wouldn't send out the MPEG as well, except if they had received things from abroad which was in MPEG - - -

MR TODD: A commercial broadcaster who is predominantly doing broadcasting with AC3, if they receive some content in from another source, they would probably conform it to their normal broadcast, so they would probably change it over to AC3. But a broadcaster like SBS, where most of their content is with MPEG audio coming outside, they would keep it in MPEG audio, and that's fine with us. The cost penalty to the box is very minor to allow that flexibility.

PROF SNAPE: We've been talking of the costs at the receiver level and we go to the costs at the other end of it and the costs to the broadcaster of encoding - the additional costs, if they are encoding into AC3 and MPEG - the additional costs for encoding and broadcasting and licensing at that end.

MR TODD: Okay. Dolby does not and never has charged for content, so starting back from the cassette tape that had Dolby noise reduction on it, we received zero revenue from the cassette tapes themselves. We received no revenue from digital video disks. We receive no revenue from broadcasting of the content.

PROF SNAPE: So there's no licence for you at - - -

MR TODD: The only licence is on the encoder that creates the content. We do licence that because it reflects our patents. We manufacture those products. They cost a few thousand dollars US, 3 to 5 thousand, depending if it's two channel or five channel. We licence other manufacturers to build those kinds of encoders and those manufacturers pay us a licence fee and it might include the encoding in their larger broadcast system. So the transmission costs are very modest and I don't think differ between the systems.

PROF SNAPE: What you were just describing then encompassed all the additional costs at the broadcasting end.

MR TODD: The only cost I can imagine is you have to buy an encoder from somebody and that's a few thousand dollars.

PROF SNAPE: That's with the content producer, the broadcaster, the lot, that's it?

MR TODD: Once you buy the encoder, you can do anything you want with it. We get no more revenue.

PROF SNAPE: I guess that what you were saying for most consumers, that there's probably not a great deal more in Dolby than in MPEG, but it does allow you to go further up the scale for those who wish to.

MR TODD: If I could say, if you talked about how many of the televisions sold would make use of a multichannel feature? I'm a high-end consumer and I definitely want to take advantage of it. However, my home may have four televisions. It's the one in the main living room that has the multichannel system, so out of four TV sets in my home, I may have one equipped for multichannel, so my own market share is only 25 per cent which sounds low, and yet it's a very key feature of interest to me. If half the consumers are like me, then the total market share might be down around 10 per cent, seemingly small, and yet the importance of it is far greater than the 10 per cent and maybe more like 50 per cent really care about the feature.

PROF SNAPE: I guess Silicon Valley is not typical of the rest of the States. Do you have a feel of what proportion of the population are like you in that regard?

MR TODD: I started in the multichannel sound area really when I joined Dolby in 1977 just before the Star Wars film came out and that was the first big film that took multichannel sound into the cinema. I worked on that technology, designed that system such that it could go to the home sometime in the future, and it did go to the home in the 1980s under the term "Dolby Surround, Dolby Pro-Logic" and if you look at the growth rate, it's been exponential and still going up. It's hit about 40 million households worldwide. If you look at the growth rate of the AC3 technology, it's the same kind of exponential growth curve; it's just the first couple of years of it. We find consumers really like this kind of stuff and we're building a business on it and it seems very well accepted.

MR SIMSON: You gave us the invitation to ask you some questions on some of the other substantive issues that are in our draft and that you have heard this morning. A particular issue is the standard of television that is mandated or as is the case, not mandated or may not be mandated here, and you are familiar with the issues presumably. Could you, as an outsider, provide a comment on what you think would be the right way to go?

MR TODD: I mean, I've been around the world. Most parts of the world want digital television and they want high definition television. South America, Argentina, Brazil are adamant; China, my understanding is they're adamant, that's my experience; Taiwan, Korea, Japan, everybody - North America of course - is going for high definition television

Australia's work in standards and in international bodies and the comprehensive testing they did of ATSC and DVB systems is very well respected in the world. I mean, Australia is seen as doing things right, you know, choosing the best technology. This recent suggestion that has come up that one would mandate the inclusion of a standard def stream along with a higher definition stream, from a technical viewpoint and, you know, looking from outside the world, is just appalling, I think. It's absolutely the wrong thing to do. For me to simulcast 576i and 576p, there's so little difference between the two signals. Yes, progressive is better than interlace but I believe 576p has the same horizontal resolution as 576i, and you won't get a much better picture.

As I have said earlier, digital television works by removing redundant information from the signal. Sending the same content twice is exactly the opposite. You're adding redundancy back into the signal.

MR SIMSON: Just a point of clarification, what was originally or what is currently the policy is 1080i, and a mandate of a quota of programming that must be transmitted over a period in 1080i. So the question has been raised, or the issue has been raised, given affordability questions relating to 1080i, both with regard to the set-top box to make the conversion but also the price of the receiver to give you the full benefit of 1080i, whether there should be a simulcast of a standard definition digital signal, and a higher definition digital signal, whether it's 720p or - in fact, you can't do 1080i. It would have to be a lower definition because there's not the spectrum available to do that. It is not, as we understand it, an issue of two simulcasts of 576.

MR TODD: Okay. It comes down to, we believe you should send one stream that can serve the entire audience. We believe you should have the capability of high definition television using all the internationally accepted formats. I understand the concern about cost. I mean, that is an important issue, but I go back to this: what you're talking about is what's on the silicon inside this one part and the difference in cost of that sliver of sand. The sand is getting cheaper and cheaper every year, so if it's $40 difference this year it's $20 next year and $10 the year after that. For that very minor extra cost you have opened the door to true high definition and true spectrum efficiency.

If you have to simulcast you can't do the full high definition even if, you know, thousand dollar ultimate display devices become available and people are working to design those. If there's a market for them somebody is going to come up with it. If you have to keep sending the standard def signal it's inefficient use of spectrum. The value of spectrum will probably go up in the future versus the value of silicone going down, and it may seem a semi-intelligent thing to do today, but one, two years out, I think it will seem a very silly thing to have done.

PROF SNAPE: It was not our draft recommendation that it be done as you may or may not have noticed but what we are very concerned about, and what is driving many of our draft recommendations, was to free up spectrum just as you were saying

before, that spectrum will become very, very - is the scarce resource, there are going to be more and more demands upon it. Now, we are very concerned essentially that the analog gets switched off as soon as possible. That's a driving force and I think that you would appreciate the reasons for that.

MR TODD: One may presume that a more rapid initial uptake leads to 100 per cent penetration sooner, but that may or may not be true. It's not the uptake that's important, it's the completion of the task.

PROF SNAPE: We understand that, but our draft recommendations were rather that, to keep options open, that it seems to us that there are two possibilities as I was outlining yesterday, logical possibilities. First of all, the set-top boxes that will take high definition, or the receivers in general, the set-top boxes or other receivers, that will take high definition, are going to be a lot more expensive, significantly not more expensive, or not much more expensive. I think that tends to exhaust the possibilities there. No-one's suggesting they're going to be cheaper, which would be the third possibility, so we have got two possibilities. So we examine those two possibilities. If they're not going to be significantly cheaper there's no reason to mandate high definition because it will be chosen, and it will be the winner anyway, and it will be chosen as the form of transmission etcetera.

If they are significantly different in price then to mandate high definition seems bad policy because it will slow down the uptake and slow down the clearance out of the analog spectrum. So either way on those two points, whichever one it takes, it seems to us to be either bad policy or unnecessary to mandate high definition.

MR TODD: I think the mandate of high definition is a political economic issue that's out of my expertise.

MR SIMSON: Yes.

MR TODD: I believe it's wise to have the flexibility that a broadcaster can transmit whatever signal he likes; high def, of course standard def, and that he not be burdened with an efficiency-robbing requirement that might preclude him from offering too high def or preclude him from offering valuable data services that themselves might encourage the uptake of digital TV.

MR SIMSON: That has been very much our position and I notice Mr Branigan has just entered, from FACTS, and he would have heard the - I put this to him yesterday in those terms, the two logical possibilities. Our draft recommendations have been very much driven, as you say, by getting the digital take-up and to have the greatest range of possibilities of products, and it would seem to us that the mandating was in fact of high definition. It was going to in fact close out a number of options which would help to drive the digital take-up, but as you say that's into the economical, political area.

MR TODD: In the United States there's no mandate for high definition. It's

voluntary industry agreement. The broadcasters want to be able to send it. The consumer makers are supporting that by making every product able to decode the high definition service.

MR SIMSON: Is that because the industry believes there is not a substantial price difference between high definition and standard?

MR TODD: I think initially the industry wants to create a new market for higher quality entertainment products, and high definition is precluded. They can't sell a better video display unit for a home theatre. There's no market for it because there's no content. I think that drove much of the consumer manufacturer's interest. I think in general they know that at the end of the day or the decade the cost difference is negligible. The cost will be driven by the display device, not the piece of silicon inside.

MR SIMSON: We had a submission yesterday from one of the networks here, Channel 7, who said that they had been overseas and in America they had found that the uptake of digital had been very slow - of high definition digital, very slow, and to a point where they, that's Channel 7, claimed that there was a question mark over whether it was something that people - whether it's going to gather a critical mass of market.

MR TODD: In the US it's problematic because the ATSC system was an entirely new system. The modulation was new, the service information people, PECEP, we call it, was new. The high level MPEG decoder was new. There were a lot of hurdles to overcome. The initial product prices were very high. The set-top boxes were one and a half to 3 thousand dollars. It's only in the last couple of months that affordable products like this one, a Thompson set-top box for $US650. Its true high definition output receives both terrestrial and satellite. With products like that starting to hit the market I think the uptake is certainly going to pick up. We have also had a problem with the modulation system. That was invented by Zina. They did a poor job of getting good receivers implemented, so many of the receivers can't receive the signal picked up by the antenna. They can't demodulate it successfully and we're just now getting new chips out that will solve that kind of problem.

MR SIMSON: So it's not an ATSC problem. I think Sinclair were in fact trying to get the standard changed.

MR TODD: Right. I think the verdict is out. The new chips seem much better. I haven't tried one myself so in my own mind I'm waiting to be proven that this VSPC system is okay. I think it will prove out but it hasn't been proven yet.

MR SIMSON: So what you're saying is in America there have been these problems but the market's basically determining a standard which is a high definition standard. There has been no mandate of high or standard or any other mandate. In our draft recommendation, as Prof Snape pointed out, we didn't recommend a simulcast of standard definition and high definition. We simply recommended that there not be a

mandate of high.

MR TODD: That would then correspond to what the US situation is, I think.

MR SIMSON: What you're saying to be clear on this, is if Australia were now to in effect do a simulcast, or as Mr Branigan describes it, a triple-cast when you include - - -

MR TODD: I would call it a cripple cast.

MR SIMSON: You would call it a cripple cast.

PROF SNAPE: I think we have heard that word before.

MR SIMSON: Could I just put it in another way. If you don't mandate - if you don't have a simulcast, let's keep the analog out, if you don't simulcast SD and high, and some people in the community buy the standard, go for the standard set-top box and arguably receiver as well, you're still going to end up with a bunch of people in the community who, even if the high price does come down to being comparable to standard, you're still going to have a bunch of people in the community who have purchased that standard equipment. I mean, whether it has been mandated or not, you still have the problem, don't you? I mean, you're still going to end up with a mixed market, whether it's simulcast or not. How are you avoiding that in America so that people don't - or how are you avoiding that double-cast or cripple cast as put it in America, whether there's a mandate or not?

MR TODD: There were serious suggestions from some in our computer industry that broadcasters send out a standard def signal because they could decode the signal in the computer not by adding a chip but by running software on the pentium chip. Microsoft and Intel like that scenario. They don't like companies making money off other companies making money. The broadcasters rejected that. If somebody did make such a receiver it wouldn't receive CBS programs and ABC football games and so forth. That is the reason that kind of product isn't sold because the broadcasters are emitting some HD signals and those receivers would go black, and they would be taken back to the store. This doesn't work. You know, CBS put up Chicago Hope and there was no picture. "This thing, it's no good. Give me my money back."

PROF SNAPE: CBS is broadcasting, as I understand, in 720p.

MR TODD: No. CBS is 1080i. It's ABC that is 720p.

PROF SNAPE: So CBS is on 1080i. ABC is on 720p and NBC - - -

MR TODD: Is doing a little bit of 1080i, the Tonight Show, and Fox, I think, is doing 480p and they might do a little bit of 720p.

MR SIMSON: So why are our screens going blank then?

MR TODD: Pardon me?

MR SIMSON: Because they accommodate all of them. Because the code in the set-top boxes accommodate all the different - - -

MR TODD: Yes, nothing goes black.

PROF SNAPE: And ABC is managing the 720p okay?

MR TODD: Yes, the 720p is quite a good format. It's a pretty good match for current and near future display devices; has very good motion rendition if it is 60 frame per second.

PROF SNAPE: If it's 60. What about if it's - - -

MR TODD: 50 is fine.

PROF SNAPE: 50 is fine as well, because we had a suggestion yesterday that there were some major problems with 720p.

MR TODD: I wouldn't support that statement. I think there may be less equipment availability, the cameras aren't as advanced, so there's some truth to that, but technically it is a viable format.

PROF SNAPE: Would it add much in the way of costs then as compared with 576?

MR TODD: The chip does it. The chip doesn't care.

MR SIMSON: How difficult, just in terms of the set-top box, if the government were to decide to simulcast/triple-cast in these various forms, how difficult would it be down the track in three or four years' time for people - let's assume the price of the high comes down substantially as Mr Branigan and others say it will, how difficult would it then be for people to upgrade their set-top box?

MR TODD: Throw it out.

MR SIMSON: Throw it out, okay. So you would need to buy a new set-top box.

MR TODD: That's right. I'd like to mention when people say 1080i, most of the material is actually shot on film and it's really 1080p and the CBS broadcast in the evening, in the bits stream it may say 1080i but the little instructions in the MPEG stream are saying, "Here's field 1, here's field 2. Repeat field 1, repeat field 2." The sequence is being reconstructed in the receiver as if it were interlaced and the receiver can determine, "Gee, here's two things. I'm going to display this as 72 hertz progressive because it's truly coming in as 24p." So I think some have done a

disservice saying 1080i all the time when really most of it is 1080p 24 frame and here it would be 1080p 25 frame, even though they keep calling it 1080i. It's the live camera that would be truly interlace.

PROF SNAPE: Well, the 1080p has been determined as the international standard for - - -

MR TODD: It's one of the international standards. You can interchange 1080i and if it's captured by a camera running 50 or 60 fields per second then it truly is interlace, but if it was captured as film and transferred into video it's truly a progressive image.

PROF SNAPE: But a moment ago you said it was misleading, I think, to call it 1080i because it was really - - -

MR TODD: I think CBS and Joe Flaherty have been very visible in the industry and in the US there are the proponents of progressive always fighting against the proponents of interlace and there really isn't much to argue about. Most of what is called interlace content really is progressive content. The DVDs are labelled as interlace format, but all the content is film and it's really progressive content.

PROF SNAPE: We understand from some others that 1080i or 1080 whatever with what is it 1940 pixcels, 1920 - - -

MR TODD: 1920.

PROF SNAPE: - - - pixcels per line, 2 million plus pixcels, that there's no glass that can take that.

MR TODD: I think that's probably true, but the chip does it and you don't need to prohibit the broadcast of it. In the future display devices may become available that have no trouble doing that.

MR SIMSON: Just out of interest, do you have an HD set at home?

MR TODD: No, I have an NTSC set, a projector like that. It cost me about $2000.

MR SIMSON: What does that do for you?

MR TODD: It's about 480 line by a little more than 720 resolution and the image is a little fuzzy. I'd certainly like it sharper.

PROF SNAPE: And it changes colour from time to time.

MR TODD: No, that's a myth. It's quite stable. I haven't adjusted the colour in years.

PROF SNAPE: Is that right. You must have a better set than I had when I was in the States.

MR TODD: The older sets do that, but not the current ones. I want to mention one other thing. There's talk of DVD and future formats and DVD recordables being standard. In all the Japanese labs they're hurriedly working on green and blue lasers to come out with DVD high definition and I don't now if it is two years or five years before it comes out, but it certainly is going to come and it would be a shame to shackle broadcast with, you know, triple-cast limitations that they can't do full high definition when you go to your store and buy a disk for 20 bucks of the movie and watch that at home.

MR SIMSON: What, you just couldn't play it? In other words, when you plug your DVD recorder into your "system" it wouldn't play unless it was 1080i compatible?

MR TODD: I'm saying the next generation DVD player will play all of today's disks plus play the new ones that deliver a high def content, 1080p, 24 frame, into new display devices that can display some fraction of that resolution up to the full resolution.

MR SIMSON: So you'll still be able to play them?

MR TODD: I mean, that will come and the question is will broadcasters be able to compete against the recorded media. That's one of the things driving the states, the HBOs, the Showtimes, CBSs and so forth.

MR SIMSON: You're making a competition point against - you're making a competition point.

MR TODD: And if it's a triple-cast and you've got to blow all these bits on a standard def signal you're not going to be competitive with the packaged media.

MR SIMSON: That would then get down to the difference between a 720p picture and a 1080i picture. I mean, in the - - -

MR TODD: You can't do 720p and standard def in the same channel for all content.

MR SIMSON: That is not what we have been advised.

MR TODD: I saw it in New York a couple of weeks ago, what is considered to be the best high def encoder in the States, they were running high def and standard def in the US six meg channel, 19 megabits sharing it.

MR SIMSON: Six.

MR TODD: Six megahertz, but a similar kind of bit rate that you would operate

here. Generally the pictures were fine, but when a flock of birds flew across the high def picture the MPEG coding broke down. There were not enough bits. The birds turned into little blocky things drifting across. It's very much a picture content related thing.

PROF SNAPE: And that was running 720 and - - -

MR TODD: I believe that was 720.

PROF SNAPE: - - - and standard but it was only on six - - -

MR TODD: It was 19.39 megabits or six - - -

PROF SNAPE: So it was about the same bit rate as here.

MR TODD: One thing you might think of is in the US we have sports bars where people go to the bar and have a beer and watch the game and they can have a bit TV and that kind of venue can support the true high def projector, you know, close to the 1920 resolution. Sports programming is popular and sports programming is the most stressful for HD encoding because there's so much - - -

MR SIMSON: They're moving pictures, yes.

MR TODD: I think the triple-cast would cripple that kind of high def sports broadcast.

PROF SNAPE: Let's turn things around a bit. We've got I think an objective which is very commonly endorsed and that is to free up spectrum as soon as possible, as soon as reasonably feasible by switching off the analog and that we need to put in policies that will facilitate that and so that there aren't extensions, there aren't etcetera etcetera. What's your formula for doing that?

MR TODD: If that is your only goal you would make a different decision than if that is one goal and there are other goals as well.

PROF SNAPE: Yes, there are always other goals as well but I mean, if you like, that is a goal which is a very high priority. If we say, "Okay, it's not the only thing we want but we certainly want to ensure that that occurs within a reasonable time-frame."

MR TODD: I think it's the end of the uptake that's important, more important than the beginning, and at the end of the uptake the cost adder for HD reception capability is negligible. So I don't think there's a big penalty there.

MR SIMSON: But you're assuming that you'll get there.

MR TODD: I'm assuming you'll get up the curve to where you can get - - -

MR SIMSON: Yes, I mean, you're assuming you get to the same point, whether - - -

MR TODD: If you were having this discussion two years ago, the proponents of low cost high def would have a much harder time because it hadn't happened two years ago but it is happening now as we speak, and you know, you launch a year or so from now, you're in a good position.

PROF SNAPE: We've also got these other drivers of course of that upkeep both in the short and the longer term - - -

MR SIMSON: Which need spectrum.

PROF SNAPE: - - - which need spectrum.

MR SIMSON: And which won't have it.

MR TODD: But simulcast is inefficient use of spectrum.

MR SIMSON: Thanks very much.

PROF SNAPE: Thank you very much.

MR TODD: Thank you for having me.

PROF SNAPE: I say thank you very much for coming out into this part of the world and sorry you probably hit a storm just about the time you arrived yesterday or soon after and today isn't looking too good either but thank you very much for that.

MR TODD: I'd like to offer you this - - -

PROF SNAPE: If you could pass that to the staff, the members of staff might wish to have a little chat about some points of clarification if you are around for a few minutes and we'll now, as we gather that Sony are not appearing - they sent a message that didn't sort of arrive, but we now understand that they are not appearing this morning, so we'll resume at 1.30 and this afternoon we are having the Australian Consumer Association and Cable and Wireless Optus. So until 1.30, thank you.

(Luncheon adjournment)

PROF SNAPE: The participants are ready and we're just a few minutes early but I don't think that will inconvenience anyone. So we welcome Cable and Wireless Optus and we ask the representatives to identify themselves individually for the transcription service please.

MS KOOMEN: My name is Kaaren Koomen. I'm the group manager of multimedia regulation and policy at Cable and Wireless Optus.

MS LIDGERWOOD: I'm Carolyn Lidgerwood. I'm a senior lawyer at Gilbert and Tobin and we have been advising Cable and Wireless Optus in relation to this matter.

PROF SNAPE: Good, thank you very much. It's rather interesting that people are engaging lawyers generally with this, rather than economists.

MS KOOMEN: Some people are multiskilled.

PROF SNAPE: It was a comment on the state of the industry as we have seen it but we have been quite surprised - or perhaps we shouldn't have been - as we went around the industry, to find how many places that we went into and the people we were speaking to were lawyers. In fact part of what we have tried to do in our recommendations is to make recommendations which would make the industry rather less litigious than it has been in the past.

MS LIDGERWOOD: I think that's what they said in 1992 as well.

PROF SNAPE: And they will probably be saying that a hundred years from now as well.

MS KOOMEN: Well, an admirable objective, which we support of course.

PROF SNAPE: Okay, we have received your submission and thank you very much for that, and for the earlier submission and participation too. Ms Koomen, would you like to speak to it?

MS KOOMEN: Yes, I would. First, on behalf of Cable and Wireless Optus I would like to thank the commission for the opportunity to appear today. I understand that you have received our written submission and I wanted to just restate a number of key points here today and of course answer any questions. First, CWO supports the principle that the regulation of the broadcasting industry and the introduction of digital television should encourage competition, audience choice and diversity of content. Second, our view is that the digital television regime should maximise the economic and efficient use of spectrum, whether contained in the broadcasting services bands or otherwise. Ideally, spectrum should be competitively acquired, which would ensure a commercial return to the public, reflecting also the market determined prices for what is a scarce resource.

I would just like to make a couple of points about HDTV and multichannelling.

The rationale for the existing television regime is based on each free-to-air broadcaster being loaned seven megahertz of broadcasting services band spectrum free of charge, to deliver prescribed amounts of HDTV from 1 January 2001 in metropolitan areas. If this ceases to apply then in our view there would be absolutely no policy justification to support the handover of a seven megahertz channel to each free-to-air at no cost.

The free-to-airs should not, in our view, be permitted to avoid the HDTV obligation and use the gifted spectrum to offer multichannelling subscription or pay-per-view services. The reason is if the free-to-airs were permitted to do this, it would enable them to compete with the pay TV industry from a significantly lower cost base. This would be anticompetitive and would have a very negative impact on the viability of the pay TV industry.

We believe that if the free-to-airs are not required to deliver substantial amounts of HDTV then the entire digital conversion scheme would need to be revisited, starting with the first principles of access, competition and equity. One option is for at least some of the spectrum to be returned to the government, where it can be subject of a competitive auction. Another option might be for the free-to-airs to pay the government for the use of any spectrum which is not required for the simulcasting of the analog signal in digital.

In relation to set-top boxes, we believe that the development of an interoperable set-top box would be very important in the development of a viable digital future for Australians. In particular we would like to encourage the development of a set-top box which has the capacity to provide access to free-to-air datacasting and pay TV services. This would ensure that consumers are not trapped into one mode of delivery for services on the basis of the particular set-top box they have purchased. It would also encourage competition and diversity in the new digital services market.

We at CWO have been attempting to encourage support between broadcasters, datacasters and manufacturers on this issue. In particular, a CWO engineer has accepted the chair of the Standards Australia interoperability working group, representing the Digital Convergence Australia group. That working group is currently developing a scoping paper on this issue for Standards Australia.

In relation to datacasting, in our view a broad definition of "datacasting" should be adopted for new players. This will encourage new datacasting entrants and maximise diversity in competition between service providers. However, we also believe that a moratorium on the provision of datacasting services by the free-to-airs should be applied during the simulcast period. This is because the free-to-airs have significant market power in the broadcasting industry and could easily leverage this power to dominate the datacasting market at the expense of new entrants.

For example, the free-to-airs' enormous potential to leverage their existing customer profile, content relationships, advertising potential and digital broadcasting infrastructure would all give the free-to-airs significant advantages in the new

datacasting market when competing against new players. Accordingly we believe that special measures need to be taken to ensure a stronger and more competitive environment to develop. I would also like to stress that this would also be the case if we were to end up with a broad definition of enhanced programming which the free-to-airs would be able to offer using any excess spectrum. In fact the worst case scenario from a competition point of view might be if the government adopts a narrow definition of datacasting and a wide definition of enhanced programming.

In relation to anti-siphoning, CWO has a pay TV business which of course is subject to the anti-siphoning list. As we have argued on numerous occasions, the anti-siphoning list substantially impacts on competition in the broadcasting arena. We are aware that the government considers there to be broad social objectives underlying the anti-siphoning list in order to supposedly prevent key events of national significance being available only on pay TV and thus denying non-subscribers from watching these events. However, we are not convinced that these social benefits have been substantiated under the regime, or that there is any evidence that these events would migrate to pay TV exclusively. In any event, we strongly argue that the list at present goes well beyond events of national significance, to cover every tennis match played at Wimbledon, the Australian, French and US Open, all NRL and AFL matches and a range of other tournaments, all of which cannot be substantiated as events of national significance.

I understand that the commission has discussed these issues in detail with ASTRA yesterday. We're a member of ASTRA and support its submission, so I don't propose to reiterate those issues. I just wanted to summarise today that our first preference is that the anti-siphoning list be abolished, as it is anticompetitive, and that the market should be allowed to prevail in this area. If this does not occur, we support a complete reform of the anti-siphoning scheme.

We note the concept in the draft report of non-exclusive rights being granted to pay TV operators and free-to-air broadcasters, and would suggest that if this approach is adopted it could also be extended to Internet and online content producers and datacasters, if this were within the definition of datacasting. In other words, we understand that the draft report seems to be suggesting a regime of dual rights and would, as a second preference, like to see this extended to new forms of media so that each type of right can be sold separately so that online content provider doesn't itself obtain exclusive rights to the sports events.

In relation to broadcasting and datacasting, we note that in our submission we said that the current distinction in this area between the two types of services should remain, at least until there is a complete review in this area. This is because the Broadcasting Services Act sets up a regulatory regime that is based on the concept of social and cultural responsibilities arising from the use of a scarce public resource, the idea that diversity of voices needs to be legislated for, and the concept of a few information entertainment products be disseminated from a point to multipoint basis in real time. It would not be appropriate to abolish this distinction without revising the whole framework of the act. Having said that, however, in an environment where real

convergence is upon us, perhaps the time has come for such a wide-ranging review.

PROF SNAPE: Good, thanks very much for that introduction and your submission. I would like perhaps to start where you finished and that is with the anti-siphoning and the list. You're endorsing as a second-best the suggestion that we had for a dual approach and non-exclusive rights. Would you maintain a list under that approach or would you say that it just applies to all sports?

MS LIDGERWOOD: I would have thought that a limited list might still be of some use in that context, because if there are events which at the moment aren't considered important enough in the national interest to be on the anti-siphoning list then it would seem a little strange to impose additional regulation on those kinds of events that, say, pay TV couldn't acquire the rights to broadcast at least popular sport that it might already. There are probably arguments for and against each position. I don't think there's - - -

PROF SNAPE: Well, we're talking about whether they could acquire exclusive rights. I mean, one approach would be to say that you couldn't acquire any exclusive rights, neither could acquire exclusive rights for any sports, ranging from something I mentioned earlier perhaps - tiddlywinks - to the AFL Grand Final.

MS LIDGERWOOD: I think the difference here is, would a free-to-air broadcaster really want exclusive rights in a very obscure sport which, by contrast, might fit into a niche programming arrangement for a pay TV broadcaster. I guess it's the difference between what is sort of general appeal and what might be of niche appeal.

PROF SNAPE: Yes, but if you in fact had as a business plan gone ahead and fostered a sport like tiddlywinks, which may not be a major one, then you would want in fact to have the exclusive rights to that. Is that correct?

MS LIDGERWOOD: Well, it's a possibility. I suppose it would depend - if for example there had been a lot of sponsorship of a sport that might fit within a particular programming genre for a pay TV channel - I'm thinking maybe of some of the foreign language channels. There might be a role for a sport that's of particular interest to that particular foreign language group but isn't of enough interest to the free-to-air networks because it probably wouldn't rate very well but it would seem unfortunate for - - -

PROF SNAPE: Well, they wouldn't want it anyway so you're no worse off by - - -

MS LIDGERWOOD: No, that's true.

PROF SNAPE: We haven't changed anything.

MS LIDGERWOOD: That's true.

PROF SNAPE: We did have a discussion with Fox Sport this morning on this issue,

as a matter of fact, and when the transcript comes out you might want to have a look at it to see whether you agreed with their position or not on it. They were inclined to maintain a list but a shorter list.

MS LIDGERWOOD: It depends if it's ultimately anticompetitive or not. That's what it really comes back to.

MS KOOMEN: Yes, I think it depends on what the proposition being put up is, and then how that would affect the broad competition within the whole environment. So if you had a small list, perhaps of events which may be of real national significance such as the Melbourne Cup, then we could certainly probably accommodate that and work within that within our business plan. But we do believe at the moment that the list is far too broad and it just makes the programming of sports rights on pay TV extremely difficult.

PROF SNAPE: Okay, but your first preference would be to abolish the whole thing completely.

MS KOOMEN: Yes.

PROF SNAPE: So that you could acquire exclusive rights, so could the free-to-airs?

MS KOOMEN: Yes, just in an open market.

PROF SNAPE: In an open market, yes.

MR SIMSON: An issue that may be a potential trap there is where the broadcaster also owns the event and whether there is the possibility of a conflict in the perspective of the public interest in that situation.

MS KOOMEN: Yes, that's true, and there may be a range of competition issues which would need to be looked at from a trade practices perspective as well.

MS LIDGERWOOD: Whether that was an improper use of market power - I think you would have certainly issues under the Trade Practices Act and perhaps that's the more appropriate forum in which to regulate it.

MR SIMSON: We have already seen situations where newspaper journalists have not been able to go to events that have been staged by a subsidiary of a rival newspaper group.

MS LIDGERWOOD: Yes.

MR SIMSON: Could I just take you to the issue of set-top box interoperability, which is item 1.1. Could you just provide us with an update on that, as to what is the status of that issue within the industry and the government?

MS KOOMEN: Well, as you would probably be aware, there's enormous uncertainty in the industry at the moment, both on the sides of the broadcasters, the potential datacasters and the manufacturers, as to what will actually be the standards that will be made available within the 12-month period leading up to the commencement of digital television. So with that being the primary concern of most manufacturers they're less inclined to look at these other issues of interoperability. However, we believe that they are extremely important. There have been models around to date, especially from the pay TV sector of proprietary set-top boxes and then free-to-airs seem to be promoting a retail model of set-top box being available for consumers to purchase. We think the idea of the consumer having a lounge room and a television set with numerous set-top boxes standing on top of each other is not going to be the ideal outcome. So we're trying to encourage manufacturers, datacasters, broadcasters to work together to try and look at an interoperable module.

We have encouraged and now actually have a CWO engineer as the chair of the Standards Australia working group on interoperability and unfortunately it is a slow process working through Standards Australia and trying to get cooperation on any of these technical issues. But that working group has put out a draft scoping paper looking at what the standards are, where the areas of interoperability might occur and it's in the process of consulting on that and then we'll put it to Standards Australia sometime over the next couple of months. I might add that it seems to me being a little outside of that process that it hasn't been as smooth or as speedy as we would have liked it to be and we are trying to actually ramp up a bit of encouragement on that front.

PROF SNAPE: We can see the desirability of interoperability and of course everything probably comes at prices. Do you have any idea as to how much set-top boxes - how much cost would be added to set-top boxes by requiring the sort of interoperability that you're talking about?

MS KOOMEN: I couldn't give you an accurate figure now because I don't even think that the issue has been advanced enough to make approximations. However, what might well be possible is the development of a set-top box which has modules so that it could accommodate another service later on. What we'd not like to see is a box developed which is totally incompatible with any other service.

PROF SNAPE: But you're not seeking to mandate that any set-top boxes should be fully interoperable across the level, should be sold, should be manufactured from the beginning that are fully interoperable.

MS KOOMEN: I don't think we're in a position to mandate it but I think we'd like to see some support for this because at the end of the day we are entering an era where there are a range of different services that will be available to a consumer, whether they be free-to-air, pay, datacasting, interactive, on-line type services available through the television set. We think it's in the long-term interests of the industry to have steps being taken now to ensure that whatever is going to be on the

top of our television sets can accommodate those services. The first generation may not have all of that capacity but we think it should be a goal. At this stage cost will be a factor but we all know that cost will be driven down in time. So if there's sufficient support from all areas of the industry we think it's a viable proposition.

PROF SNAPE: That includes interoperability between Optus and Foxtel?

MS KOOMEN: That's right. I mean, we've taken a pro-competitive line here. People can tune to us and they can tune away from us. We accept that as part of this whole new environment that we're working towards. There are opportunities, there are threats.

PROF SNAPE: So it's not that you would require interoperability or would you require interoperability? I mean, would you envisage, for example, that Optus could still be putting out boxes that would not be interoperable across subscription services and to others?

MS KOOMEN: It would all depend on how the market developed. We certainly were meant to adjust to any environment that is out there. So we may or may not continue with that model that we have at the moment. I might say that it is very expensive to subsidise the set-top boxes to the extent that we do now and that may be something which we'd like to review.

PROF SNAPE: You mean to price them in the way that you've currently priced them?

MS KOOMEN: Well, just the cost of actually developing them and installing them and servicing them, all of those costs add up to a pay TV provider. But we also see that over time we would expect to be a lot more fluidity, diversity within the range of services that will be available - digital services. So at the end of the day there may not be the distinctions that we see now between pay, free and datacasting.

MR SIMSON: There may be Internet broadcasting as well which I'll come back to later.

MS KOOMEN: There may well, yes.

MR SIMSON: Just turning to page 6 of your submission I'm just uncertain as to where you're sitting on the fence here. On the one hand you say that you support the proposition that digital television should be introduced in a manner that's readily available and affordable to Australia; on the other hand you say that in the event that HDTV was not mandated, that would be a bad thing because basically the networks would then have spectrum available to do other things with. I suppose just up-front the question is, in your mind is HDTV the right way to go or the wrong way to go?

MS KOOMEN: I think we have to answer that question in terms of where we are at the moment and that is a regime that has allocated free speech into the free-to-airs

on a condition. Had that not been the case we might have looked at the whole issue from a different perspective.

MR SIMSON: Let's go back a bit. Let's go back to this time last year or in fact earlier when decisions were being made on this. What was your company's position? Was it in favour of mandating high definition or not?

MS KOOMEN: Before this regime was introduced?

MR SIMSON: Yes, I mean, at the time it was a big public debate and the legislation was being developed for parliament and so on, what was Optus's position? Was it for mandating high definition or not for mandating high definition?

MS LIDGERWOOD: I think it was the speed with which the legislation was developed, because as you would remember there was the ABA working group and there was a lot of preliminary discussion before the legislation was introduced on the broader digital television issues and the ABA group came out - Colin Knowles came out with a preference for high definition, and there was general debate about it at the time. But then the speed with which the decisions were made and the fact that that would be the trade-off, the seven megahertz, on the basis you do high definition, there wasn't a lot of debate about that before that decision was made.

MR SIMSON: So you didn't have a position on that?

MS KOOMEN: I'm not certain that we did, and I must admit it was actually before my time at Cable and Wireless Optus.

MR SIMSON: I'm not trying to set traps but what we're trying to do is cut through a lot of this stuff because you've got a particular point of self-interest and a number of the groups that have appeared before us this week who do not support the free-to-air position nonetheless say, "Notwithstanding the fact it may have been a wrong decision, we've got to stick with that wrong decision because if we don't stick with that wrong decision our business is going to be compromised because we've acted from that position." Can I just say that the question we've been raising - the issue we've been raising - is where does that leave the consumer, because the implication of mandating high definition - and this is one of the reasons we recommended the way we did in our draft report - is that it locks the consumer to a very great extent out of the benefit of a whole bunch of digital services for a number of years.

So multichanneling, datacasting etcetera, that's one of the reasons we recommended the way we did. We have people appearing before us, such as yourself, raising at least the question as to whether high definition is the right way to go, at least implicitly in that first paragraph agreeing with the thrust of our report with regards the issue of affordability, for example, and yet not being prepared to say, "Look, the decision should be changed because it's going to" - in your view - "hand a free kick to the free-to-airs." All we say is what about the poor consumer who for years because of this will not have - there will not be the spectrum available to deliver

these other services.

MS KOOMEN: Can I just respond to that by saying that we think it's imperative that the spectrum allocation to the free-to-airs ought to be revisited if there's a suggestion that HD be abandoned for standard definition. We have no problem with standard definition as an industry standard per se. What has been the problem is the spectrum loan for free which has disordered the process. That was the deal that was done and it has enormous implications for other industries such as pay TV. If that is to be revisited and standard definition was to be made the standard, the free-to-airs were made to either pay for the spectrum that they're not using for HD any more or give it back or any other range of options, then we - Cable and Wireless Optus - would not object to standard definition being the standard that is incorporated in most of the set-top boxes or digital television sets. In fact, there may be interests for us in terms of re-transmission of free-to-air services over our Optus television services.

MR SIMSON: Of course, the rumoured or the speculated simulcast of standard and high doesn't help things, does it, in that context, because it doesn't free the spectrum.

MS KOOMEN: No, it doesn't. It's inefficient; we would agree with that. We also would have a long-term concern that if you did have the triple-cast for a period of time, the consumer - or most consumers - would end up buying a standard definition set-top box which would be cheaper and in time the free-to-airs would stop broadcasting in HDTV because they would say there's no market for it, but they do get to keep their seven megahertz. So that to us would be a bad long-term proposition because it doesn't confront the issue that, you know, you have a deal that was done and enormous ramifications for other industries that flow from that if the rules have been changed.

MR SIMSON: So on balance would Cable and Wireless Optus prefer to stick with the existing policy which is mandating high, rather that simulcasting standard and high?

MS KOOMEN: Yes, I think our position would be to favour the existing regime, rather than the triple-cast.

MR SIMSON: Of course, what the commission recommended in its draft was that high should not be mandated. That's what we said.

MS KOOMEN: Yes, we're aware of that. We're also aware that you recommended that the free-to-airs be able to multichannel. That of course raises all the issues that we've already covered in our submission and I also mentioned today that the concern for us is that that would allow the free-to-airs to compete with pay TV from a significantly lower cost base.

MR SIMSON: But the commission also made a number of other recommendations including, for example, new licences in the free-to-air area and other recommendations that would increase competition in the free-to-air sector. That

recommendation with regards to multichanneling was not in isolation or the only recommendation we made.

MS KOOMEN: No. We do support those other recommendations regarding competition in this important industry. But we're very cognisant of the fact that multichanneling is one of the major attractions for pay TV.

PROF SNAPE: I suppose we're in a situation where, as we've said, that this whole structure of policy has been built on quid pro quos and everyone therefore is trying to look after their own little quid. We've been here in this draft report trying to look at the structure as a whole and to recast the thing as a whole. The trouble is then that each participant comes in and says, "My quid's missing from that," so everyone opposes it. No-one will stand back and say to the government, "What a marvellous draft report. We support that in its entirety, even though we can see that there's a quid missing from it but we'll make up from the other quotas that we get back."

MS LIDGERWOOD: Do you know what, if this report had come out before those decisions had been made - if this investigation had happened before the decisions in digital television had been made, you could see you probably would have had some very different submissions across the industry.

PROF SNAPE: Yes. As to how that would have affected policy is another matter of course. Perhaps I shouldn't elaborate on that point.

MR SIMSON: With regards to what you say on multichannelling at the bottom of page 6 and going onto 7, I'm just wondering - of course I understand the implications of what you're saying for your pay service but don't you see benefits in that in terms of driving the take-up of digital services of which - and of course your company is a player at a whole bunch of levels in the value chain, right?

MS LIDGERWOOD: Yes.

MR SIMSON: That while there may be a pro from the prospective of your pay television business, there could be another - there could be quids from the prospective of some other parts of your business in driving digital take-up.

MS KOOMEN: There are certainly opportunities for us which we're aware of but at this point of time we are - we need to look at where all the players are and how it affects us. We do have a pay TV industry. Multichannelling is one of the key drivers. We also, I might add, need to - well, need to - all players in the media industry are looking at digital services in the conversion to digital which is an extremely expensive proposition. Infrastructure costs are fundamental to that. It comes down to what is - what am I trying to say, giving advantages to one side affects the other side. That is unfortunate.

MR SIMSON: Could I ask why, just on page 9 - if you could just elaborate as to why you had reconsidered your position with regard to datacasting services. Of

course we appreciate the way you have driven the reconsideration - just be interested to know what prompted your rethink. What has happened in the last few months.

MS KOOMEN: Basically we just reconsidered our position in relation to the whole industry and we also, in reviewing our response to other recommendations that you'd made on competition issues, we decided that it would lead to a more healthy and productive and competitive industry if we encourage new entrants. Some of those entrants, new entrants, might compete with us. Some of them, you know, might not but we believe that in the longer term it was better for the whole industry to be pro-competitive and this sort of flowed through to a whole range of other approaches that we've taken.

MR SIMSON: Fair enough. Of course at the time at which the free-to-airs are able to datacast, I take it you wouldn't be attempting to distinguish between what they can do and what the new players can do in terms of the services so described in paragraph 3 on page 10, the paragraph which begins, "New datacasters should be permitted," and you have described quite well what you think they should do. Presumably at the time when free-to-airs will be able to datacast you would not have two different - - -

MS KOOMEN: No, we have asked for a moratorium during the simulcast period for free-to-air, purely for the purposes of encouraging competition and new services. At the end of that simulcast period we think that the new datacasters ought to be established. If they are not, you know, there is not much more that can be done for them. At that point there ought to be just open competition.

MR SIMSON: Going back to this question that we were discussing earlier about what has changed since the legislation was put in place, could I put it to you that there has been a lot of change in terms of the business strategies of the players, including your company, that you're doing things now - take another example, Austar, and companies such as that - are doing things now in terms of other parts of their business that if they were envisaged - nobody knew about them at the time. In other words, you've got a pay TV business but you and they are now bundling telephony, other access, other interactive services. You're launching a new high-speed Internet access service before Christmas with the Excite at Home businesses - that is with you, isn't it?

MS KOOMEN: Yes.

MR SIMSON: Yes, with you. Austar has announced this week that a new NDS based high speed Internet broadband service which is quite separate to its pay TV business - except in the way they price it to subscribers - you get a slight benefit - discount if you're already a pay TV subscriber. I'm just wondering the extent to which - you know, life might have moved on a bit in terms of the quid pro quo discussion since those decisions were taken last year. You're developing revenue bases. I mean, look what is happening in mobile telephony, for instance, with Optus. Look at what's happened to your share price in the last two weeks, it has gone through the roof - that

really to me indicates that in all fairness the debate has shifted, or should have shifted - maybe it hasn't shifted - but should have shifted in terms of being able to be a little bit more forgiving on quid pro quos.

MS LIDGERWOOD: You know what the point is in these circumstances, what your review is about is the broadcasting services bands - no-one could deny that there's been a lot of development on a lot of different fronts in the media business but this is really - the other developments aren't using that chunk of the broadcasting services band spectrum, which has always been separately regulated - - -

MR SIMSON: Excuse me for interrupting, I don't think that's actually right because in the case of Optus you've spent billions of dollars laying a cable. That cable is delivering a pay television service, of which you're most protective of in the context of what you're arguing about multichannelling, but that cable is now being used and it's going to be used for a whole bunch of business services unrelated to pay television. So I think what's happening in terms of your larger business strategy, you could argue it cannot be divorced from the arguments that you put forward with regards to policy on the Broadcasting Services Act. I don't think you can just put one in a box and say, "That is not related to this other box."

MS LIDGERWOOD: But none of those things are in the Broadcasting Services - - -

MR SIMSON: It doesn't matter.

MS LIDGERWOOD: I mean, I guess this is the traditional - - -

MR SIMSON: We're questioning your self-interest here.

PROF SNAPE: If I could just refer to the terms of reference. The terms of reference said:

> The commission is to advise on practical courses of action to improve competition efficiency and the interests of consumers in broadcasting services. In doing so the commission should focus particular attention on -

etcetera etcetera etcetera -

> and have due regard to the phenomenon of technological convergence to the extent that it may impact upon broadcasting services.

So we were not confined to just the Broadcasting Services Act, nor were we confined to traditional broadcasting.

MS KOOMEN: I think the issue is that we certainly have a cable. We've spent squillions of dollars developing that cable and hopefully some time soon we're going to see some good returns on that, if we're not already, but that is an investment we

have made. The broadcasting services bands, it's a protected industry. It has been for some time. Unless some of your recommendations are adopted you have very little competition and, I might suggest, very little threat of competition from a fourth commercial or fifth commercial service in the future. The free-to-air services - the commercial services in particular - generate massive revenues from advertising. They have a profile with Australian audiences which they can build on and advertise in relation to in a way that, you know, other services would find it difficult to compete with.

That is not to say they can't compete and won't try to compete fiercely in the market but the free-to-airs are really using that BSB - are really regulated in a very special way. I think as we do enter into a converged environment we really need to question the privileges that they've been given over time, the special deals that have been made, and look at this from - as you've done very much in your report - a purely competitive environment. But I think to just change the surface of some of the deals that have been done over time without some of the fundamentals underlying it would also lead to a distortion. That comes back to our point about the spectrum give-away.

MR SIMSON: From your perspective that's fine but from the perspective of the Australian consumer we're talking about lockouts here on services for years in some cases. In the context of the pace at which this whole digital area is moving, it - I mean, frankly if you try to reconcile all the quids and all the pros that may be fine from the perspective of the interested parties but from the prospective of the party that most interests us, which is the consumer, it is clear that on the basis of what we've been told this week Australia is going to miss the boat - it is going to be years and years before some of these services will become available. They will come available in a competitive sense years and years behind the time at which they're going to become available in some overseas countries, and are already.

Multichannelling, for example, is recognised as a key driver of digital take-up in the US. On the basis of what you're saying, and on the basis of policy, current policy, as we - and this is why we recommended it the way we did in the draft report, we just close our eyes for years before there is even an opportunity before this sees the light of day.

MS KOOMEN: We also suggested that if you were to go down that course that the spectrum allocation be revisited, that free-to-airs pay for that spectrum or that some of it is returned. I mean, if you are proposing at the end of the day that free-to-airs can deliver in standard definition, then they will not need seven megahertz of spectrum to do that. So some of the spectrum - that they have been allocated for HD ought to be returned to the government. It can then to be auctioned. You can have new data customers in there bidding for it and a whole range of additional services can be offered. You know, but we can't just stand by and allow the extra spectrum to be used to offer datacasting services, interactive services, all of which compete against legitimate players that have invested a lot of money over time in good faith in this market.

So there are options. We're not saying, "Stick to HD," you know, "regardless". We're saying, "That was the deal. If the deal is off then there are other alternatives which could equalise the environment."

MS LIDGERWOOD: In that context what would be interesting to see applied is the Productivity Commission's recommendations about the separation of spectrum and content licensing because if that were the case and all bets were off with HD TV, spectrum is handed back, see how those mechanisms operate because they were interesting recommendations. It would be interesting go see them drawn together for the allocation of digital spectrum.

PROF SNAPE: What are you own plans for digital?

MS KOOMEN: We are looking at the options of converting to digital. All I can say at this time is the costs are astronomical.

PROF SNAPE: Nevertheless, if free-to-airs are going digital, you would presumably want to carry their signal in digital?

MS KOOMEN: Yes, we could do that over satellite because that is a digital service but over analog - yes, I mean, we can - or there could be simulcasting but we could reconvert from digital into - - -

PROF SNAPE: Into analog - - -

MS KOOMEN: Just take the analog fee. You can retransmit it.

PROF SNAPE: While the analog won't be in the simulcast period.

MS KOOMEN: Yes.

MR SIMSON: I think Prof Snape's point is that you've got hopefully one set-top box and as an Optus subscriber or a Foxtel subscriber or an Austar subscriber, you have the free-to-air channels as part of your package. You could actually end up with different standards, couldn't you, with different boxes, unless you convert to digital. Just out of interest, what are the main costs in doing that? What are the lumpy costs from the perspective of a cable operator?

MS KOOMEN: To give you an accurate response, I'd have to actually get back to you on that.

MR SIMSON: Would you mind?

MS KOOMEN: Yes, okay, I will.

MR SIMSON: While you say it's astronomical, as far as you can within the bounds of commercial sensibility, could you indicate the sort of numbers that we're talking about here in terms of conversion? That would be most helpful too.

PROF SNAPE: Okay. We have asked you if you would come back to us on a couple of things and you might recall the earlier one about the anti-siphoning in the Fox Sport transcript this morning and you might consider what they were saying there as to whether you are of the same mind with respect to the lists, rather than try and go right through it at this juncture.

MS LIDGERWOOD: And also the pre-decision - if Optus had a - - -

PROF SNAPE: That's not so - - -

MS LIDGERWOOD: Okay. We'd love to have been asked pre the decision and - - -

MS KOOMEN: I think the case was that Optus wasn't actually represented on that working group way back when.

PROF SNAPE: I think we heard at an earlier time that the whole thing crept up on Optus and went past them before they sort of realised. I think in a visit or in an earlier submission - perhaps it was in a visit that that might have been - but as you said, you are saying that you thought it happened very quickly.

MS KOOMEN: Yes, it did happen very quickly and I do know that there were a number of very frantic trips back and forwards to Canberra in the period leading up to where people were quite incredulous about what was being proposed.

PROF SNAPE: Okay. Thank you very much. It has been very helpful. As I said before, thank you very much for your submissions and for appearing last time and this, and your help with this.

PROF SNAPE: We will now pass on to the Australian Consumers Association. Thank you. As they are public documents, we won't incorporate them into the submission as such, but you will refer to them.

MR BRITTON: I don't think I have referred to them in my submissions; they're supplementary to it. Is that a problem for you?

PROF SNAPE: No. You will be referring to them on the transcript anyway.

MR BRITTON: Yes.

PROF SNAPE: If you could make it fairly specific what you're referring to as you come to it at the time, so it's obvious in the transcript what's being put.

MR BRITTON: Will do.

PROF SNAPE: Okay. We now turn to our last scheduled participant for this set of hearings in Sydney and we welcome the Australian Consumers Association and in the usual way, we would appreciate if you would identify yourself for the transcript please.

MR BRITTON: Certainly. My name is Charles Britton. I'm the senior policy officer for IT and communications for the Australian Consumers Association.

PROF SNAPE: Thanks very much. As you mentioned earlier, Ms Mara B'un apologised that she had been called away elsewhere; thanks for that message. Mr Britton, thank you for your submission. I wonder if you would like to speak to it please.

MR BRITTON: Yes, I would like to actually give you some supplementary material that I will refer to. Thank you very much for the opportunity to present our views. We have noticed that there has been, if you like, a skilful movement of the debate recently over digital television, which is the first thing I wanted to talk about, from the consumer equipment to this notion of chip sets and things that are coming down the track and the idea that we don't have to worry about the cost of consumer equipment now, it will be fixed by chip sets that will do conversions. I think one of our concerns with this turn of debate is that it's looking at the long term to try and solve short-term problems. I think there's a series of problems with this notion of using chip sets, the question of the support chips, the software and the integration engineering that go around the pricing of these chips. We understand many of them are in prototype form. They're not surrounded by the support apparatus. The question of getting then to an Australian high definition receiver has hardly been thought of, let alone engineered. So they are the long-term problems and we don't feel that the debate is going to be solved by those.

The other thing is it turns the mind away from the question of consumer equipment which is something I would like to just return to here, because it's a media

and it's important and it's expensive. The first thing I'd like to refer to is the report I have handed up to you; it's a consumer report, March 1999, and on page 16 it looks at two pieces of equipment from the American market and these are where we sort of go for our pricing. One is $7000 for a decoder and screen and the other is $8000 for a direct view television.

PROF SNAPE: These are Australian dollars or US dollars?

MR BRITTON: No, sorry, they are US dollars. But the key point here is this has nothing to do with our debate here, this is Consumer Union in America, sampling off the streets to tell American consumers about these things, so there's no interest in our debate whatsoever. It's a very, very small - - -

PROF SNAPE: These are American - - -

MR BRITTON: These are American consumer reports, so that's, if you like, our base. That's where we start looking for our numbers there, in terms of consumer equipment.

MR SIMSON: Excuse me, is this clipping from an American magazine?

MR BRITTON: Yes, it's from the American Consumer Reports magazine. I should have made that clear - yes, because this is the market where we've got high definition actually functioning. Obviously there are issues in terms of, "Would that equipment work in Australia?" The answer is no, but it would be probably more expensive to make it work here.

An important message in this review of the American market is on page 15 where it talks about the question of quasi high definition television sets. I think that's one thing to bear in mind when people are quoting cheaper prices for high definition equipment in America is this notion that the consumer reports in America have picked up of the quasi high definition sets. They say they're typically priced at $US3000 to $US5000 which usually doesn't include the cost of a decoder.

> These sets promise higher resolution than regular TV, often claimed to be the equivalent of high definition television.

It concludes:

> Today's quasi high definition television sets probably have too many compromises to justify the price tag.

So the question of what it is to be labelled "high definition" and then translating that into our context, is an additionally complicated issue when you take American equipment, and that is something to bear in mind from consumer reporting there. I will probably return to some of the comments from that report.

I think another issue is the question of what you see when you view high definition transmissions and what the equipment can resolve for you and in that context, I have included an article that you may or may not be familiar with, so it's there for you to pick up - "Now You See It, Now You Don't" by Peter Puttnam - because I think people think that those $8000 price tags are quite high, but on page 3 of that document, it talks about a Panasonic 30-inch professional grade HDT monitor that will give you, in a sense, what you should be getting, but the price tag quoted there is $US30,000. So we're not talking in a sense top of the line when we're talking the $8000; that's just what you need to get in the business. If you're going to talk about equipment that delivers you this extreme experience, if you like, you're talking many, many dollars, so it's an interesting price point to contemplate, $30,000 for a - - -

MR SIMSON: A cheap house.

PROF SNAPE: We don't know precisely what the specifications are on that, do we, in terms of pixcels?

MR BRITTON: Not exactly. In the context of this discussion, it's more concerned with the dot picture, the grille for the monitor, so in that sense it's anecdotal, I suppose, but 30,000 concentrated my mind. There's more detail in that article that may be useful for your research. Going on with the theme of reviewing some of the price data from the United States, when we looked into the consumer reports for February 1999, because one of the things I wanted to look at was the analog TV situation and how the prices work there in terms of consumers' expectations of what TVs cost and how the TV market works for people as it currently exists. I'm referring here now to the consumer reports of February 1999, "30-somethings". It talks about 32 and 36-inch televisions. On page 24 of that, it's interesting, although they canvass the question of, "Should you buy one of these big-screen TVs or should you wait for HDTV?" so again, another comment from the American consumer movement:

> HDTV is likely for some years to remain a boutique technology with sets selling at stratospheric prices and broadcasts that cover only part of the programming day.

So again, a completely unbiased comment in terms of our debate about what's going on with these things, "stratospheric prices" being their choice of words. So there, we're looking at their pricing on 32-inch analog televisions, which is an 81-centimetre roughly in our terms. The average of the prices that are listed down page 24 is $US638, so you compare that with the high definition prices they're reviewing in their magazine elsewhere, in the US context, those analog wide-screen TVs are very cheap. They look at a price drop on page 20 from 1997 to 1999 and it's a $US120 price drop, so that's the sort of price drops they're talking about that's going on there. I'll refer back to that in a minute.

I'll just refer back to this other document I've talked about, the consumer reports of March 1999 where they evaluated the high definition television equipment

and immediately following the high definition review, they reviewed 27-inch television sets and this immediately adjacent - - -

MR SIMSON: What page are we on now please?

MR BRITTON: Sorry, we're now on page 17. Their point was:

> The advent of high definition television, previously in the report, does not diminish the high quality of the best conventional TV pictures.

They then go on to review these 27-inch television sets which, if you look at the average pricing of those, is $US392. That's a 27-inch TV. It so happens that Choice magazine has reviewed that size television set in 1997 and I've included the test results on the equipment. The pricing is the key issue there.

MR SIMSON: But that's an analog?

MR BRITTON: Yes, that's analog. What I'm getting at - and maybe I'm trying to get to where I'm going - that is $1459, the average of the sets tested. We have just been out in the marketplace because we're going to test them again and the pricing from our research averages $1340. So over the past two or three years, there's been a drop of something like $120 in the price of these things. There are two points I'm driving at: one is that if you compare the costs from America to Australia of these television sets, in America you're paying an average of something like $392, whereas in Australia you're paying $1340. Okay, so I don't pretend to understand how those price differentials arise but if you apply the same price differential you're talking about enormously expensive boxes in Australia. The other point is that we're talking here - people often talk about, "Oh, yes, the technology will drop, the prices will drop," and they will, but the key point there is to notice that in these consumer reports the price drop we're talking about is $100 over three years, okay. Then if you look at history of colour television sets, over 25 years they have dropped by about a third in price. The way things are being - - -

PROF SNAPE: In nominal terms.

MR BRITTON: Yes, in this debate that people are talking about now.

MR SIMSON: In real terms it has been a much larger drop.

MR BRITTON: That's anecdotal. I was discussing it the other day with some people at Consumer Association and they were saying that they thought the prices had dropped by about that much, but somehow we have got to try and engineer in about two or three or four years' time a much, much, much bigger drop in digital televisions, which is the point of visiting this analog television data, because I think what we need to do is visit if you like the consumers' expectations of television because one of the things that was said to me, "Yes, yes, well, colour TV, analog TV, it's a mature technology," and it is, but consumers expect television to be a mature product. They

don't care whether it's analog or digital, and they're going to be very upset by a price discontinuity that somehow resets and then has to drop again, unless that fits together somehow.

In our opinion high definition makes that technological disjunction that much worse for consumers. For something that's going to touch every home in multiple places potentially, it's not just the home theatre scenario where - one person compared it to me the other day like changing telephones. Now, we changed from analog to digital mobile phones. Six months before the cut-off date a million people hadn't changed. People change slowly but in this instance it's like we're transferring all telephones to digital phones and then taking away the copper, and it's a similar style, size, transformation. So one of the key things we have been advocating is the idea of the standard definition simulcast, and we will perhaps discuss it more if you wish but simply in the point of trying to get people an entry level to this digital chain so that in terms of their expectations there will be some capacity to get access to cheaper consumer equipment than the astronomical or stratospheric prices that we have been discussed to date.

In that sense I have included a couple more technical style papers on simulcast that may be of some use; one by Ken McCann called DVB and MPEG Devising HDTV Guidelines. The key point there that's made is that DVB was designed to be able to be upgraded to HDTV. It quite happily contemplates SD and HD living in the same envelope. It was a design parameter of DVB engineering that that be able to be done. The second paper, A DVB Specification for High Definition Television by Sandbank and McCann. It's from 97. It talks about the fact that there are two ways of doing that. You either can do it by what's called hierarchical and coding where the two signals are in code in one stream, or you can do it with the simulcast scenario and expresses an opinion that perhaps the simulcast is more efficient.

PROF SNAPE: I'm not sure I have got the first of those two. You said Sandbank and McCann but you have also referred to one by McCann.

MR BRITTON: It's in the back of that, sorry.

MR SIMSON: But in that situation, Mr Britton, why mandate either? I mean, you have pointed out the technology allows both to happen. Why mandate either high or standard?

MR BRITTON: We're not minded to mandate things. It's not our style. I guess from the point of view of our discussion in the context of this thing, is the question of the legislation for high definition.

MR SIMSON: Sure.

MR BRITTON: So from that point of view then what we're saying is that once you get - and that's part of the problem. It's a slippery slope to some extent. Once you start mandating one thing it tends to leave to having to mandate other things which is

in a sense another version of the quid pro quo conundrum - - -

MR SIMSON: Would your preferred position be not to mandate either?

MR BRITTON: Essentially yes.

MR SIMSON: I just wanted to clarify that.

MR BRITTON: No, that's fine. No, I understand. You have talked about it with Optus. I was listening. I can understand the dilemmas and we can go into a bit more detail. I think the other thing, we'll go back to the chip arguments, and this is one of the things where it seems very likely that one of the European pushers in terms of chip development will actually be for up-conversion of standard definition to high definition in the consumer's equipment which is a real opportunity because there are very smart things you can do with line doubling interpolation and various other things inside the equipment as I understand it, to give people a very much enhanced video experience but still off the standard definition stream. Since Europe has gone standard definition in this DVB environment, that's the sort of thing that will very likely be being developed.

I mean, the fundamental question is what was asked to me on talkback radio a couple of days ago. That was somebody saying, "Look, I'm going to buy a $400 television. I want it to last for 10 years." I mean, that's the nub of it. Where will the $400 Australian television be found in the digital television world when we're burdened with high definition television only? Part of the reason for my going through the analog television numbers, they're the expectations. They're orders of magnitude, smaller prices than digital, and people expect it to stay that way. I'm just not sure that that will happen. Perhaps one other small thing to nail the standard definition and high definition is that people talk about high definition as if it was in some way - standard definition then became a throwaway; that once you got high definition you don't need standard definition, so there's this misleading analogy between colour and black and white.

I mean, when you go to colour you throw away black and white. To some degree you do. There are two critical differences between where the analogy breaks down and that is standard definition remains useful. Black and white perhaps does or doesn't but standard definition remains useful for smaller screen sizes where its high definition can't be realised and it's not useful; for mobile and for other applications where you simply don't need high definition. The other issue is that high definition, unlike colour in the same space, is resource intensive. It uses more resources than standard definition, so there is a resource issue that uses up bandwidth and gives you opportunity costs of other services, so it's important, I think, not to succumb to the idea that somehow high definition is an upgrade to standard definition, then leaves standard definition, something you don't need any more.

PROF SNAPE: No, I don't think we have fallen into that one.

MR BRITTON: No, I'm sure you haven't. I like to put it on the record for some others to peruse perhaps and have a bit of a think about. So I think probably if I leave my comments there and invite you to - - -

PROF SNAPE: Okay. Thanks very much. Can I recall when the draft report came out first, you made some fairly critical comments fairly soon after it came out, I think in relation to cross-media in particular which I think might have been based on the ABC television report that day. Is that so?

MR BRITTON: May well have been. I think we might have been - - -

PROF SNAPE: Which just in fact illustrates of relying on media reports because that particular report on Channel 7 on that day was quite - - -

MR SIMSON: ABC that day.

PROF SNAPE: Channel 2 on that day, sorry, at 7 o'clock, is what I meant to say, was in fact quite misleading.

MR BRITTON: The comment is well taken.

PROF SNAPE: So anyway, it led to a few problems, I might say.

MR BRITTON: My apologies in that case.

PROF SNAPE: Anyway, thank you for this. Mr Simson has just been clarifying that in fact your preferred position would probably be to mandate nothing.

MR BRITTON: In a full context which is the issue or one of the things we commented on in our submission, so context is very important, but yes. The point of requiring things is - - -

PROF SNAPE: Thank you for these references to these articles which are very useful too. We, I think in some of the cases, need to see precisely what standards they are talking about when they say quasi high definition etcetera. Does the Consumers Association have a preferred position on the standard of high definition which should be broadcast or would be broadcast? If we are mandating what level should we be going at?

MR BRITTON: In terms of designing the system, I mean, given that we're talking about wanting to have a simulcast with standard definition, then we would obviously favour as, if you like, bandwidths, at least bandwidths intensive as possible, so we would look at suggesting that you went in at the lowest level of high definition, whatever that might be, 576p I think it gets called.

PROF SNAPE: 576p, yes.

MR BRITTON: And leave it to people's discretion if they wanted to broadcast higher than that, because that's one of the, I think, misapprehensions with the simulcast notion, is that high definition crowds out the spectrum completely and of course you don't have to dedicate your entire spectrum to a high definition. Given the difficulties of resolving high definition on screens, a lot of that would be wasted anyway.

PROF SNAPE: On datacasting, do you have a view on datacasting?

MR BRITTON: Essentially our view there is that we would like to see it as broad as possible. I mean, I touched on it as being that you should be able to deliver to the lounge room what you deliver on the web, because from our point of view that's the datacasting promise. It's a multimedia opportunity and that's what should be delivered. Now, we understand the problems that that creates in terms of possible conflict with broadcast-type issues but from that point of view, we don't see that datacasting business model is in any way assured for anybody. I mean, it's now a low risk enterprise, something to enter into. People carry on as if it was some sort of, you know, well-defined thing that you can just go out and do. Anybody that does it is going to be - and I doubt it's going to be successful immediately, so we're very, I guess, concerned that something that's nascent really, it's very ill-defined, it will get strangled at birth before anybody has ever seen what it might do. I think to the extent that it presents challenges, they should well be dealt with as they arise. I think dealing with the challenge at a conceptual stage is very premature.

MR SIMSON: Mr Britton, have you done research here or overseas, and maybe it's in these documents which we can have a read of, that actually researches what people may or may not want from digital, whether it's a better picture or no ghosting or a bit of datacasting or multichannelling or enhanced programming. Is there any - - -

MR BRITTON: We specifically haven't done research on that.

MR SIMSON: No.

MR BRITTON: Our impression is that people certainly want a better picture but one of the questions is what do you mean by a better picture. Some of that research is done in the United States where the picture is notoriously not good so - people bet at reception in terms of ghosting and things like that which digital standard definition fixes anyway, so what does a better picture mean? I think one of the key problems you would have in terms of surveying people is that it's a technologically-driven area, it's technology pushed. People don't really know what's available so you wouldn't necessarily get meaningful responses from asking them.

PROF SNAPE: Yes. I think the various things that you are giving us, and with your exposition, I think you have been satisfying our questions en route.

MR BRITTON: Good.

PROF SNAPE: So that we don't really have much more to ask of you.

MR BRITTON: Good.

PROF SNAPE: So we thank you very much for your help and presentation here and the submissions.

MR BRITTON: You're welcome.

PROF SNAPE: So once again I ask if, at the end of the day's proceedings, if there is anyone who would wish to make an oral presentation. I think that invitation has been declined, and so I now close the hearings in Sydney on this draft report. The hearings will be resumed on Monday in Melbourne at 9 o'clock in the offices of the Productivity Commission there, so thank you very much.

AT 2.45 PM THE INQUIRY WAS ADJOURNED UNTIL
MONDAY, 13 DECEMBER 1999

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