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SENATE

SELECT COMMITTEE ON THE NATIONAL BROADBAND
NETWORK

Reference: Implications of the proposed National Broadband Network

TUESDAY, 28 OCTOBER 2008

MELBOURNE

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**SENATE SELECT COMMITTEE ON
THE NATIONAL BROADBAND NETWORK**

Tuesday, 28 October 2008

Members: Senator Fisher (*Chair*), Senator Birmingham (*Deputy Chair*), Senators Lundy, Ian Macdonald, Nash and Sterle

Senators in attendance: Senators Birmingham, Fisher, Ludlam, Lundy, Ian Macdonald and Minchin

Participating members: Senators Abetz, Adams, Arbib, Bernardi, Bilyk, Birmingham, Bishop, Boswell, Boyce, Brandis, Bob Brown, Carol Brown, Bushby, Cameron, Cash, Colbeck, Collins, Coonan, Cormann, Eggleston, Ellison, Fielding, Fierravanti-Wells, Fifield, Forshaw, Furner, Hanson-Young, Heffernan, Humphries, Hurley, Hutchins, Johnston, Joyce, Kroger, Ludlam, Lundy, Ian Macdonald, McEwen, McGauran, McLucas, Mason, Milne, Minchin, Moore, Nash, O'Brien, Parry, Payne, Polley, Pratt, Ronaldson, Ryan, Scullion, Siewert, Stephens, Sterle, Troeth, Williams, Wortley and Xenophon

Terms of reference for the inquiry:

1. That a select committee, to be known as the Select Committee on the National Broadband Network, be established to inquire into and report by 30 March 2009 on:
 - a. the Government's proposal to partner with the private sector to upgrade parts of the existing network to fibre to provide minimum broadband speeds of 12 megabits per second to 98 per cent of Australians on an open access basis; and
 - b. the implications of the proposed National Broadband Network (NBN) for consumers in terms of:
 - i. service availability, choice and costs,
 - ii. competition in telecommunications and broadband services, and
 - iii. likely consequences for national productivity, investment, economic growth, cost of living and social capital.
2. That the committee's investigation include, but not be limited to:
 - a. the availability, price, level of innovation and service characteristics of broadband products presently available, the extent to which those services are delivered by established and emerging providers, the likely future improvements in broadband services (including the prospects of private investment in fibre, wireless or other access networks) and the need for this government intervention in the market;
 - b. the effects on the availability, price, choice, level of innovation and service characteristics of broadband products if the NBN proceeds;
 - c. the extent of demand for currently available broadband services, what factors influence consumer choice for broadband products and the effect on demand if the Government's fibre-to-the-node (FTTN) proposal proceeds;
 - d. what technical, economic, commercial, regulatory and social barriers may impede the attainment of the Government's stated goal for broadband availability and performance;
 - e. the appropriate public policy goals for communications in Australia and the nature of regulatory settings that are needed, if FTTN or fibre-to-the-premise (FTTP), to continue to develop competitive market conditions, improved services, lower prices and innovation given the likely natural monopoly characteristics and longevity of the proposed network architecture;
 - f. the possible implications for competition, consumer choice, prices, the need for public funding, private investment, national productivity, if the Government does not create appropriate regulatory settings for the NBN;
 - g. the role of government and its relationship with the private sector and existing private investment in the telecommunications sector;
 - h. the effect of the NBN proposal on existing property or contractual rights of competitors, suppliers and other industry participants and the exposure to claims for compensation;
 - i. the effect of the proposed NBN on the delivery of Universal Service Obligations services;
 - j. whether, and if so to what extent, the former Government's OPEL initiative would have assisted making higher speed and more affordable broadband services to areas under-served by the private sector; and
 - k. the cost estimates on which the Government has based its policy settings for a NBN, how those cost estimates were derived, and whether they are robust and comprehensive.

3. That, in carrying out this inquiry, the committee will:
 - a. expressly seek the input of the telecommunications industry, industry analysts, consumer advocates, broadband users and service providers;
 - b. request formal submissions that directly respond to the terms of reference from the Australian Competition and Consumer Commission, the Productivity Commission, Infrastructure Australia, the Department of the Treasury, the Department of Finance and Deregulation, and the Department of Infrastructure, Transport, Regional Development and Local Government;
 - c. invite contributions from organisations and individuals with expertise in:
 - i. public policy formulation and evaluation,
 - ii. technical considerations including network architecture, interconnection and emerging technology,
 - iii. regulatory framework, open access, competition and pricing practice,
 - iv. private sector telecommunications retail and wholesale business including business case analysis and price and demand sensitivities,
 - v. contemporary broadband investment, law and finance,
 - vi. network operation, technical options and functionality of the 'last mile' link to premises, and
 - vii. relevant and comparative international experiences and insights applicable to the Australian context;
 - d. advertise for submissions from members of the public and to the fullest extent possible, conduct hearings and receive evidence in a manner that is open and transparent to the public; and
 - e. recognise the Government's NBN proposal represents a significant public sector intervention into an increasingly important area of private sector activity and that the market is seeking openness, certainty and transparency in the public policy deliberations.

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Committee commenced at 9.18 am

CHAIR (Senator Fisher)—Ladies and gentlemen, I declare open proceedings today for the Senate Select Committee on the National Broadband Network. Today is the third day of a series of public hearings being held by this committee into the national broadband network. We have a couple of days of public hearings in Sydney and Canberra, and during November we will head to Brisbane and Perth. Proceedings before this committee are public and evidence provided to this committee is public. However, there is the facility to provide evidence in camera, if that is appropriate. Any request to do so will be duly considered by the committee.

Evidence provided to the committee is protected by parliamentary privilege. Any attempts to intimidate, coerce or otherwise inappropriately encourage witnesses is unlawful and can be treated as contempt of the Senate, as can providing misleading evidence to the committee. Witnesses are able to indicate that they wish to decline to answer questions asked of them during the proceedings. Provided that witnesses provide the grounds upon which they are seeking to do so, the committee will consider those grounds and make a decision. The committee can decide to insist on an answer. The committee can also decide to insist on an answer but have that answer provided in camera.

I hope that gives our cast of thousands some insight into the basic rules around how the committee will attempt to operate and take things forward today.

BHATIA, Mr Ravi, Chief Executive Officer, Primus Telecom

HORAN, Mr John, Regulatory and Legal Counsel, Primus Telecom

CHAIR—Mr Horan and Mr Bhatia, thank you very much for your time in providing the committee with a submission and in particular your extra time and effort to appear before us today. We have before us your submission. Are there any amendments or variations you want to make to it?

Mr Bhatia—No.

CHAIR—In that case, I invite you to provide the committee with an opening statement, if you so wish, whereafter we will seek to interrogate as is appropriate and benefit from your knowledge.

Mr Bhatia—Thank you very much, Senator. We regard this as a privilege to be present today. We consider broadband to be an essential part of Australia's future, of our economy and of securing our rightful place in the world economy. I have some notes; I did not really prepare a formal statement, so I will read this to you. I would like to first outline our company as to what it is and our experience and so on. Primus started in Australia in 1993 as a Telstra reseller. We were probably the first large-scale reseller of Telstra at that point in time. Quite incidentally we are one of only two survivors of that era, the other being AAPT. Everyone else has gone into bankruptcy and is finished.

We pretty soon found out through resale business that Telstra's wholesale prices were extremely high and we really could not make any margin and we could not survive as a business.

At that point in time we decided to build our own network. This was in 1995. That network went into operation in March 1996 and comprised switches in five states. Over the next 12 months after that, we built 66 points of interconnect with Telstra. In essence we had a network which was as large as could be with the exception of Telstra and Optus. Essentially we were the first company to compete against the duopoly. We chose to compete against that duopoly by offering exceptionally competitive IDD prices and national long distance prices. We made major inroads into that market.

Also on 1 July 1997 we became the recipient of the fourth carrier licence. The first three were Telstra, Optus and Vodafone. In 1998 we had become one of the largest ISPs in Australia serving approximately 450,000 customers. We introduced DSL. Now we have roughly 256 DSLAM exchanges in service and we are adding some more as we go. The bulk of these exchanges, and I think most of them, actually, offer ADSL2+ services. We serve several hundred thousand customers. We employ several hundred people. We actually employ over 700 people in Australia right now. In building this network we have invested approximately \$400 million.

Insofar as I am personally concerned, I have 38 years of experience in the retail telecommunications industry—in Australia, naturally, and in the United States, and earlier than that in Europe. As you can see from my name and accent I started in India. I am also a graduate electrical engineer. We have a certain point of view about broadband in Australia. We think the vast majority of urban centres have excellent service, courtesy of the competition that exists today, which generally has kept the service quality pretty high and the prices reasonable. Approximately 15 to 20 per cent of people in urban areas in our experience do not have access to broadband services because of pair gain and RIM equipment deployed by Telstra.

CHAIR—What percentage?

Mr Bhatia—Fifteen to 20 per cent. We derive that from our own experience when customers sign up with us. We find that 15 to 20 per cent of the customers that sign up with us cannot be provisioned on broadband. We feel that this is a serious situation that needs to be addressed. We also feel that it is relatively easy to address it and relatively inexpensive to address it and probably it can be addressed quite quickly. We feel that the vast majority in regional and rural Australia do not have access to broadband. We think that those particular underserved areas need to be prioritised. We think that there is opportunity for rural economies to grow and employment opportunities to exist because the skills do exist out there, and therefore we need to address that on a priority basis.

In our opinion mobile broadband is not a substitute for fixed line broadband or fixed wireless broadband because of cost reasons, and the two products really are not cross elastic, not only because of cost reasons but also because of other technical reasons, like availability of spectrum, downloads and so on and so forth. We think that Australia has tremendous future wireless opportunities when the analog TV spectrum is freed up in the next decade upon analog TV moving to digital TV en masse. The 600-650 megahertz spectrum is pure gold. It will change the equation quite dramatically for all of us.

From our customer experience what we find is that customers are quite price sensitive—at least our customer base is very sensitive. The price range, the sweet spot, is around \$30 to \$40 a month. They find it harder to buy services that are more expensive than that, and generally it is

very difficult to provide services and make any margin out of it for under \$30 a month. Our experience in dealing with Telstra has been as follows: they have acted like a classic monopoly and are reluctant to act like a wholesaler. They obviously heavily favour their retail. For example, some of the broadband services that we resell from Telstra are inferior to the services that they offer to their own retail customer base.

We feel that ACCC regulation of Telstra has been light-handed and has become extremely soft in the recent few months. We have several concerns about the situation as it exists today. We are concerned that Telstra, which is a wholesaler to us in many ways—and we are one of its largest customers—has access to customer-sensitive information. While we cannot conclusively prove it, we feel that that information may be used to gain competitive advantage. We have instances, and we have not really kept records because we never knew that this would come to this. For example, we do a service quality check—

CHAIR—Sorry, did you say you have not kept records, Mr Bhatia?

Mr Bhatia—We have not kept records on this particular point. A customer has approached us to provide broadband services but we found that we could not because of various reasons, and we discovered later on that the customer was directly approached by Telstra that wanted to sell them broadband services. We found it upsetting, but we focused on our business. We thought that it is very hard to keep these records and get into an extremely adversarial situation with a major supplier. We are subjected to massive telemarketing campaigns by Telstra to our customer base, and we lose several thousand services every month to such campaigns.

We found as we were building our DSLAM network that in many cases it took us 9 to 10 months, maybe 11 months, to get access to a particular exchange. The reasons given were that there was work going on in a given exchange by others. Upon inspection, we found little evidence of any work being done. We found that in several cases we were told that the exchanges were capped. We visited some of them and as a consequence of those visits and pressure that we applied to Telstra, directly and through ACCC, some of the cappings were removed. We found, again through experience, that building exchanges is a serial process. That means that only one carrier could work there at a given time. If that carrier took a lot of time, there was absolutely no capping of the time a carrier had access to a given exchange. We also discovered that only one electrical contractor was allowed or certified to work in a given exchange, and that contractor was so busy elsewhere that our work could not be done.

In short, we found lots of artificial hindrances. We made a number of suggestions to improve these processes, but I think that nothing ever came to fruition. We find that we are often subjected to monopoly prices on access facilities and unfair non-price commercial terms and conditions. We find that we have a regime of dispute resolution whereby we lodge a dispute, we try to negotiate and then it goes into arbitration and so on. That process is effectively gamed by Telstra to delay matters for years. What it means is that small businesses or small companies like us are forced to make low interest loans to Telstra. We keep on paying high prices, and years later, these moneys are given back to us. Therefore we become cash starved. We could have deployed such funds as capital or for marketing to gain more customers and bring new services to the marketplace.

We are often subjected to wholesale and retail price squeezes whereby in many, many cases wholesale prices often are more than retail prices, and that acts to our detriment, but we find ourselves to be absolutely powerless to fight that and to have issues of that nature resolved.

Senator MINCHIN—You can retail less than the wholesale price?

Mr Bhatia—That is correct. These are our practical experiences with Telstra and its behaviour as a large corporation that is many times our size. It convinces us that the future of broadband in Australia lies in structural separation of the largest retailer in Australia. Their own behaviour rather than any theoretical considerations makes us conclude that the structural separation of Telstra or the new network from Telstra is very crucial and very important.

CHAIR—Thank you, Mr Bhatia. You have added a lot of information to your submission, which my colleagues will find very interesting to ask you and Mr Horan questions about. Mr Horan, do you have anything you wish to add to the opening statement made by your learned colleague?

Mr Horan—No. My learned colleague has 35 more years of experience than me.

Mr Bhatia—Learned, I do not know about—wiser maybe.

CHAIR—I might begin questioning by asking you, if I may, Mr Bhatia, about the 15 per cent underservicing in metropolitan areas. If I am correct, you said it would be relatively easy to address that. Then you spoke about prioritising the underserviced areas in rural and regional Australia. We have heard evidence from a number who have suggested rolling in, effectively, the NBN from those underserviced areas rather than rolling out. Can you comment firstly on your observation that it is relatively easy to address the 15 per cent and, secondly, how you would go about servicing rural and regional Australia? My colleagues may then want to ask you further questions about that.

Mr Bhatia—Sure. Thank you, Senator. The number is 15 to 20 per cent and it is empirical. We do not really have any details of Telstra's network, right? But this is what we find from our experience when we take orders. We cannot provision 15 to 20 per cent of orders because of pair gain issues in general. How to address this?

CHAIR—I am sorry. Do keep talking. I will move around. I am listening.

Mr Bhatia—Sorry. There are several ways to address this: remove pair gain systems and put extra copper in and so on and so forth. That takes a lot of time and takes a lot of investment. One way to address this situation is by using fixed wireless networks rather than mobile wireless networks, right? Fixed wireless networks would involve, for example, towers. A typical tower would produce a coverage of roughly 10 kilometres radius and because of spectrum considerations and because of frequencies that are available today, it would require customers to have near line of sight or line of sight operation. That means that they will have to put out a small antenna up there, much like they have a TV antenna but much smaller—about the size of this A4 paper—externally installed. Typically it costs \$200.

In our cost estimates, we think that a typical tower to service a given area, or the capital expense involved, is approximately \$150,000. On top of that, if we add to that the cost of CPE, the customer premises equipment in this case, that would add another \$200, and there would probably be another \$150 for a roofing plumber to install this antenna externally. I think we would have a good solution.

We must recognise one thing here: the bandwidth demands will change over time. This solution would give us at least a four or five year bridge until the time the next generation networks can be installed. That means we can service these people right away. A similar situation would apply to rural and regional Australia. Let us take a particular example. Let us look at Ballarat, for instance. I believe Ballarat to be an underserved area.

Before I move forward, let us look at the elements that go into providing broadband services to a given area. There is of course the customer access network, which is between a customer's premises and a serving point of presence. That particular serving point of presence has to have high-speed backhaul, which is required, right? If we look at the Ballarat example that I mentioned, the state of Victoria built, as a part of a VicRail project, something called a fibre optic cable system that goes from Melbourne to Bendigo, Ballarat and regional towns along that line, okay? The most expensive component of the network is backhaul, and that backhaul exists today. Installing three or four towers of the type I described earlier to overcome the RIM issue could probably allow us to light up a small town like Ballarat with high-speed broadband.

Senator IAN MACDONALD—You picked one town with B, Ballarat. Let me pick another one, Birdsville, and tell me how you would get broadband there?

Mr Bhatia—Senator, I do not know about Birdsville.

Senator IAN MACDONALD—I am sorry, Birdsville is in the south-west corner of Queensland on the borders of Queensland, South Australia and New South Wales.

Mr Bhatia—That would be pretty isolated.

Senator IAN MACDONALD—Yes.

Mr Bhatia—Yes. I think the issue there would be backhaul, right? There are two possible solutions to that. One is DTH, which is direct to home satellite. The second solution to that would be to use satellite as backhaul, but to use a lower frequency wireless in the local area.

Senator IAN MACDONALD—But it is doable, though, is it? They already have satellite broadband out there, but they tell me it is slow and very expensive.

Mr Bhatia—It is because the current generation satellite broadband, from memory, is around 256 kilobits per second, or thereabouts, okay? The next generation satellite can take it to high speeds, 1.5 megabits per second or 8 megabits per second, and so on. The advantage is that satellites have spot beams or regional beams. You can really cover a very large area rather quickly.

Senator IAN MACDONALD—But is Telstra not promising to have fibre out there, and everywhere else, unless it is part of the two per cent?

Senator MINCHIN—I suspect Birdsville is part of the two per cent.

Senator IAN MACDONALD—There are a lot of other places. It will be a big two per cent.

Senator MINCHIN—Physically and geographically, it will be.

Mr Bhatia—But clearly there is another factor to consider and that is effective use of capital. With a \$250 million to \$300 million satellite, which is usually used in pairs, one as a stand-by and one in operation, so with \$600 million we could possibly light up all of Australia to serve as alternate mechanisms of broadband delivery.

Senator IAN MACDONALD—Was that the original OPEL proposal?

Mr Bhatia—I have no familiarity with the OPEL proposal.

Senator IAN MACDONALD—Okay.

CHAIR—Senator Macdonald, continue with your questioning if you wish.

Senator IAN MACDONALD—I have just one more question. I did not intend to go on. Are you aware of the last submission we had from Kevin Morgan? You are advocating structural separation. Do you know of Kevin Morgan?

Mr Bhatia—I know of him. I know he writes in the *Age* and I often write rejoinders to his articles.

Senator IAN MACDONALD—He has put in a submission and he will be coming to talk to us later this afternoon. In all the submissions we have received, they have basically all argued for separation, and he is saying structural or functional, and points out that people confuse the two. As I understand his submission, which is quite complicated, he is saying it is all rubbish and the only one that really can run a network here is Telstra. My question really is: have you read his submission to this inquiry?

Mr Bhatia—No, Senator, I have not. I have read his articles in the *Age* from time to time. As I indicated earlier, I respond to them. When I say structural separation, I am not coming from a theoretical basis. I am coming from very practical experience that we have had in dealing with issues of this type. I am sure if Mr Morgan has made a submission, he probably has as extensive an experience in dealing with Telstra.

CHAIR—His submission is public available, Mr Bhatia.

Mr Bhatia—I see. I am sorry.

CHAIR—No. You may wish after these proceedings to have a look at it. It is totally open to Primus Telecom to provide the committee with further information, if you wish.

Mr Bhatia—Thank you, Senator.

Senator IAN MACDONALD—I am just very interested in his submission, which is quite different as I read it to most other submissions we have received. I am going to try to find out today what people who are supporting the separation think of some of the arguments he makes, which on paper seem to be cogent.

Mr Bhatia—The structural separation issue may be misunderstood in the sense that the new network presents an opportunity to do it right this time around. What I am suggesting is structural separation of the new network, not the entire existing Telstra network, or the network that Telstra operates. The new fibre network, when it is built, should be structurally separated.

Senator IAN MACDONALD—As I read his submission, and I do not want to misquote him, I understand him to be saying that the cost of separation far exceeds any benefit you would get from greater competition, et cetera. Perhaps I should just ask if, in the course of your business over the next couple of weeks, you might just have a look at his submission and perhaps even drop us a note, if you violently disagree, which I suspect you will.

Mr Bhatia—I will certainly read it. I do not know if I will disagree violently, but I will certainly read it. I think you have piqued my interest. Thank you very much for pointing it out.

Senator BIRMINGHAM—Mr Bhatia and Mr Horan, thank you for your time today. I will follow on from Senator Macdonald's questions to begin with. Obviously a new network will be a natural monopoly and will therefore require a strong regulatory framework built around it to ensure that reasonable competition exists. Why, in your opinion, could a successful regulatory framework not be built without having structural separation?

Mr Bhatia—I will start and John can finish it off. There exist regulatory mechanisms today in the Trade Practices Act XIB and XIC, and that is really your strength, not mine. In my experience, it has been found very hard to enforce provisions of the Trade Practices Act for various reasons. John, you can take it up from here.

Mr Horan—Yes, I can. Thank you, Ravi. The problem is the incentives that still exist.

Senator IAN MACDONALD—Are you a lawyer, are you?

Mr Horan—I am, yes, by trade. The problem is the incentives that still exist when Telstra has a retail agenda as well as an obligation to wholesale. That is the situation we find ourselves in today. Telstra is a very reluctant wholesaler to us. What we need is what has been termed as a no-conflict, open access model where the incentives are aligned with the competition goals and the national interest and consumer benefit outcomes that we seek. When that is not the case, we have the system we currently have where there is a lot of hurdles that are put in the way of our objective to provide services to our consumers and compete aggressively with Telstra and others in the market.

The regulatory framework we currently have, such as the Trade Practices Act and Ravi referred to that but I include XIB and XIC, have largely proved futile in disciplining Telstra and ensuring the outcomes that were intended when the regulatory framework was first enacted. In

section XIB, the principal areas we are referring to here are around anticompetitive conduct. The ACCC and the industry have from time to time considered or initiated some sort of step to proceedings under XIB, but eventually Telstra has managed to fend those off through legal technicalities or just the difficulty of obtaining evidence and rules like that. Largely when we talk about XIC, that ensures fair and reasonable terms of access, price, and non-price. Again the arbitration processes have proved to be, we would say, a failure. We are still negotiating access with the ACCC arbitrating that for a period for ULL that relates back to 2004. At this stage we are acquiring access, and we have, but we still do not know what the price is.

To paint the context of these arbitrations, we have three on foot at the moment and few more in the wings. We have three staff members working on one of these arbitrations to try to determine a price for ULL. At last count, Telstra had 36, and 10 or was it 12, of those are lawyers from Mallesons. You have to remove that and the only way to do that is to remove those mixed incentives that Telstra has to ensure that we deal with a wholesaler that has an interest in accommodating a competitive industry, accommodating innovative services, and the broadband objectives that we want to deliver to our consumers as opposed to a wholesaler that has a retail agenda and well-publicised profit objectives that are inconsistent with trying to serve the wholesale industry in the way that the wholesale industry wants to be served.

Senator BIRMINGHAM—I appreciate that answer. In your submission you have been one of the more forthright submitters in terms of the level of angst you run into in the relationship with Telstra and both the pricing and non-pricing barriers it puts up and the gaming theory that they may or may not apply. I want to tease out a couple of these issues, if we can. I understand there may be limitations in terms you wish to go, so please say if there are concerns with the direction we are pursuing.

You indicated that you have installed DSLAMs in 256, I think you said in your opening statement Mr Bhatia, of your exchanges. Is that an ongoing process? You said there were sometimes nine to 10 months to gain access to those exchanges. What reasons has Telstra given for those delays? Have you pursued those issues around those delays with the ACCC or elsewhere and sought to get that process hastened?

Mr Bhatia—Senator, what we discovered was that there was not a national process for access to the exchanges and TEBA, but each state had a product manager assigned to it. The product manager typically was in a position to determine what essentially the process should be. We found that in certain states it was faster and in certain other states, it was slower. Victoria was not very good. It actually was one of the bad ones. We analysed the process and we found that the process was serial in the sense that if a given ISP got access to an exchange, no other ISP could have simultaneous access to that exchange. There was only one ISP or carrier that could work in there. The period for which that ISP was allowed to have access to that exchange was not capped.

If somebody went in ahead of us, until that person ahead of us vacated the exchange we could not get in. There were no reasonable time limits. I may tell you here that the way we work it takes us approximately 120 man hours to finish our work in a given exchange. For the life of us we could not understand why people were in there for nine months, 10 months, and so on, and why there did not exist a pressure on them to finish their work. Let us say they are 10 times as

inefficient as we are, that will be 1,200 man hours. We simply could not understand it. We raised it a number of times.

In fact, what I did is this. I live in Toorak in Melbourne. We did not have access to the exchange in Toorak in Melbourne so I asked my engineers to access that and they said, 'Oh, we are already there. We applied three months ago.' So I said, 'All right, let us track it as to where we are.' We would track with Telstra on a fortnightly basis and I kept a diary of it because it was an issue which was close to me, and we would get the same reply every two weeks—that the other party is still working in that exchange. I visited that exchange a number of times and not once did I see anyone working in that exchange. I mean, it would be a hell of a coincidence really that every time I visited the competitor went away. That story is repeated across multiple exchanges.

Mr Horan—We have no visibility as to the issues that are impeding our roll-out. We did raise a number of issues with the ACCC, and the US Trade representative also conducted an inquiry around this. Ultimately there were a lot of so-called capped exchanges that were suddenly uncapped as a consequence of those inquiries by the ACCC and the US Trade rep. There were many exchanges that we had been camping outside for years and we had been told they were capped and there was no room in there to put in our equipment, so we could not provide our consumers with broadband. Lo and behold, earlier this year Telstra had to put up its hand and confess that they were not capped, and that there was in fact room there for our equipment. Primus and some other competitors have since or are now installing in those exchanges. It is just the lack of visibility and there seems to be no enthusiasm on the part of Telstra to try to get some sort of efficient system in place for deploying our equipment or competitive equipment in these exchanges because, as I alluded to earlier, they have no inclination or incentive to encourage a competitive broadband industry, or certainly an aggressive one.

Mr Bhatia—I may add that there is further collateral damage to it in the sense that what we find is that in the 256 or so exchanges that we have in service today, 40 per cent are full. Therefore, we have to add a second cabinet, and to add a second cabinet we have to wait nine more months. Then if we have to wait those nine more months, we run smack into what is going to happen with NBN? Should I be investing millions of dollars now, wait for nine months and have the investment totally stranded?

Senator BIRMINGHAM—Mr Bhatia, you have pre-empted what was going to be my next question, and Senator Fisher is giving me the wrap-up call for my last question, and that is: Are you continuing to seek to expand your network through the installation of DSLAMs or otherwise, or are you doing so at present? If so, is Telstra being more or less cooperative at present? If not, is that a result of the government's pursuit of the NBN and the uncertainty that exists in the market at present?

Mr Bhatia—There are two parts to that question that I can give you, and the second part has to be in camera. Insofar as the first part is concerned, there is a confluence of factors. One is the extreme wait. The second is uncertainty about NBN. That is holding up that investment now. The second part of the answer I would like to give you in camera.

Senator BIRMINGHAM—Perhaps we can pursue that at the end, since there are other matters.

CHAIR—We will consider that, Mr Bhatia.

Senator LUNDY—I want to go back to your experience in not being able to provision some 15 to 20 per cent of your customers upon request. I note that in your evidence you have talked about the lack of visibility that Primus had of the Telstra network and capping within exchanges and so forth. What information do you get from Telstra on the constraints on the provision of ADSL services from exchanges that you have installed your own DSLAMs in? What are you told by Telstra when you approach them to install your DSLAMs in their exchange, and how does that inform your investment?

Mr Horan—My understanding, and Ravi can jump in, is that after we conduct an initial service qualification inquiry we get a response Y for yes, or N for no. We follow that up and we subsequently can identify where it can be attributed to long line, RIM or pair gain, and that is about as much information as we can obtain. We have previously requested what is called line transpositioning, when there are some obstructions to providing a DSL service to a consumer. Telstra has refused to provide that to us. I think it is public knowledge that it tends to provide it to itself so it can then service that consumer.

Mr Bhatia—That is absolutely right, John. You are on the mark.

Senator LUNDY—Let me get this clear: if a customer requests an ADSL service from Primus, you make the inquiry of Telstra as to the availability of that service on that customer's line. Telstra will tell you yes or no, but not why yes or no, particularly in the case of a no answer. Are you saying that you know of circumstances when Telstra has subsequently provisioned that customer with the ADSL service that they were unable to purchase through you?

Mr Bhatia—We have anecdotal evidence of that. We have some situations of that nature, yes.

Mr Horan—We often get complaints from consumers who experience that. As Ravi alluded to, we have anecdotal evidence of that.

Senator LUNDY—I am sure the ACCC would be interested in those circumstances when they occur because my understanding is that that would constitute anticompetitive behaviour, quite specifically on behalf of Telstra, because Telstra is required to provide you with information to enable you to provide the service. Can I just go a bit further? With respect to small pair gain systems, which can be rectified by what Telstra described as a transposition of the installation of essentially new copper to bypass the pair gain system, how many times or what proportion of times would you have requested an ADSL for which Telstra has provided a transposition to enable you, Primus, to provide that service?

Mr Bhatia—I could not quantify it, but there have been instances of that nature.

Senator LUNDY—So there have been some instances of it.

Mr Bhatia—There have been some instances of that nature, yes.

Senator LUNDY—Again my understanding is that, if they are requested and that is possible, they are under some obligation to rectify that broadband blocker in their network to allow that service to be provisioned, albeit by a competitor.

Mr Horan—About four or five weeks ago we raised that very question with Telstra, and we were quite flatly advised there would be no offer of a transpositioning service for Primus if it wished to provision a ULL or a DSL service to consumers that suffered from pair gain or RIM access problems.

Mr Bhatia—The policy has changed.

Senator LUNDY—They flatly refused.

Mr Horan—They may offer it—

Mr Bhatia—On a scheduled basis.

Mr Horan—Maybe, but very unlikely, to be honest. I think it is a flat denial. But for spectrum sharing service—

Senator LUNDY—So reselling?

Mr Horan—No, I am sorry, spectrum sharing service is when Telstra will still provide the voice service and another competitor may provide the broadband. My understanding is that they offer a line transpositioning service, but it comes at quite a cost—a very significant cost.

Senator LUNDY—With respect to capping in exchanges, I am aware of constituents who have contacted me directly that they have been advised by Telstra that there is a finite number of ADSL services emanating from their exchange, and there are no longer any more available by Telstra and presumably anyone else. What is your experience with capping? I note in your evidence you said that you were advised by Telstra that they were full and that it was not physically possible to install more DSLAMs, yet you subsequently found that that was possible. Can you describe in a little more detail what happens if you ask Telstra the question, ‘Can you provision this customer with a service?’, and the answer comes back that the exchange is what they claim to be full? How does that work?

Mr Horan—It is not a service-by-service request. What we request when we are talking about capped exchanges is that we are requesting the ability to install some equipment into the exchange so that we can provide a number of services. That is when we are advised that they are full. But that said, often it is capped because there is no room for our equipment or it is capped because there is very little room on the MDF for new lines to be connected. I am not an engineer. However, our experience to date—and we have conducted an investigation and engaged someone to do this for us—was that the particular exchange that we called upon, our consultant advised us, or we were told, that the MDF was full and there was no room for any services to be connected, and our consultant advised us that that was not the case. We have since escalated that further.

Mr Bhatia—In one exchange we noticed that there was room on the one hand, but that was earmarked for Telstra's future use. In one case the future use included building an office for an engineer. We also came across the fact that there were lots of cabinets in a given exchange which were no longer in service, but they were just occupying space and could have easily been removed. I think the rejection was probably an ill-considered one, without going into details. The person who addressed that request simply dismissed it out of hand and probably did not apply himself or herself to doing a detailed check to see what was the de facto situation.

Senator LUNDY—Thank you for that. I am also interested in the extent of information Primus has about the general state of the network. We have often heard the figure of ADSL being able to reach 85 per cent of the population, and I know that that relates to the proportion of the population serviced by the larger exchanges. But I also know from previous evidence to various committees from Telstra before it was fully privatised that never are these exchanges capable of delivering ADSL to all of the customers in the ADSL-enabled exchanges. In fact, Telstra has quite a strict approach of what they consider commercially viable for decking out their exchanges, and other constraints such as the radial reach of ADSL and the copper bundle attenuation issues, of which I have taken evidence previously that only between 10 and 20 per cent of copper pairs within a bundle of 100 could carry an ADSL signal without getting some attenuation difficulties.

All of these mean that ADSL cannot possibly reach all of the customers connected to those exchanges that are ADSL-enabled. What sort of information do you get access to about these types of constraints? How does that impact upon your investment decisions and your capital investment in given exchanges? How do you make those judgements? On what information do you make those judgements as a business?

Mr Bhatia—There are two manners in which we use Telstra's wholesale services. One is that we would use a straight resale service for the exchanges in which we have no presence, and in those particular cases, a check is possible only on a customer-by-customer basis.

Senator LUNDY—That is the question you ask Telstra, and they come back with a yes or no.

Mr Bhatia—That is right, quite right. The second part of it is that there is a second manner in which we use Telstra's wholesale services is to use the unbundled local loop or spectrum sharing, as the case may be, and the constraints there are three. The first constraint is the space in the exchange itself, right? The second constraint is more customer specific and that is whether the customer is affected by RIM or pair gain equipment. Then, if the customer is not affected by either RIM or pair gain, the distance of the customer from the exchange. Some customers could be simply too far away because of attenuation, across rock, noise, quality of copper issues, to be able to service effectively.

Senator LUNDY—Did Telstra give you that information, though, when you get that yes or no back?

Mr Bhatia—I could not answer that accurately, but what happens is that the process is like this. We log onto a system and that system tells us whether a service number can be serviced or not. If the answer is no, we usually escalate it. Then we find out the precise reason as to why it cannot be done. At times we request transposition and so on.

Senator LUNDY—Yes. A final question for you relates to large pair gain systems or RIMS. If you make a request to Telstra to connect a customer who is on a RIM, how do you go about doing that? Is that possible? Are you able to install DSLAMs in Telstra RIMs to provide the customer with a DSL service?

Mr Bhatia—No. We are not allowed to install any DSLAMs outside the exchanges.

Senator LUNDY—So if any customer or groups of customers are seeking access through Primus and they are on a RIM, and we know that there are at least 800,000 of those, you cannot provide any of them with a DSL service?

Mr Bhatia—No. In the current architecture of the network and the technology that is deployed, no, we cannot.

Senator LUNDY—Thank you very much.

Mr Bhatia—I might add that at one time when this capping issue was becoming a major problem and before we had this investigation carried out, we considered the possibility of us putting cabinets outside Telstra exchanges, either in public space or on the open real estate that surrounds Telstra's exchanges. We gave up on the idea because I believe that we were told by Telstra that (a) they would not allow us to put any cabinets on their property, and (b) it would have been simply cost prohibitive to put cabinets on sidewalks, going through the whole process with the councils, and so on and so forth. It would have been extremely complicated so we dropped that idea.

CHAIR—Thank you, Mr Bhatia. I will ask Senator Minchin to ask a couple of questions. The witnesses present have generously agreed to allow us to push back into the lunch hour, so Senator Minchin will ask a couple of questions and then we will consider your request to provide the second part of the answer to Senator Birmingham's question in camera.

Senator MINCHIN—I will just confirm that you are members of the TERRiA consortium?

Mr Bhatia—Yes, Senator, we are.

Senator MINCHIN—And it is your intention to remain members of the consortium? There is nothing that would lead you perhaps to consider withdrawing?

Mr Bhatia—There is no reason I know of, no. We are very strong members of TERRiA.

Senator MINCHIN—Are you concerned, as a member of the consortium, by the withdrawal of three of the members of the consortium in the last two weeks?

Mr Bhatia—I have some firsthand knowledge of this, which I am happy to share with you. I think Soul was an active member of the consortium. After its merger with TPG, the new company showed very little interest in participating in the consortium. If one took it as a fait accompli that that would happen at some point in time, naturally we could not throw anyone out; they would have to leave of their own volition, right? With the other two, I think TransACT's situation is best addressed in camera. Insofar as AAPT is concerned, I think its CEO has said that

external factors from New Zealand influenced his decision on one hand, and I think he said also that he wanted to speak freely about the issue of NBN, and the gag rules which apply to NBN bidders or proponents, or potential proponents in this case, would constrain him. Therefore he decided to exit TERRiA. So he gave two grounds.

Senator MINCHIN—Clearly the funding obligation on TERRiA, if it were to win, would be enormous—at least in the realm of \$10 billion in addition to the government's equity. Would Primus be part of the funding of this very, very substantial investment, if TERRiA were to win?

Mr Bhatia—You know, I am not across it yet of what it would cost to build NBN and how the timing of the project finance will work. Obviously in a project of this nature which takes five years to build, you do not need \$10 billion on day one, if that is the cost, right? The funding is drawn, as you know, on a progressive basis. Let us assume a hypothetical number of \$10 billion and let us also assume that the government, which has indicated a commitment of \$4.7 billion, contributes to the project, right? We do not know how that flows and what the terms and conditions are associated with it and what the rules are, right? The whole funding question is an open one because of a lack of clarity surrounding the total cost of the project. It is not in the public domain, nor is the project's schedule and how the funds will be drawn upon.

But if you were to take a theoretical construct, one could say that \$4.7 billion is coming from the government. The TERRiA consortium members between themselves would probably contribute, let us say, another \$2 billion and that would leave a shortfall of \$3 billion which could come, for example, through vendor financing and debtor equity as debt markets improve.

Senator MINCHIN—Are you saying that as a member of the consortium, you do not know what the anticipated cost of rolling out fibre to the node, to 98 per cent of Australians, would cost, or that you are not at liberty to indicate to this committee what it is?

Mr Bhatia—Senator, I am not yet fully across it.

Senator MINCHIN—Okay. We have heard a minimum of \$15 billion. When I said \$10 billion, that was in addition to the government's equity of \$4.7 billion, so anything up to \$30 billion. Obviously, there is gaming in the process, but \$15 billion seems to be the accepted cost.

Mr Bhatia—I do not know on what basis. I do not know on what basis because it is a function of a number of things. It is a function of the project schedule, and it is a function of the technologies deployed. Different technologies would have different cost elements and so on, right? I am not across that level of detail. I have heard numbers of up to \$25 billion mentioned by the CEO of Telstra, right? I have also heard the same gentleman mention numbers of between \$10 billion and \$15 billion, so I tell you I think these are all guesstimates at this point in time. I have not been involved with that level of detail with the bid preparation.

Mr Horan—That preparation is still continuing so there is nothing finalised yet. These numbers are still moving on a weekly basis.

Senator MINCHIN—A fellow member of your consortium, the managing director of iiNet, has publicly described the bidding process for the NBN as corrupt. He said the one thing that everyone in the industry agrees on is that this is a bad investment and it is a completely corrupt

process, and he also said, pardon his French, that the government is just pissing money up against the wall with this project because it failed to define the rules of the bidding process. Do you have a reaction to Mr Malone's views on the whole process, of which you are part, as part of TERRiA, as is he?

Mr Bhatia—I think that is the beauty of TERRiA—that we still are democratic.

Senator MINCHIN—It is like the parliament, is it? Oh no.

Mr Bhatia—Yes. And that is good, is it not?

Senator MINCHIN—I guess so.

Mr Bhatia—That people are allowed to express their point of view. This probably is the wrong example here, but Mao Zedong said, 'Let a hundred flowers bloom.' And then he shot them all.

Senator MINCHIN—Are you telling me that Mr Malone is wrong? He says 'everyone in the industry'; do you disagree with Mr Malone, do you?

Mr Bhatia—It is a very complex question. I would appreciate it if we could address this in camera.

Senator MINCHIN—Sure.

CHAIR—In that case, if I can ask those present in the public gallery, such as it is, to vacate the room for a period while the committee firstly considers the request being made by Primus Telecom to be heard in camera. Thank you.

Evidence was then taken in camera but later resumed in public—

Proceedings suspended from 10.32 to 10.49 am

RAICHE, Ms Holly, Executive Director, Internet Society of Australia

WHITE, Mr Gerry, Director, Internet Society of Australia

CHAIR—Welcome. I do not believe you were in the room earlier when I outlined the basis of the proceedings today. The evidence that you provide to the committee is taken in public, unless you request otherwise, in which case the committee can consider a request to provide evidence in camera. In providing evidence to the committee you are protected by parliamentary privilege, and it is unlawful for anyone to attempt to intimidate you or otherwise influence you in respect of evidence that you have provided or will provide to the committee. It is also open to the committee to consider any requests that you may make in terms of objecting to answer any questions that may be put to you by a senator as a member of this committee, and will consider the grounds upon which you may wish to object, if you do. With all that preamble aside, the committee has received your submission. Do you wish to add to or vary it in any way?

Mr White—Thank you, Senator; substantially, no. We would like to labour some points, if we may.

CHAIR—In that case, I invite you to make a very brief opening statement. My colleagues will wish to ask you questions as to the detail, but I invite you to make an opening statement.

Mr White—Thank you, Senator. I note the South Australian senators are here. Being a South Australian, I applaud that initiative.

CHAIR—Indeed.

Mr White—The Internet Society has a broad base in Australia and it is the Australian chapter of the International Internet Society. Our whole aim is to improve service delivery in Australia. We are very much focused on the fact that the government initiative is to be applauded as an initiative across the country to improve fibre-to-the-node connections, particularly broadband. Our concern is not the connectivity; our concern is the delivery of service to communities, particularly education, health and business. We note the recent OECD figures on connectivity in Australia and our ratings internationally, which are continually slipping. Hence we applaud the initiative by the Australian government to do something about that.

There is concern around Australia of course in the sectors that I have mentioned, and there are others, that this is taking some time to occur. No doubt there have been submissions from other groups that have taken those points up particularly and the other government initiative, the digital education revolution, is also taking up a part of that as well. Our whole emphasis is the delivery of services to communities. We believe that the business model is particularly of importance and concern. We do not have a view on separation other than to say that operational separation has operated now for a few years. Whether operational separation or structural separation is something that the committee considers or reports on, our only line in that would be simply to say that whatever improves the delivery of service to Australian communities is what we are after. Our mantra is the 'Internet For Everyone'.

The bottom line on that particular issue is simple: we have had operational separation for three years virtually. We have seen what has happened in the UK and in New Zealand and we think that it is timely that a review be undertaken in Australia to see if that is working, whether or not to improve it, or which way to go. We do not have a view on which is the right answer: we just do not know. I think worldwide, that is similarly the case, but at least a stick has been put into the sand, and it is a good opportunity to review and reflect on that. Senator, they are probably the main points that we really want to emphasise. Our great concern is the social, educational and economic opportunities that Australia is missing in the lack of provision across the country. That is why we applaud this initiative and we wish it all speed.

CHAIR—Thank you, Mr White. Ms Raiche, do you have anything to add?

Ms Raiche—No.

CHAIR—In that case, I invite Senator Birmingham to lead with the questions we wish to ask you.

Senator BIRMINGHAM—Thank you, Chair. Mr White and Ms Raiche, thank you very much for your time today. Firstly, why do you believe Australia is lacking and falling behind, as you put it, in terms of internet connectivity and access to broadband? Does it relate to the wrong regulatory framework, the wrong structural framework, or a lack of government investment? What do you target as the reasons from a consumer perspective?

Mr White—Senator, I am not sure that we would focus on any one particular issue. The OECD figures at the moment give us a position of 16 in the world, which is somewhat embarrassing, and we have been slipping down the pile for sometime now, probably since about 2000 or 2001. Originally the Internet Society would have argued that there does need to be a strong emphasis across the country on finance to do that. We see that that is being taken up at present. There is no doubt that a bundle of regulatory provisions need to be considered very carefully and we have hinted in some of those in the context of separation.

We think that in Australia we have particular problems that are very similar to those of Canada. However, Canada was provisioned through broadband much more quickly and invested more heavily and more quickly than we did. Probably it would be reasonable to argue that Canada's provisions into communities by around about 2001 or 2002 was pretty healthy. We would like to see that as a benchmark and possibly even South Korea, although I think South Korea is a little bit too small and too highly concentrated, and does not have the vast expanses and the big donut in the centre that we have. Senator, I would not say there is one particular issue; I would say there is a whole bundle of issues, particularly relating to our geography and our location.

However, the one thing I did not mention is that whatever is the business case in the roll-out of the provision, roll-out or roll-in, our argument would be, if the internet is for everyone, that the greatest advantage clearly would be to roll in. That is a particular business model that may be difficult and would need to be worked through.

CHAIR—I am sorry, did you say the great disadvantage?

Mr White—If we roll out, we roll out from the major population centres out into country areas. If we roll in, we would start in the areas where the greatest advantage could be taken and gradually move in to the major centres because clearly the major centres are better provisioned than are the provincial cities, the rural areas, and particularly the remote areas.

Senator BIRMINGHAM—With that, you have hit on regional services. Certainly that is an important aspect of what we are looking at here. Obviously with the government putting \$4.7 billion on the table, it is reasonable to think that those less economically viable areas should be given some sort of priority from that level of government funding. But in your submission you have made a statement that you support suitable application of benefits from the communications fund to foster the continuing application of advanced network technologies to internet users throughout Australia. That speaks of a future role for the communications fund that does not appear to exist if the government is to expend that \$2 billion on building the NBN. Does that mean that the society believes that the government should source its funding from elsewhere and maintain the communications fund?

Ms Raiche—First, my understanding was that the communications fund is a little bit larger than \$2 billion.

Senator BIRMINGHAM—No.

Ms Raiche—No? Okay. Probably I had better think about that answer and come back to you. I will think about the answer and come back to you.

Senator BIRMINGHAM—Okay. If you can take that on notice, that would be good. I will also ask you briefly about Senator Conroy's recent statement about broadband speeds being more symmetrical, which you highlighted in your submission, and also the statement you have made in your submission that ultimately you believe the provision of fibre to the premises technology will be required for much of Australia. Do you believe that the technology approach that is being spoken of at present is the right one, or do you think that it is overly prescriptive, or that a difference mix could or should be applied?

Ms Raiche—My first statement would be that my understanding of the request for proposals was not as prescriptive as perhaps is being talked about. The concept of fibre to the node is what has been talked about. I am unaware that it is totally saying fibre to the node, and I understand there is more flexibility than has been implied in some of the conversations about this particular proposal. So I would first say that I think if you read the proposal, you are aware that it is not quite as prescriptive as is the current dialogue. In terms of fibre to the premises, I know that that has been talked about a great deal.

The reason I think fibre has been talked about is that ultimately fibre is the best guarantee of high speed to homes. Earlier testimony this morning and other testimony today has pointed to the difficulty of other technologies, ADSL2+, ADSL, WiMAX, in terms of how far you can get out to the exchange, in terms of WiMAX and the sort of attenuation that happens when you start to get too far out from the tower. In terms of delivering high capacity, there are very real questions about other technologies and their ability to do that.

If you are looking at the suitability of the technologies, that depends very much on the area, the population. What I think the government was trying to achieve by talking fibre, even fibre to the node, and then fibre to the home was that is you are talking about high-speed delivery to everyone, probably in most cases—but I think it is a long-term aim—fibre will be the way to do it. But how long that takes and whether that is appropriate in particular circumstances is an open question.

Senator IAN MACDONALD—Did I hear you correctly? As I understood it, you did not really want to get involved in the separation, but did you say it was working well in Europe and New Zealand?

Mr White—No. We said there is a track record to examine and learn some lessons from.

Senator IAN MACDONALD—Okay.

Mr White—We do not know whether it is totally successful or not at this stage, and would not want to make a comment because our total goal is the improvement of provision and delivery or services.

Ms Raiche—Can I add to that?

Senator IAN MACDONALD—Yes, sure.

Ms Raiche—The New Zealand operational separation, which is what they are calling it or another term that is used is the functional separation, only started on 19 March this year, so it would be absolutely premature to make any judgement. In terms of the operational separation or functional separation, which is what it is called in the UK, that has only been going for two or three years. In fact, if you look at the schedule they have developed as part of their undertaking to Ofcom, that is a roll-out of several years of a program. They have not even reached an end point where they would say they have effectively operationally separated, and they are coming to terms with NBN and how you roll out NBN in an operational separation circumstance. They have not come up with final answers and a final regime.

When we say to look at overseas models, we are saying there are overseas models; they are in varying stages of progress; and it is worthy to look at the way they are developed. But I think it is premature to put a tick against them at this stage.

Senator IAN MACDONALD—I am trying to look, but I cannot see whether you are associated with an international society?

Ms Raiche—Yes.

Senator IAN MACDONALD—Are the members of the international society from Europe, the UK and New Zealand happy with the way things are, unhappy, or are there complaints?

Ms Raiche—Do you mean in Australia or do you mean globally?

Senator IAN MACDONALD—In the UK and in Europe. Perhaps that is not a fair question to you.

Ms Raiche—There are so many models. You are talking about chapters in Tonga, you are talking about chapters in Africa.

Senator IAN MACDONALD—Let me say the UK, Germany and New Zealand.

Ms Raiche—I would say they are all grappling with, first of all, high-speed access because obviously that supports the internet and services that high-speed access provides. There are so many models in Europe. You have the European directive on functional separation as a possibility that might be engaged in. I think that goes all the way down to some of the Pacific cases where they are lucky to get dial-up.

Senator IAN MACDONALD—I see.

Ms Raiche—So I would say it is very difficult to say what chapters come up with what positions.

Senator IAN MACDONALD—Again, just taking the UK as a broad example, there is not a view that members of your society in the UK are (a) unhappy about, say, speed or price, or (b) that they are very happy about speed or price.

Ms Raiche—I have not heard an official position from them. I have only heard them participating in the debates about the need for a broadband that supports internet.

Mr White—There is comment internationally about the UK functional separation in terms of the large volume of behavioural rules that have been written to expedite the process.

Senator IAN MACDONALD—If you go into my office in Canberra, every one of the staff complains about how slow it is because it is done up in the electorate office for some strange reason. There is a general view that, ‘Oh, gee, this is slow. It’s awful’, but there is not that general view among your colleagues in the UK?

Ms Raiche—No. The discussion is about slowness of speed and the inability to get access. I see most from Africa and from the Pacific area.

Senator IAN MACDONALD—And from Parliament House, Canberra.

Ms Raiche—No, I have not seen that.

Senator IAN MACDONALD—No, I am just adding that.

Mr White—Senator, there is a benchmark in that. If we take education as an example, the short supply of teachers and principals is coming and we know the statistics on that quite well. We know from using lessons from various places in digital video conferencing, for example, that to be seamless we are going to need better provision than we have at present. Particularly in country areas.

Senator IAN MACDONALD—Yes.

CHAIR—Thank you, Mr White.

Senator LUNDY—I want to ask you questions about wireless versus fibre. I know you touched on that point before. My understanding of fibre is that its capacity really depends on the technology you put on either end, and therefore it can provide essentially a network that has infinite capacity provided that light continues to move quickly and you have good technology on the ends. How does that compare to the constraints of wireless and the different bands you can get through the wireless networks and the availability of wireless networks? I guess I am looking for a critique as to the strength of fibre and the fibre core network compared to wireless.

Ms Raiche—None of us is a technology expert but we can always find the answer. I would say, only from what I have read, and this is a lawyer speaking not a technology person, there may be situations where wireless is appropriate where there are small populations to be served. It is probably far easier to put up a tower than it is to put in fibre. My understanding would be that as a long-term solution, there may be difficulties if an area wants to grow and if it wants to have more population and if it wants to have the benefits of education, for example. Mr White was talking about education and the need for symmetrical capacity for education, for health, and for a range of reasons including accessibility, and wireless challenges the sorts of future applications that we see as particularly beneficial. I am not sure that answers your question.

Mr White—I can only answer that that question from my previous life's perspective. I was formerly the head of the Australian National Education and Training Agency for Technology. In that circumstance, communities benefit, particularly the universities, from wireless access. However, as there are very costly setup provisions and it is difficult technically to maintain, there remain security issues around that. Here in Australia we measure cost by traffic. The Australian Academic and Research Network, or AARNet, does not measure cost by traffic. It operates on a completely different model so it does not have those issues in universities.

Adelaide with m.Net, for example, has been an experiment and has really worked quite well. There are certain provisions in communities that we know about, but on a large scale basis I do not think we would be in a position to give any sort of definitive answer. We think it is an option for very niche circumstances at present. Our second comment would be that, mathematically, although fibre to the node is not limitless, it is regarded as such at present, and at least it would cover our needs whereas wireless has a finite capacity.

Senator LUNDY—Thank you. That does answer my question. Based on experience with internet users and their frustrations in getting online access, particularly ADSL or ADSL2+, can you just give the committee an insight as to the feedback you get from your various members and member organisations about the frustrations with the current network infrastructure and their capacity or ability to access high bandwidth services?

Ms Raiche—No, we will not ask for this to be in camera. One example is that we had a meeting generally with internet users in Ballarat, which is funded by the department and for which we thank you, and we had a number of people attend that meeting from anything from students to small business people. Ballarat is an interesting place. It is an ICT centre. IBM has just moved there. They have universities. One would think that broadband would be available,

and what we heard was enormous frustration. There was a guy who sat there and he would have been five kilometres out of town running a business, and he said, 'I'm on dial-up.'

Senator LUNDY—I am sorry to interrupt, but they have Neighbourhood Cable there as well. Does Neighbourhood Cable provide a high bandwidth service, or not?

Ms Raiche—Neighbourhood Cable was there and Neighbourhood Cable was extremely frustrated. Neighbourhood Cable can put on infrastructure where there are power lines. I am sure you have heard of a bit of difficulty some of the competitors have obtaining access to Telstra ducts and so forth. We heard a bit of frustration, if I may put that gently, from TransACT. In areas where they do not have access to telephone poles and they do not get access to ducts, they can resell Telstra capacity. But they do not get a wholesale price from Telstra. The price they get from Telstra, which they then have to resell to everybody else, is the price anybody else pays at a retail level. Neighbourhood Cable was there and very frustrated.

Senator LUNDY—Just to wrap up that point, you mentioned the donut. I am familiar with the donut. For the benefit of the committee, it is outside the radial reach of ADSL, but inside the scope of the subsidised satellite connections. If you could conceptualise this, there is a strip outside of that reach of ADSL. But I want to say this: what proportion of that frustration of your members occupies the donut space, that bandwidth back-land that still exists out there?

Mr White—The numbers are not big but when we get it, we get it with a steamroller. It comes in very heavily, and we get it reasonably frequently. It is not uncommon for someone to really get quite upset about the areas of the donut and it mostly comes from business and education and occasionally from health concerns.

Senator LUNDY—So it is from people who are trying to earn a living or grow the economy, and they cannot because they cannot get online or at a high enough speed.

Mr White—Yes, and the rural and remote businesses tend to be home businesses as well with internet service provision experts. I am thinking of libraries, health, financial advice, those sorts of things—and wine, of course.

Senator LUNDY—Thank you very much, Chair.

Ms Raiche—If I could just add to that, I would say that the one person in Ballarat who was trying to run a business said, 'Look, I deal with the rest of the world. They expect that I will have capacity, and I'm on dial-up.'

Senator MINCHIN—I just want to touch on your remarks on affordability. You talk about the government's \$4.7 billion contribution being a major factor in relation to a sustainable case and keeping costs down. Those comments to me are based on an assumption that what the government is doing is providing a grant whereas the government has made it quite clear that indeed its stated policy was to provide equity with a commercial return, and that remains its objective. Are you saying that from your perspective, and thinking of customers, it needs to be a grant or a straight subsidy rather than equity investment, or indeed debt? That is simply the government acting as a banker or a provider of funding, which of itself would have no impact on reducing what would otherwise be the cost. It is just another equity investor.

Ms Raiche—There are two things: first of all, if you look at the request for proposals and what the requests for proposals were clear about, it was that the final product would (a) reach 98 per cent of Australians, and (b) that it would be providing the possibility of competitive and affordable services, with an emphasis on affordable. The design of this proposal—and clearly I am not an expert on this—was that the end product for our members and everybody else who use the internet would be affordable. That was the aim.

I have read of other suggestions, or indeed if you look at the broadband guarantee program which was a completely different approach but I understand is still being followed, there is another model of, ‘If you can’t get a service, then in fact there will be a subsidy so you can get a service.’ If you look at the latest Regional Telecommunications Infrastructure Fund, or RTIF, suggestion, there was yet another kind of model. I am assuming that this committee will be looking at the RTIF report and that has a very different model to it. I think the end result that we are interested in would be affordable broadband, and there is a recognition it will be expensive to provide, and therefore it is important that there be assistance for its provision.

Mr White—Our overall position as an internet society would be to say that we applaud the government initiative to stimulate the market.

Senator MINCHIN—I am really going to what you are putting here: that in order for your objectives to be achieved, surely it is the case that this \$4.7 billion has to be provided as a subsidy, not as an equity investment, otherwise it of itself will not, as you suggest, contribute to keeping the costs down. How could it? In other words, if you are wanting the government’s contribution to keep the costs down, the money has to be provided in some non-commercial fashion. Does that not follow?

Ms Raiche—Does it? If it has to be provided as almost a capital expenditure up-front and then there is a commercial return, the point of what the government is doing is that it is saying it is necessary to have some kind of assistance. But broadband will encourage a great deal of services on top of it, such as business use. In some of the evidence that was given to this committee, the case for roll-in ultimately is that the successful tenderer will want to be generating revenue up-front and will use the subsidy to roll it out, but will be generating the revenue stream. The encouragement is there to build the infrastructure, which will be then an economic good and an economic revenue driver. I think that is what the government intended.

Senator MINCHIN—You used the word ‘subsidy’ there yourself.

Ms Raiche—I beg your pardon.

Senator MINCHIN—That is not what I am getting at. My interpretation of your remarks is that your society believes this money should be provided as a subsidy and not as equity, which is what the government says. Indeed in its own statement, it says it wants a return on its investment of \$4.7 billion. If that is the government’s position, I do not see how that sits with your proposition. It seems to me that what you are saying is that the government should be ‘subsidising’ this, not being simply an equity participant.

Ms Raiche—Subsidy is perhaps the wrong term I used: a provider of up-front capital that will produce a return. In terms of an earlier discussion I had elsewhere, which was a discussion was

Internode at a public forum that I think was an ATUG meeting, the difficulty was having capital up-front to put in the infrastructure that would then produce the revenue which could then provide the return. What I understand the government to be doing is to say, 'We will help with the provision of capital up-front because the provision of fibre or related costs is expensive', and that once they are operating, we expect on a return on our capital for that.' But it is the initial cost that is sometimes the barrier in putting infrastructure in, and it is having the infrastructure in that we want.

Mr White—Given that circumstance, Senator, they have certainly been our discussions around the concept of venture capital. However, if you are putting to us would we prefer a position that it was a subsidy, our answer would be clearly yes, and we think that that would stimulate the market even further.

Senator MINCHIN—Sure. I realise that. I assumed that is what you would say, although that is not where the government is at. It seems to me that in order for your desire to have costs lower than they otherwise would be, it has to be a subsidy. But the other point I just noticed in your submission is that some areas may be more difficult and costly to provide broadband, in which case there may be a case for a government safety net provisions to address affordability. But the government is saying that the premise of this NBN is uniform retail pricing on a national basis. In other words, metropolitan will subsidise country, by definition. But that contradicts what you are saying because you are assuming that country services, or more difficult services to area, which is country, will be more expensive and there should be some special provision for them. Do you get my question?

Ms Raiche—I do, and I think we are confusing a couple of things. In providing the service as opposed to a customer paying for it, there is no question but that providing the service and the infrastructure outside of the metropolitan areas will be more expensive to do, and that is what we are talking about. When you are talking about end user cost, we would want it affordable. The government policy is cross-subsidisation. We did not put that in our submission, but what we did put in was affordable broadband.

I have read some submissions that say the affordability starts at about \$20 a month. We have not put a figure in, but there is a limit after which broadband will become so expensive people are simply not able to afford it and we would like it to be affordable because otherwise it will not be taken up. There is undoubtedly a higher cost in regional and rural areas to provide that infrastructure.

Senator MINCHIN—You talk about addressing the affordability of broadband service to users in those areas.

Ms Raiche—Yes.

Senator MINCHIN—But the government is insisting on uniform retail pricing on a national basis. If the government's objective is met, there will not be an issue, will there? But you can bet that city users will be paying more than they otherwise would to ensure 'affordability in the bush' by having uniform pricing.

Mr White—That is possible. Our line would be very clearly that we would want to see in most areas of the country, not the two per cent that is accessibly difficult, strong competition in the field for the consumer.

Senator MINCHIN—I do not think you are quite answering my question. This goes to the whole structure and design of this thing. You could adopt an approach of saying, ‘Let the market dictate the city price and that will be competitive and kept low,’ and clearly rural and regional pricing would be higher. In that case we then come to targeting assistance at users in those areas as opposed to what the government is saying, which is, ‘We’re not going to use the \$4.7 billion to subsidise consumers. We’re going to use it, we don’t know how, to ensure this thing is built and then insist on uniform pricing.’ That is a completely different way of approaching this issue. I have difficulty in working out what you think is the better course. They are two radically different courses to adopt in terms of what people, at the end of the day, are going to be paying and how they are going to pay it.

Mr White—Yes, indeed they are. The telecommunications infrastructure in Australia at present is fairly uniform and the price of a telephone call is minimal right across the country. In time that issue decreases because the infrastructure is available and it becomes a scale issue, or a scale of use issue, as well as over time. We think that in the provision of the national broadband network at present, we would like to see country areas advantaged as much as possible. We have certainly taken the words that have been given from the government’s current position that that is a desirable position to have across the country—that is, that country areas are provisioned as much as is possible, and that there and affordability regimes are not substantially different from metropolitan centres.

CHAIR—In wrapping up, I will just seek one clarification. You said, Mr White, that to ensure that country areas are advantaged, so do you mean as against today or in terms of pricing and access as compared with, for example, metropolitan users?

Mr White—I used a relative term, Senator. I would compare that to today. I would see that today they are seriously disadvantaged. I would like to bring them into equilibrium somehow.

Ms Raiche—If I could just add to that: if we say advantaged, what we do say is in terms of expenditure of the \$4.7 billion, the point we were making is that that money will be used where it is most needed. I will just read this, ‘the government funds should be used in such a way that maximises industry investment in new networks’. Where there are no networks, which will largely be regional and rural Australia, that is where we think the money should be invested to bring rural and regional Australia up to par. Let us also note that not all metropolitan areas achieve good broadband anyway.

CHAIR—Indeed.

Ms Raiche—There are some black spots out there that we also are concerned about. We are talking about using government money to improve the infrastructure, particularly advantaging those areas that are disadvantaged.

CHAIR—Thank you, Ms Raiche. Thank you, Mr White. Thank you very much for your submission, your time and your evidence before the committee today.

Mr White—Thanks for the opportunity, Senator. We wish you well.

[11.27 am]

SINCLAIR, Ms Rosemary Anne, Managing Director, Australian Telecommunications Users Group

CHAIR—Welcome. As you are aware, the proceedings of this committee are public. It can be otherwise if you need to so request, and we will consider your request. The evidence that you provide is protected by parliamentary privilege. You are able to object to answering a question, provided that you provide the grounds upon which you are objecting. The committee will consider your request. Do you wish at the outset to add to or vary your submission in any way?

Ms Sinclair—No.

CHAIR—I invite you to make a brief opening statement before we ask you the many questions we will have.

Ms Sinclair—Thank you, Senator Fisher. You have our submission and I thought I would just run briefly through the key issues from our perspective. Firstly I wish to say that we have been watching broadband developments and discussions over many years at ATUG. We have been at numbers of these inquiries and have always put our shoulder to the wheel when we think that there is a serious discussion about a matter that is really important to us.

There are a number of key suggestions that we have put in our submission to you. They are not any different from the matters that we have raised in a number of submissions that we have put in other places. The first one is for us the policy objective for the regulatory framework around the NBN. It needs to remain focused in our view on the long-term interests of end users. A focus on ensuring an effectively competitive market for telecommunications is absolutely at the heart of what we mean when we talk about the long-term interest of end users.

Affordability, to continue Senator Minchin's theme, is a very important issue to us. We can have the best broadband network in the world, but if people cannot afford to be part of that network, it is not going to deliver the sort of productivity and innovation benefits that we all hope for. Affordability in the Australian context is not necessarily the lowest price in the world, and that is never been a position that ATUG has put. We are talking about an affordable service for Australians.

End user choice is a key issue that we are concerned about, and we want to make sure that when it comes to network design issues. I am no technologist or engineer, but from following the debate overseas, I am aware that you can either design these next generation broadband networks to allow competition or foreclose competition. We want to make sure that this network that Australia is talking about is designed to support competition.

When we talk about competition, we are keen for there to be infrastructure competition wherever we can economically and efficiently get that competition. There are different ways of going about that. Where that is not possible, we are very keen for services-based competition of a set of issues around open access and wholesale equivalence to be part of the thinking.

Wholesale service equivalence is a finer granularity than we are interested in, beyond the general concept of open access. It starts with the design, it goes through the inter-operator industry discussions about codes and standards, and then we are suggesting that there needs to be some proactive industry oversight around open access and wholesale service equivalence before we get into the legal process under the Trade Practices Act part XIB, the anticompetitive conduct provisions.

Our next point relates to the customer experience in the NBN environment. Assuming we have all that sorted out and we get our NBN and we are up to the point of people moving onto that platform, we think that there needs to be some very careful attention given to how the transfer and the transition of customers is managed. We will at this stage be in a world where broadband is critical to people. I would never go so far as to say third after water and air, but we get down that track, so we do not want a situation where suddenly you can be without your broadband for six weeks while we transfer you from the legacy platforms to the new platforms.

Ubiquity—we want all Australians connected. For us, that is not only about network availability, but the issues of affordability, and beyond that even accessibility, taking account of people who have disabilities of one sort or another. Rural and remote broadband has been a key issue for ATUG for many years. We have been out and about. We have now visited over 60 different towns and centres, speaking to many people about broadband. How we get 100 per cent coverage is of great concern to us.

We have been watching international developments in this space for a number of years through our connections with the international telecommunications users groups, so we think there is value in those developments. But Australia of course needs its own solution, given the geography that we all confront and the size of the market that we are dealing with. At the end of the day our position is really that we need both a national broadband network and a competitive telecommunications industry, not one or the other.

CHAIR—Thank you, Ms Sinclair.

Senator BIRMINGHAM—Thank you, Ms Sinclair, for your time today. Under the issue of affordability in your submission, you mention of the need for an entry level safety net. How does ATUG believe that should be achieved? What type of nature should it form?

Ms Sinclair—I guess our approach is informed by the position we took on the migration from CDMA to Next G. Everybody was very excited about the possibilities for advanced content services on Next G. We said we think that is terrific, but by the way there are people who will just want to use this platform for a voice service and we want to make sure that there is an affordable package for those folks who just want a voice service on their mobile to be able to connect to the new platform. Then people get on their own journey and they find that there are all sorts of other things they can do and they build their own value proposition as they go along. That is what we mean by a safety net package—a package that enables everybody to connect to the national broadband network, taking account of a basic package of service and affordability.

Senator BIRMINGHAM—That obviously flows to some of those customer experience issues you were speaking of, as well in terms of the transition of people across networks. In a sense, you are saying that people are being forced in that process to take a more expensive

package, or a package that delivers more services than they might feel they need or require. How do you believe governments should ideally address those issues?

Ms Sinclair—There is quite a bit of experience, even in the telephony world with the low income maintenance assistance approach for telephony services, so there could be some assistance there. We are hoping that we all learn quite a bit from the transition from CDMA to Next G in terms of making sure that there are affordable, reliable devices such that people's individual circumstances are taken into account, and that those learnings can be used by industry very broadly, by regulators and government if necessary to ensure this easy transition.

Senator BIRMINGHAM—On a different area, also in your submission you have made a point which you have bolded, so I assume you intend to make it strongly, that a solution must ensure advanced broadband services for all Australians, long term and sustainable for rural and remote areas. You go on to say that if more time in the planning and coordination phase is needed, that time should be taken. Other submitters, particularly some of the other telco companies, have suggested that if the government cannot get the regulatory framework or the proposal right around the NBN, it would be better to not proceed. Does ATUG has a view on that, given your view that it is obviously important to get these things right?

Ms Sinclair—Unhappily, we are not prepared to make it as simple as that for the government or the parliament because we think that a medium to long term vision of Australia has a suitable ICT infrastructure to enable the development of the knowledge economy, the information economy. People keep talking about the fact that at some point we will have to stop digging rocks out of the ground or shearing sheep or building houses and move our economy to a services base. At that point ICT infrastructure is absolutely critical.

In terms of the timing, we have long said that the timing is ambitious. If we can get our national broadband network without destroying the competitive fabric of the telecom sector, then we are happy. If you press me to say if I can only have one or the other, then we would always stick with competition in telecommunications. But that has been ATUG's mantra since 1981. It is at the core of what we believe delivers benefits for end users—a competitive market structure—and if you have that, then you deal with price and you deal with quality, and you actually deal with innovation and infrastructure investment.

Senator BIRMINGHAM—Okay. A number of people have expressed concern to us that the final development of the regulatory framework that will sit around building of the NBN will not necessarily, because there is no commitment, come back for consultation or for input from stakeholders, such as industry or consumer stakeholders or others. Is that a concern that ATUG shares? Given the comments you have made about the ambitious time line involved, do you think there would be benefit in a step somewhere there after the expert panel and the government have considered what regulation should be put in place for that to be put into the public limelight for comment to see whether it meets those commercial or competitive imperatives you have spoken of?

Ms Sinclair—Without being prescriptive about how, the answer is absolutely yes. We do not want the public policy framework around communications or the regulatory framework around communications negotiated as part of a behind-closed-doors deal. If there are major changes to either the policy position, if we decide to move from long-term interests of end users to

encourage investment, end of story; or if we want major change to the regulatory framework, if for example we saw no role for the ACCC in this sector, then we absolutely would want that discussed in the public domain.

Senator BIRMINGHAM—It says in your submission to us that you have made a submission to the expert panel.

Ms Sinclair—Both expert panels.

Senator BIRMINGHAM—Yes, both. Have you sought from government any commitment or undertaking that there will be an opportunity for the type of comment or public scrutiny of which you have just spoken, Ms Sinclair?

Ms Sinclair—I have not got the detail of both of those submissions in my head, but we have been so public about it, even in our weekly newsletters to our members, that I am sure I would have.

Senator BIRMINGHAM—Yes.

Ms Sinclair—It is absolutely key to us, however exciting and attractive is a national broadband network, if it comes at the cost of open, transparent and proper debate about what we see as public policy issues and regulatory frameworks, then it is a danger sign, as far as we are concerned.

Senator LUNDY—ATUG has been, as you have asserted—

Ms Sinclair—It has been on the whole journey.

Senator LUNDY—I was going to say that I think you have probably appeared before every Senate inquiry or select committee inquiry on telecommunications.

Ms Sinclair—Yes.

Senator LUNDY—But I would like you to take this opportunity, if you would, to share with the committee just a sense of that history and ongoing frustration, I suppose, looking at Australia's relative position in the world, particularly from your members' perspective and the economic opportunities that they are seeking with a reliable, affordable, high bandwidth network, and the sorts of public policy campaigns that you as an organisation have campaigned on over the years up to this point. Just give the committee a bit of a potted history to get a stronger sense of that in the context of this current inquiry where we are contemplating a national broadband network finally.

Ms Sinclair—All right, and if anybody gets bored, I would be grateful if the Chair of the committee would just stop me. It is too good an opportunity, Senator Fisher.

CHAIR—Unlikely.

Ms Sinclair—If I go back to when I started in 2001, but before that ATUG had long been interested in access to the internet and broadband. Perhaps the first place that we could talk about is the broadband advisory group of 2002. I do not think Senator Alston would be too cross with me, but we did start in that committee with the position that said 19.2 kilobits was going to be good enough for everybody as far as we could see into the future and that there was no need for subsidy for rural areas. Happily during the course of that 12 months, we all learnt a lot.

Out of that came the first HiBIS scheme. I can remember saying to Senator Alston, ‘This is a worthy beginning, but only a beginning, and I am going to go out into rural and regional Australia and tell everybody I can about broadband’, me being ATUG, not just me being me, ‘and why it’s important and what the role of this subsidy is, and we’re going to spend that money as quickly as we can because the next tranche of money will be easier for you because of the cost benefit; we will be starting to see what a difference this can make in terms of the sustainability of communities and economic growth and innovation.’

So we went through all that, and along the way there were numerous Senate committees about broadband and where Australia sat. At that time we were sitting at about 23 or 24 in the OECD, and not really getting very far. There was a discussion around that time that said, ‘We’re not going to build this until we see the demand for it, and until we see that demand, we’re not putting any money into it.’ That was very, very difficult with something like broadband, getting people to understand what it is before they have actually got it. That was a key part of our enthusiasm to get the demand side interested because there is nothing like a few people who will buy the service to then get the supply side interested in investing and delivering the service. It is a bit of a chicken and an egg.

Anyway, I think we went through HiBIS 1 and HiBIS 2—we might have even got up to HiBIS 3, I am not sure—but along the way, for each of those changes, there was a public discussion of ‘How’s the scheme working?’ and ‘What do you think?’ We made submissions and then we got to the big concept of the Australian broadband guarantee. That was a real breakthrough from our point of view. I can remember Minister Coonan announcing it at our annual conference. She said, ‘A hundred per cent of Australians, wherever they work or live will get access to broadband, using subsidies when necessary. Competitive, commercial market structures as far out as we can get that’, and we agree with that, ‘but beyond that point, whether we are in the donut or out of the donut, subsidies for the rest.’ I said to her, ‘Minister, did you really truly mean a hundred per cent. It’s a big call. It’s world-leading policy, a hundred per cent of people wherever they are, having access to broadband.’ And that was the position.

Then we went through various versions of the Australian broadband guarantee, the various connections as we get up to the end of the year and hassles of one sort or another. But we have always been there saying that we accept and support the position that where commercial markets will not supply services, government subsidies need to apply. In those discussions we really started making submissions to ACMA and their spectrum inquiries and wireless access services and broadband in regional areas using wireless. Our position on all of that is not to pretend as I sit here before you that I am a technical specialist about the ins and outs of wireless and fixed broadband, but to say that in achieving a hundred per cent coverage in a country like Australia, wireless and satellite have a role to play; whether it is 98 per cent, 92 per cent, 96 per cent, I do not know. At the end of the day, it really depends. But wireless broadband has an important role

to play. As far as I can see, right out at the edges of all of this, satellite broadband will play a role in Australia.

Then we got onto discussions about competitive backhaul and OPEL and WiMAX. We were very interested in all of that. We made our submissions. We participated in discussions. We walked the walk and talked the talk on that and we were very disappointed when that project went the way it did. Competitive backhaul is quite a different way of coming at this issue of market structure. It opens up the possibility that less government subsidy would be needed to enable small providers in more remote areas to develop a market.

We are still interested in that because, when we look internationally, we see the development of these smaller providers as a part of an overall market structure. It seems to us that those smaller providers create significant competitive pressure on bigger players, and they are also responsible for quite a deal of innovation. We would cite as an example Internode in South Australia as an example of the sort of provider that we mean.

The caravan rolls on and we get up to national broadband network. Along the way we are part of the T3 debates and discussions and submissions—various, backwards and forwards—and we live through the whole package of packages in 2005 where we have local presence and operational separation and the communications fund and regulatory changes, and so on. I think that brings us now to national broadband network and the current discussions.

Senator LUNDY—Thanks for that. I think it is an important context. Can I just wrap up by going to this point of competitive backhaul and the survival of small internet service providers in those pockets where they think they can make a case? What is the regulatory change on your understanding that would have made the difference to the survival of a lot of those small competitors who were subsequently knocked out of the market because either Telstra moved in as soon as they set up or the cost of backhaul was too expensive for them to sustain their business case?

Ms Sinclair—Look, a range of tools, and I think one big tool would have been to change the market structure with an OPEL-like arrangement. You just change the structure of the market, and doing that changes everybody's incentives. That would have been one model. The second model is to ensure that regional backhaul is a declared service with access prices that make sense to everybody. The third area that I think really needs attention is the implementation at a practical industry level of anticompetitive conduct monitoring and enforcement arrangements. We have a legal process. So if I get sufficient evidence I can go to the Australian Competition and Consumer Commission and they can go through their competition notice process and so on and so forth. Then we eventually go through that range up to appeals courts of one sort or another. In the meantime, people do not have the funds to play that sort of legal game and the market moves.

Our suggestion in here about NBN Australia is modelled on a body in the United Kingdom. Unhappily, it is called the Office of the Telecoms Adjudicator No. 2, which is a kind of Yes, Minister title. Essentially it is an industry body. An industry sits around the table with a bit of gentle help at their elbow from the regulators. If you find out that no-one, ever, under any circumstances can get into an exchange to provide equipment then industry deals with it. We do not have to wait and use the kind of formal legal process to deal with it. If you look at the uptake

of unbundled loop in the United Kingdom and the consequent position of the United Kingdom in the OECD statistics now, I would say that it is absolutely due to that body. The functional separation undertakings by themselves, without this industry oversight body, would not have produced what we see now in the United Kingdom.

Senator LUNDY—Thank you, I think I had better stop there. I am getting the look from the Chair.

CHAIR—Senator Minchin will now proceed, very quickly.

Senator MINCHIN—I was actually going to ask you about NBN Australia. Thank you for what you explained. Presumably, to achieve the objectives you are setting for it, it would have to be legislated for and provided for in legislation.

Ms Sinclair—I think so, Senator Minchin. Unless it is legislated, you cannot change the incentives. I have said to ministers various along this journey that it is very important for them to growl in this industry. If there is not that incentive then it is difficult for the industry players to come out of an industry forum and go home and say, ‘Look, I think it is a really good idea if we open up the exchanges and redevelop our billing and ordering provisioning systems. It is going to be a couple of hundred million dollars, but it is a great idea.’ I cannot see it.

With my ATUG members, if there is a strong incentive that says there is legislation that we have to blah, blah, blah, then you go out and say, ‘We actually have to do this, and if we do not there are going to be regulatory consequences of one sort or another.’ Mobile number portability is the clearest and best example from my point of view. It is described by more recent participants in discussions on telecommunications as a terrific example of an industry-led outcome. Old women like myself know that the outcome was actually achieved by the regulator saying to industry, ‘If you do not do this by 21 September 2001—that is, work out how people can move between you and keep their mobile numbers—we will do it.’ Industry then becomes absolutely focused on producing world’s best practice in mobile number portability. So now any of us can take our mobile number to any other of the operators within three hours. It made that market effectively competitive.

We do not have the same arrangements in broadband. My colleagues from Primus gave you the tip of the iceberg on broadband switching practices. That is what it is all about. They talk about, ‘Can I get access to the exchange? Can I do this or that?’ From the end users’ point of view, it is a case of, ‘If I want to try your broadband instead of this broadband that I have had for a while and I want to be an active participant in what is described to me as a competitive market and move my broadband service, can I?’ The answer is that it is a complete shemozzle. I get people who are not ATUG members ringing and saying, ‘Look, I am a small business in blah, blah, blah and I thought I would just try this new broadband service. Now I find I have been disconnected and broadband is really important to me because that is the way I run my business.’ Think about what it would be like without your email for six weeks. It does not help economic outcomes, jobs or productivity. The United Kingdom dealt with that as part of its framework. It said, ‘This is nonsense, we need a process. Industry can figure it out.’ They came up with a 10-day switching practice. The customer knows exactly where they are at any point in that change.

They have the Office of the Telecoms Adjudicator No. 2 to manage the process of whether people can get in and out of the exchange and how long it takes for the transposition or transfer, whatever the technical mumbo-jumbo might be—I do not know or care. How long? It is 10 days, absolute maximum. The customer knows exactly where they are up to at every stage of the process. It did not happen as a result of industry just sitting around saying, ‘This is a good idea. I will facilitate that.’ The incentive has to be there. That is where we get to the question about separation. It is part of our thinking of how you create the incentives to ensure that the market is effectively competitive.

Senator MINCHIN—Did I understand you to say that you were very disappointed with the cancellation of the OPEL contract?

Ms Sinclair—Yes, and the minister understood me very clearly, too.

Senator MINCHIN—Are you saying that, even with the government’s proposal for an NBN, it would have been better to have kept that in place alongside what the government is proposing?

Ms Sinclair—Yes, that was our position. It was addressing a very particular problem of regional markets by dealing with the structure and the backhaul. We would have much rather that that had gone ahead. I said to the minister that this outcome means that the problem is still there.

Senator MINCHIN—What did you think of the alleged reason for that contract being cancelled?

Ms Sinclair—I thought it was a terrific example of why we need much more transparency in these decisions, particularly when we have large licks of taxpayers’ money, businesses earning profits, paying taxes, and individuals working and paying taxes. When we are dealing with public money transparent processes ought to be in play. I think it provides much stronger incentives for all the stakeholders and players.

Senator MINCHIN—Thank you.

CHAIR—Thank you very much, Ms Sinclair, for your time, your submission and your very informative evidence to the committee today.

[12 noon]

KRISHNAPILLAI, Mr Maha, Director, Government and Corporate Affairs, Optus

SHERIDAN, Mr Andrew, General Manager, Economic Regulation, Optus

CHAIR—I welcome Mr Krishnapillai and Mr Sheridan. As you understand, this is the third in a series of public hearings being held by this Senate select committee. They are public and your evidence will be treated as such unless you request otherwise, in which case the committee can consider your request to have your evidence provided in camera. The evidence that you provide is protected by parliamentary privilege and it is unlawful for attempts to be made to intimidate or otherwise inappropriately treat witnesses in respect of their evidence to the committee. It can be contempt of the Senate to do so, as can providing false or misleading evidence to the committee. Witnesses are able to object to answering questions asked of them by members of the committee and will provide the grounds upon which the objection is made. The committee is then able to consider that request and act accordingly. Do you wish to add to or vary the submission that Optus has made?

Mr Krishnapillai—No.

CHAIR—Then I invite you make a brief opening statement, whereafter we will ask you many a question I am sure.

Mr Krishnapillai—Absolutely. Thank you very much for the opportunity to speak today. We welcome the Senate's interest in broadband and the inquiry process. As you would be aware, Optus has supported the government's policy on broadband for some time—since the announcement. I will provide a quick bit of background about Optus in terms of some of the misinformation, which as you pointed out sometimes gets spread around. Over its history, Optus it has invested more than \$15 billion in the sector and we continue to invest more than \$1 billion a year in infrastructure. Last year alone, Optus invested \$1.3 billion in the sector.

In terms of the past 10 years or so, particularly since the 1997 reforms, we have a very good example of what has occurred in the sector with regard to success across the various parts of telecommunications. We have certainly seen the mobile sector become a highly competitive area, with incentives to invest and good, innovative consumer-driven outcomes for customers. In terms of the fixed network in Australia, in our view we have certainly seen a very poor outcome around broadband competition in the past 10 years. The root cause of that is the incentive, the ability and the reality of Telstra being able to frustrate broadband competition throughout the sector. We have put forward in our submission what we believe needs to happen next for what we think is a very important part of the economy—broadband. Again, in spite of some commentary around those areas, broadband will be and must be a major part of driving productivity growth across the economy. It is really not a matter of should it happen, it is a matter of when and how it will be rolled out.

In terms of the lessons of the past decade, the key for us in understanding what has happened is that the market structure in Australia is essentially dysfunctional in fixed broadband services.

The reality is that without the right incentives for a largely monopolistic Telstra to build broadband infrastructure and offer those services to retail and wholesale customers, we are not going to change that paradigm. We are slipping slowly further and further behind broadband competition throughout the rest of the world. Although Australia has in fact had some good competitive outcomes in the past few years, in world terms we are slipping further behind.

Those competitive outcomes are going to revisit some of the material in our submission. They were based on the government policy of the day looking to drive unbundled local loop, ULL, uptake and infrastructure investment by various players, Optus included, to put equipment in exchanges to roll out DSLAM, digital subscriber line access multiplexer, style networks. When that competition started to bite about three years ago, we had a perfectly rational reaction from Telstra, whereby it decided the most effective way to stymie that emerging competitive growth was to bypass those exchanges.

Let us not kid ourselves that the proposal from Telstra in 2005 was in any way in the national interest or designed in an altruistic way. It was very simply a strategy to bypass the emerging competition, driven by DSLAMs in exchanges. It would bypass that by putting fibre from the local loop directly across to exchanges. It was a very simple and effective strategy. So, the fibre-to-the-node process is, in our view, something that will probably occur over the next few years and must occur in the network topology we have today. But it must be under the right regulatory framework.

We have indicated four areas that are very important in terms of understanding the Next Generation broadband network. We call them the four pillars in terms of understanding what needs to happen in terms of regulatory frameworks. First, there must be the right structure within the sector. In other words, the incentives around wholesale provision of broadband services to wholesale customers and to end users must be completely separate—in other words, structural separation between wholesale and retail arms—and there must be true open access. I will come to that in a moment in terms of the definition of that open access and who regulates it.

Secondly, Telstra has certainly been making a variety of claims about ‘open access’. The reality of that in the past few years—and we believe the reality of that in the future—is radically different from what Telstra is claiming. Most importantly in terms of open access, there must be equivalence of access. Rosemary Sinclair mentioned the United Kingdom experience. It is not only the ability to access wholesale broadband services; they must also be under the same terms and conditions in an equivalent way as the retail company in accessing that particular service. That is why structural separation is so crucial in this market.

Thirdly, the provision of those services needs to be cost based. As others have mentioned, there is not much point if we end up having an NBN network to 98 per cent of Australia and yet only 9.8 per cent of Australians can actually afford it because it is set at such a high wholesale level. Fourthly, and most importantly in my view, let us learn the lessons of the last decade. We have had 10 years of legal frustration and dealing with Telstra’s ability to frustrate the Australian Competition and Consumer Commission processes through every channel possible. We must have a strong regulator—that is, a strong Australian Competition and Consumer Commission—which not only reacts to gross abuse of market power but which is also able to set prices and terms and industry structures in such a way that we get strong pro-competitive outcomes.

I might leave it there. Obviously most of the other things we have covered are in the submission. I think questions are probably more important at this stage.

CHAIR—Indeed, I expect my colleagues will investigate.

Senator IAN MACDONALD—You would be familiar with Mr Kevin Morgan.

Mr Krishnapillai—Absolutely.

Senator IAN MACDONALD—Have you seen his submission?

Mr Krishnapillai—I have seen part of it, yes.

Senator IAN MACDONALD—I read it very quickly, and perhaps not thoroughly, and I do not want to misquote him. However, my general view of his submission is that structural separation is not worth the cost; that is, the benefits are not worth the cost of doing it.

Mr Krishnapillai—I have seen the claims in his submission in that area. There are a couple of observations I would make. First, I think we need to go back to understand what are the incentives for investment and better consumer outcomes in this sector. If you have a wholesale broadband network that is also owned by the same company that provides retail services, very clearly you have a situation—as we have today with a fully vertically integrated Telstra—whereby the wholesale company has not only the incentive but also the ability to frustrate the growth of broadband services and offering services to other wholesale customers. That is the basic tenet of why we believe structural separation is so important. It is industry structure that actually drives those outcomes rather than trying to overlay that with a regulatory solution post the event.

Secondly, Kevin Morgan talks about the costs of structural separation. A better way of looking at it is identifying the costs versus the benefits. As has been noted, in the United Kingdom experience there are some costs to do with IT systems in other wholesale markets and regulatory costs around having a structurally separate industry. The more important way of looking at that is offset against the benefits in terms of lower wholesale prices, better competition and, therefore, better competitive outcomes for consumers. We would argue very strongly that all the evidence shows yes.

Mr Sheridan—The arguments that Kevin Morgan puts forward are very similar to the arguments that Telstra puts forward. There are some extensive submissions by Telstra in terms of why structural separation would be a bad thing. Optus has actually been through all those arguments in quite some detail. We have commissioned an expert economist from the United Kingdom to look at those arguments and to address them. As part of that work he has recently done a cost-benefit analysis of separation in the United Kingdom context. His conclusion is quite illuminating. Yes, there are some costs associated with separation. But the benefits clearly outweigh those costs. Actually, you only need some very incremental benefits to outweigh those costs given the scale of income and telecommunications, the sorts of services and the way they touch people's lives and businesses et cetera. We have not made that submission available as yet. It has only recently been prepared, but we are willing to make it available to the committee.

Senator IAN MACDONALD—That was going to be my next question. Mr Morgan is appearing before the committee this afternoon. We will certainly be putting your case to him. We have had a lot of evidence about the absolute necessity of structural separation and we have had lots of examples. We are trying to get to the bottom of who is right and who is wrong. It does not really matter who we think is right or wrong, but it is all part of the public debate. He quotes a lot of people, suggesting that it has not really happened in the United Kingdom and when it has happened it has not been of benefit. You or someone in your organisation will no doubt have read his submission in full and the consultant you have from the United Kingdom will be responding to that, so that we can factually work out whether it has been good or bad or whether it happened or did not happen.

Mr Sheridan—We have gone very much further than that. We go to Telstra's detailed submissions, which were backed up by some international experts. The arguments put forward by incumbents tend to be founded on very narrowly based caveats. If you give those caveats a prod, they collapse. What you tend to be left with is the brazen arguments that are put forward by someone trying to protect their own commercial interests. The submission goes through those arguments in quite some detail and puts forward some empirical data about the costs and benefits of separation in the United Kingdom context.

Senator IAN MACDONALD—We did not ask a question of the previous witness in Sydney. Is it correct that the national broadband network is really only an additive to existing networks?

Mr Sheridan—That is correct. It will be an overlay on the existing copper loop.

Senator IAN MACDONALD—Someone will stop me if I am asking questions out of school here. If you were successful in the bid, or the consortium of which are a part were successful, does it mean that you would have to be using Telstra's existing network—and vice versa, if they win will Telstra have to be using some of your network?

Mr Krishnapillai—I think the short answer is that the way the NBN is constructed today is not dissimilar to the way we have seen the emergence of broadband competition in the past few years. That is, the last-mile copper from a customer's premises into, at the moment, the exchange, is rented by access seekers like Optus and various others members of TERRiA. We rent that on the basis of a price set by the Australian Competition and Consumer Commission. I might add that that price is still up for debate after 10 years of negotiations through the ACCC, which is clearly a very frustrating process. The new NBN network will simply push down the point of access to a node, which is a cabinet or pillar, closer to a customer's premises and will still be, under the TERRiA model, renting the last-mile access between—

Senator IAN MACDONALD—Perhaps you can point me to legislation—it must be there. Assuming the TERRiA bid is successful, what stops Telstra from saying, 'Okay, we are taking our bat and ball and going home. We are going to run our own network and you people can do what you like. You have won the tender and the \$5 billion from the government, but you are not using any of ours'?

Mr Krishnapillai—There is a pretty easy answer to that. Under the 1997 legislation, and prior to the sale of Telstra—so it was well before any sale considerations with regard to Telstra—an access regime involving legislation was put in place by the government that involved a

process that required Telstra, because it had bottleneck infrastructure, to provide access to that infrastructure under terms and conditions as regulated by the ACCC. The way that has actually worked in practice has been quite frustrating. So, services like last-mile copper get declared by the commission, and it takes some time to go through those processes. Companies like Optus, Primus and various others then seek access to that declared service. We then go through a period of what is known as good faith negotiations with Telstra. They then fail in every situation. They are then arbitrated with the ACCC. The ACCC arbitration is then appealed by Telstra and then taken through a variety of ADGR, Federal Court and, ultimately in terms of the ULL, High Court decisions from last year. That is the reason we have had 10 years of legal frustration around that.

Senator IAN MACDONALD—We have heard stories about that.

Mr Krishnapillai—In terms of answering the question, under the NBN process going forward, we are very lucky to have had a High Court decision last year that specified very clearly the artifice and superficiality of the Telstra arguments about their not needing to provide access to ULL services. So we actually have a High Court precedent already in that area. Telstra cannot take its bat and ball and go home and pretend that it cannot abide by the laws as passed by the Parliament of Australia.

Senator IAN MACDONALD—You are saying that they never could in law, but they have.

Mr Krishnapillai—They have frustrated. The second part of that answer is that that is probably the failing in terms of the past 10 years of regulation. By making regulators have a very light hand, and probably a very soft approach in terms of regulation, we have simply opened up the opportunity for significant delay. We have said in our submission that we need stronger Australian Competition and Consumer Commission powers that can actually specify pricing up front rather than reacting to prices put forward by Telstra.

Senator IAN MACDONALD—You have heard this said before, but I will repeat it to get a comment: One way to fix Telstra's frustration would be, cutting right to the chase, to confiscate the areas where they are able to obfuscate. Is that an option? If it were, who would be paying the compensation for the confiscation?

Mr Sheridan—I think we need to be clear: We are not looking at confiscating any assets or anything of that nature. The proposition is that we would lease the copper from Telstra and there would be a payment, rather like there is today, for the use of that copper. What needs to happen is that the process of acquiring that, or the terms and conditions of accessing, particularly the price, needs to be cut through. We need some very clear rules to say, 'This is what the price for access will be', and we will move on and start to deliver high-speed broadband services using that copper loop, but also using the new technology that will be deployed as part of the NBN. Telstra will have access to that and the rest of the industry will have access to that network as well.

Mr Krishnapillai—In the same way as they do today. But it requires a regulatory change to make that more efficient and effective than it has been in the past.

Senator IAN MACDONALD—Are you lawyers? I should not be getting legal advice from you. Is there no element of confiscation in the regulation?

Mr Sheridan—We firmly believe there is no element of confiscation.

Mr Krishnapillai—It is not an ownership issue. We will pay fair—

Mr Sheridan—It is access.

Mr Krishnapillai—Exactly, it is an access issue. We will pay fair, reasonable compensation to Telstra for the use of its copper loop. As I said, prior to the Telstra sale that has always been a function of the environment they work within. Like any industry and like any company in any industry, there are certain rules and regulations about how you can operate within that sector. The basic tenet of the telecommunications environment is that there needs to be an access regime to address bottleneck issues. That will be set by the Australian Competition and Consumer Commission.

Senator IAN MACDONALD—Thank you for that. Ms Sinclair told the committee about the British industry body. Would that work in Australia?

Mr Krishnapillai—I think it would more than work; it is probably needed. As Andrew said, at the moment we tend to have to go through an access process with Telstra, wait until it fails and then seek on a case-by-case basis to work that through the ACCC processes. What we are suggesting for the NBN process to work effectively is that price, terms of access and how the process actually works in terms of NBN should be specified by the ACCC up front, and the ACCC must have sufficient enforcement powers to enforce any access code or access terms and conditions. Without that, you are right, Telstra will have the ability and the incentive to frustrate any rollout of NBN.

Senator IAN MACDONALD—As I understood Ms Sinclair, and someone might correct me if I am wrong, whilst the regulator had that power at the end of the line, because it had the power the commercial companies sat around a table and fixed it up before it got there. Is that your understanding of how it works?

Mr Krishnapillai—That is the understanding. I think that is radically different from the position we have in Australia. Without that sword of Damocles hanging over Telstra's head we are not going to get any commercial outcome in this area.

Senator IAN MACDONALD—Would you say that would be a good model if the regulations were changed so that the ACCC, or the regulator, had that power? A lot of the issues could be worked out sitting around a table with all the commercial entities.

Mr Krishnapillai—In part, yes. But the reality in the past decade of our experience is that we actually need those rules set up front by the ACCC. I think Rosemary Sinclair's example related to mobile number portability. You must specify what is required and how it is required up front; that is, equivalence of access and open access. Then you may have the possibility of industry actually coming to agreement on how it is actually implemented. If you do not have a strong regulatory framework up front, it will simply dither along in that area.

Senator LUNDY—We spoke to Primus earlier today about some of the physical features of the network and you have commented on that this morning yourselves. Can I get an idea from Optus what your experiences have been in respect of the current access regime, particularly accessing Telstra's exchanges and also the way in which you manage your retail customers when you get requests for ADSL connections?

Mr Krishnapillai—There are a couple of examples I will pick up on. Certainly, Optus has rolled out into about 360-plus exchanges with ADSL2+-type technology. Throughout that fairly convoluted process—which I am sure Primus and others have pointed out to you—we have tried to ensure that we work with Telstra and ultimately the commission in terms of access. Transparency is probably the key issue there. Telstra has come back to us on a number of occasions saying that certain exchanges are 'full', that they are being reserved for future use, or that they are unable to work with us technically. Often the key is that Telstra is able to make those claims without terribly much justification. Transparency in these areas is one of the major problems.

The second example I will give is that Optus has had to withdraw from providing a lot of broadband services in the apartment and unit market. The reason for that is quite clearly that Telstra has been able to frustrate the rollout of those services into apartment blocks. It has used the technicality throughout that process that it will terminate those services only onto a main distribution frame at the front of an apartment block. Then we will have to have a truck roll to reconnect that customer within the apartment block, often some days later. You can imagine that that is a very poor customer experience if you are potentially moving to Optus. Your service is cut off and perhaps a few days later we will get a new service connected to that apartment block. Whereas Telstra retail is obviously able to do that remotely without a truck roll in pretty much the same time. That is a very good example of the ability of Telstra to frustrate by using a lack of clarity around how those terms and conditions are specified.

Senator LUNDY—Have you pursued that on the basis that it is an anticompetitive practice or anticompetitive behaviour?

Mr Sheridan—Optus has lodged an access dispute on that specific issue. We have a final ruling from the commission and the commission has required Telstra to implement an improved process. That process took something in the order of 18 months. I must say that that was actually quite a speedy decision for the ACCC. Telstra is now appealing that decision to the Federal Court on administrative judicial law review grounds. So, yes, we have taken action and the ACCC has acted, but there is a raft of other legal remedies that Telstra has to try to frustrate the process. In the meantime, we still do not have an efficient solution for customers in apartment buildings.

This is a classic example of what happens when Telstra says it supports open access and equivalence. This is what it means in practice. In practice Telstra applies a different rule for itself. It actually claims—and these claims are in writing: 'We don't use the same service as you.' Somehow the copper line it uses is different. Telstra uses all sorts of legal shenanigans to delay and frustrate the processes and to make us jump very high hurdles and through many hoops to get to an outcome. In the meantime, it gives Telstra a very significant competitive advantage, because the apartment markets in Sydney, Melbourne and Brisbane are closed to competitors such as Optus.

Senator LUNDY—That is a growing market.

Mr Sheridan—It is a very important market.

Senator LUNDY—Have you estimated the amount of business you are losing because of those practices?

Mr Sheridan—We have done so to the ACCC. I cannot recall the figures. It is a substantial business. As you said, it is a growing and very important market.

Senator LUNDY—What you are describing is that for that growing apartment market there exists in very real terms a persisting monopoly.

Mr Sheridan—Absolutely.

CHAIR—For those who may not be so well informed, is it more attractive for Telstra to frustrate in the apartment market rather than in other potential markets?

Mr Krishnapillai—I do not necessarily think it is more attractive; I think there is an ability to do so, so it will.

CHAIR—Can you explain that in comparison with other potential users? Why the apartment market in particular, or more so, or is it just an example that you picked?

Mr Sheridan—The nature of apartment buildings is that there is a very slight technical difference in terms of how services are delivered compared to a single dwelling. I can go into that in great detail. But Telstra has exploited that technical difference. It has seen an opportunity and exploited it.

Senator LUNDY—It is similar to the use of RIMs, remote integrated multiplexer technology, in new estates. I would like to ask you about that. During the 1990s and in the earlier part of this decade—and I actually still hear stories about it doing this—Telstra installed a remote integrated multiplexer or a large pair gain system to service a new housing estate in the full knowledge that there is only a very limited number of DSLAMs, or mini DSLAM ports, that can be installed. Have you ever installed your own MiniMax or small DSLAM into a RIM on the basis of being able to provide a service to customers in that way? Have you ever had access to RIMs?

Mr Krishnapillai—The key around that is not so much a technical solution as a commercial one. The commerciality of our installing multiple small RIM-type access nodes does not make sense commercially. There is a variety of reasons. First, the technicalities of it mean that it is actually quite difficult to make it work effectively. Secondly, we know full well that as soon as we do that, Telstra will go into that market and undercut us, as it has done in many other markets. That will mean that the investment will be stranded without those customers. There will be a smaller number of customers against that particular RIM. We do not have the ability to pursue other customers, so we will have a stranded asset. Thirdly, with the development of fibre-to-the-node-type technology, particularly in the past two to three years, we know full well that a lot of those investments will be stranded. The reality of commercial investment in this country around those sorts of areas is that fibre to the node is going to overtake that. Because most

companies like ours and others realise that, there is quite a big disincentive to further investment in those types of solutions.

Senator LUNDY—So that has the practical effect of competitors just not being interested in making any investment associated with RIM-served areas?

Mr Krishnapillai—As I said, it is technically and commercially difficult to maintain a margin in those areas. With the overhang of fibre to the node, it frankly does not make sense for us to invest in those types of technologies.

Mr Sheridan—It certainly makes sense for Telstra to deploy as many RIMs as it possibly can to foreclose those important markets.

Mr Krishnapillai—Which it has been doing for a number of years.

Senator BIRMINGHAM—Gentlemen, thank you for your time and evidence so far today. I am curious about one statement made in your submission on page 6 at 2.8. You state that regulatory policy towards broadband access has been something of a stand-out policy success in recent years in Australia. That contrasts with some of the evidence you have given today and the examples you have cited in exhibit nine on page 21 of your submission. Can you tell us the bits that have worked and what lessons we can take from that into anything that is applied in the future?

Mr Sheridan—I will give some content to that comment, and it comes out in the submission. We are strongly of the view that generally regulation in the fixed-line network has been troubled. There have been a number of issues and problems. We go into some detail to outline them and how they need to be addressed. However, we have recognised that the requirement for Telstra to unbundle the local loop has been an important policy success. That has started to have some quite significant competitive benefits. Those benefits are flowing through to consumers. However, we make the point later in the submission that that competition is nascent and we should not overstate the extent of that at the present time. We must also recognise that it is largely based in metropolitan areas. Yes, it is a policy success, but in the broader context there are some significant issues with fixed-line competition.

We then go on to make the important point that with the NBN unbundled access will not be possible. It is not economically viable and realistically it is not technically practical. Therefore, we move back to a world where there is a single network and the problems with the fixed line—the part of the sector that we have witnessed for the past 11 years—are heightened. The need to address those problems is far more acute as we go forward, because we do not have this important regulatory tool available.

Senator BIRMINGHAM—Does that then feed into the statement you have made elsewhere in your submission—and you are not the only ones to have done so—that essentially if the framework around the NBN is not right it would be better not to proceed and for government presumably to allow the market to develop in other ways or to pursue total alternatives rather than to throw out a system that presently you have indicated at least has some competitive—

Mr Krishnapillai—No. Again, in terms of contest, what we have said in the past few years is that the policy intent was to encourage infrastructure build out through DSLAM competition. That has been effective. However, today under the NBN, fibre to the node will bypass a lot of that infrastructure, which will actually take us backwards. I do not think it is an option not to do anything at all. I really do not. I think the reality is that rather than saying it is too difficult to regulate it, that we actually regulate it directly now given the environment we are facing and circumstances in which we find ourselves today.

Fibre to the node will be a reality, whether it is done through a government program or gradually by stealth by Telstra over the next decade or two. It will eventually roll out. Once you have that process in play, you will strand a lot of those assets. What we are saying is that we want the regulator to be able to manage that process and to make sure that that is not done in a way that simply reinforces Telstra's ability to monopolise the core network. That is clearly Telstra's strategic intent at the moment.

Mr Sheridan—There is an important context as well. If those changes are not made then we cannot kid ourselves: Competition will not be strengthened, it will be weakened and consumers will be worse off than they are today as a result. I think we make that point. It is very important for these regulatory changes to be made to derive the benefits from the national broadband network.

Mr Krishnapillai—I highlight my earlier comments about the SingTel Group/Optus investments in Australia and elsewhere. We have said consistently on the record and elsewhere that we will only invest where there is an appropriate regulatory framework. That is not static; in other words, that does not stay the same over time. At the moment, that regulatory framework is particularly unattractive in the Australian context. As the emerging NBN and fibre-to-the-node process evolves, we believe it will be even less attractive over time. We have said consistently that SingTel believes that it makes sense for us to invest in areas where there are appropriate regulatory frameworks. That is not the case in Australia today.

Senator BIRMINGHAM—That is an interesting statement you have just made that as the NBN fibre-to-the-node process evolves you believe it will become less attractive.

Mr Krishnapillai—Yes.

Senator BIRMINGHAM—On what basis do you believe it will become less attractive? You seem to state that in a relatively matter of fact way.

Mr Krishnapillai—It will become less attractive if we do not address the regulatory framework as it currently stands. I guess the pre-condition we are suggesting is that you must address the regulatory framework as it stands in order to move to an NBN world.

Mr Sheridan—Perhaps I can illuminate the point. There is an argument being put about—and it is being put about by Telstra—that Telstra should be allowed to build the NBN network and regulations should be reduced because we could then continue down this path of infrastructure-based competition and other companies, such as Optus and the Primuses of this world, will then be encouraged to continue to invest. That world will not happen. That is one of the points we are trying to articulate.

Senator BIRMINGHAM—Is Optus comfortable and satisfied with the parallel process, in a sense, that the government is operating at present and the process for the development of the regulatory framework that will sit around the NBN?

Mr Krishnapillai—Obviously we need to be a little careful about some of our answers in that area. We have always said that we are very committed to the TERRiA bid. SingTel has a very strong balance sheet and we are very committed to investing in the Next Generation network. We believe that a condition for that, however, is that the appropriate regulatory framework is considered. Under the right circumstances, we are absolutely committed to that process.

Senator BIRMINGHAM—I understand the sensitivities about how far you can or cannot go. Some witnesses, certainly other telcos—I cannot remember offhand whether the others were partners in TERRiA—have suggested that there is a level of concern that the only guaranteed area for stakeholder input in the regulatory review is the public submission process that has already been completed, and that potentially all other aspects of it will be concluded behind closed doors or without genuine stakeholder input.

Mr Krishnapillai—We have stated in our submission that we are strongly of the view that the maximum amount of transparency that we can achieve through that process is appropriate. We would be very strongly of the view that the ACCC's views, comments and recommendations should get as much exposure as absolutely possible throughout that process. Potentially the ACCC recommendations on the NBN should be publicly released for debate.

Senator MINCHIN—In this magical eight-week period, between the close of tenders and the government's receipt of the recommendation from the panel, the ACCC has, as we understand it, six weeks to analyse all the bids and to make recommendations on the regulatory implications of those bids. Are you saying that those comments at that point, as they go to the panel, should be publicly released for comment and debated at that point? In real time, we are talking mid-January or something. Is that what you are saying?

Mr Krishnapillai—There are two parts to it. We certainly think that whatever advice goes from the ACCC to the government should be released publicly, full stop.

Senator MINCHIN—That is the six-weeks advice?

Mr Krishnapillai—Yes. The secondary component of that is that there is a pretty strong argument that it should be released for public comment throughout that process. We are certainly not looking to delay the process in any way. Throughout that process we think maximum transparency around ACCC involvement is very, very important.

Senator MINCHIN—I appreciate that you are restricted because of this \$5 million sword of Damocles hanging over the head of anybody who dares to suggest that they might want to be part of this process, and that the ACCC will provide its comments to the panel, but that tenderers will not have the opportunity—at least at this stage as far as we know—even to know what the ACCC is saying about their bids. Is that your understanding?

Mr Krishnapillai—That is our understanding. As I said, the tender process, per se, does not stop on the day the bid goes in.

Senator MINCHIN—No, that is right.

Mr Krishnapillai—I think at some point it is important that the ACCC advice is released publicly. That is the key.

Senator MINCHIN—For anyone in the industry therefore to be able to comment on it?

Mr Krishnapillai—Exactly right.

Senator MINCHIN—And for the panel, therefore, to have available to it responses to the ACCC's advice before it makes its final recommendation?

Mr Krishnapillai—Particularly from bidders. That is probably the key throughout that compressed time frame. But we would argue that, in fact, it is probably useful to have a broader exposure as well.

CHAIR—Can we just explore that a bit further? You have indicated what you would consider to be the inadequacy of the process—lack of sharing of the ACCC's views. You touched on potentially inadequacy of time frame, because you said it was tight. Can you say a bit more about what you think in respect of the six-week time frame plus an additional two weeks—overall eight weeks—with or without public exposure? What does Optus think of that?

Mr Krishnapillai—I did not actually say it was unachievable. I think it is a process that is clearly not without its challenges. But we have been working on these others for quite some time. In spite of the fact that Telstra delayed this process as long as it possibly could in terms of provision of network information, and despite what Telstra has claimed, it provided that information to the department only eight weeks ago. We have had eight weeks to work on that network information rather than the much longer period of time that Telstra has had. In spite of that, we believe we have sufficient information to put in a very effective bid. But the key I was trying to get at is that we are very keen to understand the regulatory framework that is associated with that bid. Therefore, we would like the opportunity to see at least the ACCC advice prior to a decision being made and, even better, to have some opportunity to comment on it.

Senator MINCHIN—The premise for you, and I think everybody—although I am not sure Senator Conroy understands this—is that fairly substantial regulatory change would be required before the NBN could be, in a sense, signed off. Once the government decides on a preferred tenderer, at that point it will have to legislate the regulatory changes it wants and go through a parliamentary process, which will involve a Senate committee of inquiry et cetera. There will certainly be that opportunity. I assume you would expect that process to occur. Your assumption is that whoever wins the bid, substantial change will be required to the legislative and regulatory framework.

Mr Krishnapillai—It could be characterised as substantial. I actually would not go quite that far. Whichever bid succeeds, for example, the Telstra bid—which if you look at their submission to the NBN has indicated a wind back of regulation and, in effect, no regulation on any new NBN bids, so in spite of claims to the contrary to the press, the Telstra submission has no application of part 11B and part 11C, and no application unless it chooses on those legacy network services. Indeed, even more worryingly, they could move to a different cost model

based, as they claim, on experimental and value-driven, cost-based models. Heaven knows what that actually means.

The TERRiA proposal is also clearly predicated on some regulatory changes. We do not see that they are massively significant. To come back to Senator Macdonald's point earlier, it is built on earlier regulatory changes and a learning of the lessons of the last decade. They are not massively significant. They are important and they do need legislative attachment, but they are not a massive and significant change to the current environment.

Mr Sheridan—We are also required to outline in some detail what those changes are, including proposed drafting, amendments and so on.

Senator MINCHIN—For the record, whether it is TERRiA, Telstra or anyone, presumably you could not conceivably sign a final and binding contract unless and until you actually saw and understood what legislation and regulations had passed through the parliament at whatever point that may be some time next year.

Mr Krishnapillai—I think that would be very prudent.

Senator MINCHIN—I would have thought so. I want to clarify something. Your proposition is that there should be structural separation and the proposal is that were TERRiA to bid it would be a separate, standalone entity that would own the network. Presumably even that would require legislation, would it not, to prevent that entity ever owning or controlling a retail telecommunications business?

Mr Krishnapillai—We actually would not necessarily need legislation. That would be a governance process for the NBN bid vehicle.

Senator MINCHIN—As a matter of public policy, if it is accepted that separation of the network owner is a premise, given that the TERRiA consortium might sell down, who knows who will end up owning this entity in the future. Surely you would have included legislative restrictions on what that entity could do in respect of part ownership or ownership of retail outlets?

Mr Krishnapillai—We certainly see the powers of the ACCC being able to enforce that as well; absolutely.

Senator MINCHIN—That would require legislation.

Mr Krishnapillai—Yes.

Senator MINCHIN—If Telstra were to win, in your submission there would have to be legislated structural separation, would there not? You would not be able to do that by any other means.

Mr Sheridan—Not necessarily. It is very similar to the TERRiA proposition, particularly if there is a government investment of \$4.7 billion in the network. You set up a new company that manages the NBN portion of the network. Rather like TERRiA would, it would then lease

services from Telstra, which would remain a vertically integrated company as required. But the company that manages, owns and operates the NBN is a separate corporate vehicle subject to the Corporations Law.

Senator MINCHIN—Let us say it is Telstra for the sake of the argument. Are you saying that merely by virtue of its signing a contract—

Mr Sheridan—There would need to be a similar obligation as we discussed there in respect of TERRiA to ensure that it could not then be controlled by Telstra Retail in the future.

Senator MINCHIN—There would have to be some legislated structures surrounding that to quarantine that entity from ever in the future participating in the retail market.

Mr Krishnapillai—That is right. It goes back to the earlier comment we made in our submission that rather than rely on post-event regulation, we need to get the industry structure right up front. As we say, industry structure would need to be legislated.

Senator MINCHIN—Mr Morgan, to whom Senator Macdonald referred, asserts that there is confusion in some of the commentary around this issue of separation between operational/functional, which is the same thing, as opposed to structural. As I understand it, your proposition is that it should be structural, although in your submission you talk up the virtues of what is happening in Britain and New Zealand, which is in fact operational, not structural. Is that correct?

Mr Sheridan—I think that is absolutely right. There is a continuum. At the moment Australia is at the bottom end of the range—probably the worst place—with the so-called operational separation, which is actually—

Senator MINCHIN—It is accounting separation.

Mr Sheridan—Yes, it is accounting separation, up to structural separation at the other end, and we see that as being the best model. Functional separation has been implemented in the United Kingdom and New Zealand more recently. It certainly has many attractive benefits. I guess our argument is that we should take the next step and go to structural separation, because then you do not need as many intrusive rules and regulations to continue to manage the incentive and behavioural issues.

Senator MINCHIN—On this issue, let us say it was functional separation we were talking about. I have seen and read arguments that that actually is not relevant to the issue of a fibre-to-the-node network. The carriers' coalition, Mr Morgan and others say—and even you were suggesting it—that because of this issue ULL-based access becomes irrelevant.

Mr Sheridan—It is quite the opposite. We actually think it is far more pertinent to a national broadband network because the nature of the national broadband network is such that we will find that it will be a bottleneck infrastructure. There will only be one of these infrastructures. The ability to unbundle the network is just not present. Some of the regulatory tools we have today are not there. Therefore, I think the need for structural separation to change the incentives and to drive behavioural change are heightened in a national broadband—

Senator MINCHIN—I was going to say that functional separation is the answer when you are dealing with fibre-to-the-node network.

Mr Sheridan—To be clear, the functional separation is relevant, but structural separation would be a better model.

Mr Krishnapillai—Just as an aside, I might just briefly mention the Singapore experience. There has been a recent decision to award the Next Generation network to a consortium that includes SingTel. That consortium will be rolling out 100 megabyte speeds and up to one gigabyte speeds over a period of time to Singapore. The important lesson probably learnt out of that process is that SingTel has actually taken a strategic decision that it will exit the ownership of basic passive infrastructure, such as ducts et cetera, on the basis that it will want to compete in broadband provision of services. We probably have a good example there of SingTel voluntarily choosing to structurally separate so that it does not have to compete on basic infrastructure; it will compete in terms of provision of broadband services. When I say ‘voluntarily’, it is because clearly the regulatory framework encourages such a conclusion. I think the important point I was trying to make is that if you get the regulatory framework right, you will have the right incentives in terms of players wanting to compete in certain markets.

Senator MINCHIN—I am interested in Singapore. I think it is different to here, and the point Senator Macdonald is making is that this is fundamentally an upgrade of an existing network. Does the Singapore situation involve a new network alongside the existing network, with SingTel retaining its position with respect to the existing legacy network?

Mr Krishnapillai—As part of the process of winning, the consortium has accepted that it will actually sell out of that network over the next two to five years.

Senator MINCHIN—Of the existing network?

Mr Krishnapillai—Yes, the passive infrastructure of that existing network.

Senator MINCHIN—I thought it was only talking about its role and position in relation to what is in fact a new network.

Mr Krishnapillai—It is part of a consortia and has only a minority 30 per cent holding in OpenNet. It has agreed with the government that as part of the negotiations around that process it will actually exit provision of the old network.

CHAIR—Mr Sheridan and Mr Krishnapillai, thank very much for your extensive submission, your time today, and obviously the evidence you have provided.

Mr Krishnapillai—Thank you.

CHAIR—The committee will now take a break and will resume at 1.30 pm.

Proceedings suspended from 12.53 pm to 1.39 pm

GANS, Professor Joshua, Private capacity

CHAIR—Welcome. Thank you very much in anticipation for what you are going to talk to us about today. The evidence that you give before the committee is public. You are able to request to provide evidence in camera and the committee will take into account your grounds for so requesting if you do. The evidence that you provide is privileged and it is an offence for others to attempt to intimidate or otherwise to interfere in respect of evidence that you may provide to the committee. It can be contempt of the Senate for another party to do so, as can providing false or misleading evidence to the committee. You are able to object to answering any questions put to you by members of the committee. If you wish to do that, you need to state the ground upon which you so object and the committee will consider that. Professor Gans, thank you very much for your submission. Do you wish to vary or amend it?

Prof. Gans—No, it is fine.

CHAIR—I invite you to make a brief opening statement, after which my colleagues and I would very much like to ask you some questions.

Prof. Gans—Supplementary to my submission, I am increasingly concerned about the fact that we are locking ourselves into an expensive investment in infrastructure that might not be the right technological choice. It might not actually be the scale of investment that would allow Australia to join international ranks in broadband, or even to lead them. The network that is being proposed is wedded to a wired technology. It is in many respects throughout a lot of the country already superseded in terms of its parameters, and the download speeds in particular. Also it is only halfway there—it is only to do with the infrastructure and not yet about actually getting people connected to the internet, which is a whole other matter. Add to that mix a regulatory situation that is plagued by a lack of competition and it is something that makes me quite nervous as an economist. That is pretty much what I have been saying for the last couple of years on this issue. I think it could be done correctly, but I have not seen a lot of moves towards doing that. That is all I need to say in opening.

CHAIR—Thank you very much, Professor Gans.

Senator LUNDY—How would you do it?

Prof. Gans—The ideal would have been to have allowed for more local initiatives on this front. I would have done it in three ways. The first is to ensure that the underlying backbone internet is open access and clear and that there is transparent and cost-reflective pricing in that regard. I would allow that to occur right up to the exchange in all localities. From the exchange onwards, I would have allowed a free-for-all. I would let local entrepreneurs, local councils if they so choose or what have you to choose the terms on which they connected their constituencies to the internet and the sort of service that they provided. There is room for competition at the local level.

There is also a need for diversity in how people might want to connect to the internet and what they might want to connect for. Demographics can play a large part in that. By shackling

ourselves to a national solution it has made it virtually impossible to think about encouraging local competition. That is how I would have ideally done it. If it must be the case that we want a national network, I would not specify the technology; I would specify the outcomes. If we wanted people to connect at a certain rate of megabytes per second bandwidth, I would do that, and I would call for tenderers who could satisfy that regardless of the means by which they got that to consumers.

That said, I would be very careful in how I specified those outcomes. I would want to take into account not only download speeds but also upload speeds, and things such as bandwidth limits, which in Australia are quite extreme. Most broadband internet customers here are on bandwidth limits of about one gigabyte per month. The problem with that is that if we had the sort of broadband speeds that we are looking for, that could be chewed up in maybe 15 to 20 minutes, and then you are back shaped on dial-up speeds. That is not a solution at all if that is the case. So, if we have the status quo up and we just speed things up, we do not serve much in terms of actually bringing more value to consumers. My point is that I think we should be specifying the outcomes that we really want, not the technologies used to get that, because I think that is unduly shackling our already limited competitive options.

Senator LUNDY—You made the point about having essentially open slather from the exchange to the customer; that is, the last-mile copper. How would you deal with some of the broadband blocking technology which currently pervades the network and which is a particular feature of what we were describing earlier today as the ‘donut’, which is outside of the traditionally understood reach of ADSL from exchanges, but inside the satellite subsidised area?

Prof. Gans—I think this is what poses the most difficult problem. I would prefer to see stages. This is partly because I have in my mind that broadband is not the most urgent requirement for most Australians in terms of ranking of things needed. We actually have time to see where it is that the market would roll out these outcomes. Then we could start spending money on the gaps that occur elsewhere. As with most things to do with telecommunications, most of the need for subsidy and also the highest cost will be in regard to the last eight per cent of the population, not in the first 92 per cent. So, in terms of what you are saying regarding that, it could be that the description of somebody who is in an isolated area could look very much like this area here.

Senator LUNDY—It could indeed.

Prof. Gans—It may not look like a very low density area. But we have to find that out. Right in this room, right now, on a Telstra network you can get 12 megabits a second just from a laptop computer, without any wires or anything else. We do not know what the potential for that is in terms of being a preferred technology. At the moment we are not quite finding it out.

Senator LUNDY—I do not understand why you say we are not quite finding that out. Is that because you do not think it is in that affordable band for customers?

Prof. Gans—No, I think the reason we are not finding it out is that we have so few providers who are pushing in this direction. I am also concerned about the hanging over effect of a government willing to spend \$5 billion on the industry. Why rush to invest if you could have done otherwise? Why not wait to see if you can be the person who attracts that kind of subsidy? I am concerned that there might be all sorts of solutions out there and either because you are

hoping to be one of the providers, or because you are worried about how far the reach of the provider will be, that there might be a chilling effect on actually rolling this out in an unsubsidised way. Sitting back from it, what worries me about the subsidy is not so much that we might need a subsidy again to get that last eight per cent of the country connected, but what we are subsidising in this particular instance. If you look at what people who have high-speed broadband connection of the kind we are hoping to get to, it is primarily video downloads.

Senator LUNDY—Is it?

Prof. Gans—Yes, it is. Consultancy after consultancy has done studies that show that. In the whole of South Korea and Japan, which have those networks, that is what they are used for.

Senator LUNDY—The way I am interpreting your answer, you seem to be mounting an argument that the high bandwidth demand is not there and that it is somehow overstated. Is that what you believe?

Prof. Gans—No, the demand might be there. What concerns me most—

Senator LUNDY—You are saying it is used for video downloads.

Prof. Gans—I am saying it is for private goods.

Senator LUNDY—You are sounding very much like Senator Alston.

Prof. Gans—You can throw whatever horrific accusations at me if you want. This is not a pie-in-the-sky thing; this is actually what might be there. It concerns me that the federal government could spend \$5 billion for a whole lot of people to get subsidised internet connections for the purpose of video downloads, which I would regard as a private good. Add to the mix who is going to take advantage of that given that you still have to pay maybe \$80 a month for that privilege and you have to have a computer that can actually take advantage of those high speeds. It will be the rich segments of the population.

What worries the most when I hear about it done in this way is that we are actually redistributing taxpayers' money from the poor to the rich. People like myself are getting a big boost from this for no good reason. If you could make the case—which I have not seen made yet—that in fact what we are going to get from this are public good benefits—we are going to be able to improve health delivery, education and our environmental load—then that is a whole different matter. The problem with that is that there is currently no evidence of that.

Senator LUNDY—Can you tell me if you think the national broadband network stated policy aspiration, which is to provide a minimum 12 megabits download speed across the nation, is good? Will be a net benefit to the Australian economy or not?

Prof. Gans—No, and the reason is because we would have had that anyway.

Senator LUNDY—Let us go to the anyway—

Prof. Gans—If you want to give 100 megabits a second upload and download so that we can have actual communication and competition against Telstra on telecommunications grounds, then we are talking. If you want to have a situation where you could actually have—

Senator LUNDY—I want to try to keep this in the realms of the policy we are actually debating. I want to ask you about your original points about the exchange to the customer. We have heard a lot of evidence today and previously about the constraints of the current physical network and how that has had a direct constraining effect on broadband up until the point at which this policy was announced and is now being pursued by this government. What I am hearing you say is that that environment, including all the problems with the access regime, is a better environment than the one we are in now, where we have a government putting forward a proposal to provide \$4.7 billion to help build the business case for a successful tenderer for a national broadband network, which is slightly different from the subsidy you are describing.

Prof. Gans—I do not think it is too different. I have heard about a lot of existing constraints elsewhere in the network. The one thing that does not add up is that where they have installed high-speed broadband, such as in my house—my house, as near as I can tell, has the fastest residential broadband connection in the country with 40 megabits a second download speed—that is no constraint. The only constraint comes when I want to download things that are from the United States or Europe. Then it gets a lot slower; it gets one megabit a second. Why does that happen? That is because of the constraints not in Australia but in the rest of the world. You tell me, is it worth spending \$4.7 billion plus unknown amounts of private sector money for people to be able to download content from the world at 12 megabits a second when after they actually install it they will get no more than they are currently getting?

Senator LUNDY—I put it to you that that it is not actually about you but the people who cannot get one megabit.

Prof. Gans—Exactly; it is about them. So let us think about that. At the moment there is nothing in this plan that will ensure that I pay what I am currently paying and there is no subsidy going, implicitly or otherwise towards me, and people who get connected able to connect. For instance, what about the computers? Not every household in Australia has a computer, let alone a computer that can take advantage of a high-speed internet connection. Yet here you are proposing to put in a whole lot of pipes and offer a tender. Do you know that if you give the preferred tender to TERRiA or Telstra that half of that subsidy will not be spent on things they have already invested in? We just do not know. That is the way it is currently set up. What I prefer is if we identify the people who are left out and we target connections and rewarded connections for them directly.

Senator LUNDY—Who is your provider and how much do you pay for 40 megabits of download?

Prof. Gans—The provider is Telstra and, to get that rate for the month, I am currently paying \$129.

Senator LUNDY—Is that unlimited downloads?

Prof. Gans—No.

Senator LUNDY—What is your download cap?

Prof. Gans—It is 60 gigabytes. If I let my kids unrestrained on YouTube, it gets there. So that you know, I am not with Telstra willingly; I am with Telstra because that is the option in our area.

Senator LUNDY—Do you think there is a need for greater competition in the provision of broadband?

Prof. Gans—We do need that. What I would prefer if we are going to take this seriously is that we do not have a public-partnership and that the government in fact builds this entire infrastructure network itself so that it can choose to do things on non-commercial grounds in order to drive socioeconomic objectives rather than commercial ones. What worries me about doing it as a public-private partnership is that we are not going to be able to get that.

Senator LUNDY—You would rather see a fully publicly owned national broadband network?

Prof. Gans—To what we are proposing? Yes. I think we could actually get it at zero cost if we had a harsher and tougher regulatory regime all the way up to the point of the exchange. As I propose it, it is open access at the exchange so they do not let anyone else go in.

Senator LUNDY—We already heard about the gaming that occurs between the exchange and the customer, such as what occurs in apartment buildings and with RIMs.

Prof. Gans—Yes, but that would all go away if you had multiple providers from the exchange.

Senator LUNDY—Would it?

Prof. Gans—Yes, it would.

Senator LUNDY—How? They are still renting or leasing Telstra's copper.

Prof. Gans—No, I am not suggesting that they lease Telstra's copper. Let Telstra have its own copper.

Senator LUNDY—Are you suggesting an overbuild?

Prof. Gans—I am suggesting that we allow people to overbuild. You may build a WiMAX tower to provide a wireless service to the whole area. It may be that you buy that Telstra connection for your house and then you set up your own wireless network and serve four neighbours. If we have wholesale pricing right there, directly regulated at the exchanges, we can get those outcomes. There will still be holes, but after we find that out, that is when the government can step in and start plugging them. It would be far most cost effective. I am saying this not to help out the shareholders of telecommunications companies or anything like that. It is to get the country connected in the cheapest way possible.

Senator LUNDY—Thank you.

Senator MINCHIN—I am very interested in, intrigued by and attracted to what you describe as disaggregation. Can you flesh that out a bit for me? How would that work in practice? Say the government moved right out of this space and said that the whole proposal will not work, it is a waste of money for the reasons you have stated and we let the market evolve. Would that be sufficient to provide the sort of scenario that you describe of local councils and others becoming involved, or would it not be the case that Telstra, as the effective owner of the network now, would simply progressively roll out its own fibre from the exchange and close out or make it very difficult for others to overbuild? Or would you have to set up some sort of structure proactively to enable your vision to be realised?

Prof. Gans—I think you would have to set up that structure. Experience with telecommunications regulation has shown in Australia is that it can work to facilitate competition, but sometimes it takes an awful lot of time, and it does not always serve the best interests of the consumers. I am not a legal expert, but from an economic point of view you would have to have very clear open access regimes and a strictly regulated price from the exchange to deliver internet services up to that point and then to allow anybody to connect therein with any technology they choose to service customers in the area. That would be the goal. As with all regulation along the way, incumbent firms resist it. There are legal challenges. In airports it took seven years to get access regimes going by the time they went through the courts. By that time, things have gone on. I think it would require a very tough stance. Of course, the alternative to that would be some change in how we structure telecommunications in general.

Australia is unique in that our main telecommunications company is also a main cable provider. Cable technology is an alternative access point for broadband and high-speed broadband. That has shackled us. What I would love this committee to find out is why Optus, which runs its cable past two million homes, does not appear to be using it for this competitive purpose either. What happened there would be something of interest. We have let the opportunities of that fly by.

Basically my concern is that we have never given competition a proper chance for investment in broadband in Australia. We are relying on what Telstra tells us is possible and they invest to do that. They have always ensured that they are in every market a potential competitor is in. There is nothing wrong with that. But the problem is that that in itself, when coupled with it owning key bottleneck pieces of infrastructure, may have a chilling effect on competition. The approach has to be to take the bottlenecks, identify them, regulate them very openly and then allow that competition to flourish. If Telstra overbuild and all that sort of stuff, that is fine.

Senator MINCHIN—You described the government's involvement as a subsidy. It is not clear exactly what the government's involvement is and that is a moving feast. It has said it is going to invest \$4.7 billion out of the Building Australia Fund. In the criteria or commonwealth objectives they describe it as an investment. They actually say that one of the objectives is that in the end it provides the commonwealth with a return on its investment. The word 'commercial' is missing, but they talk about a return on their investment. Would you nevertheless describe it as a subsidy, even if, as was the original Labor policy, it were an equity investment? The Optus vision is that the government will be part owner of an infrastructure company that owned the network and, therefore, the government would be getting a return on its equity. How would you view that if that is what emerges? Is it still a subsidy? If it is not a subsidy, is it utterly unnecessary?

Prof. Gans—The simple reason to think of why it is a subsidy is to say, ‘Well, if it were such a good commercial investment why would we not have seen it just occur as a matter of course?’ And it has not. Australia has never been a leader in broadband. In many respects that is a good thing because we did not buy all our fibre at the top of the market or anything like that. There is nothing wrong with that. I see that. But there could be other things at the heart of it that are preventing the proper take-up of broadband. For instance, e-health is discussed a lot. You have probably seen the very glitzy Telstra presentations about what e-health would mean if we had some sort of high-speed broadband network. They usually show a doctor or surgeon right here in Melbourne operating on somebody in a very remote town using robotic arms, all powered by a high-speed internet connection.

It would require not only download, but uploads and downloads. That is not what people are going to see; that is an exceptional circumstance. Entrepreneurs have been talking about e-health and because I write about it a lot I hear about it. You could use it to reduce time in doctors’ waiting rooms and general practitioner time. For instance, you might have a child with a suspected ear infection. It always happens at 6.30 pm and you have to traipse around and find a surgery that is open. It is an unscheduled appointment and you have to wait for half an hour to an hour with your child who is clearly distressed for the doctor look at your child’s ear and diagnose it, and then off you go.

There is another way to look at the child’s ear. That is simply for you to plug a little USB camera, which might cost \$15 to \$20, into your computer, put it in your own child’s ear and take seven pictures or whatever, and email them to your doctor. They could be high-resolution pictures and if you can upload quickly they can be sent to your doctor. When the doctor gets a chance he can then look at the pictures and decide whether it is an ear infection and whether he needs to see the child. No-one has had to wait anywhere and the doctor has been able to do it much more quickly. Why can that not be done? Medicare reimbursements, all the way to medical liability and other regulations prevent that. If that was a service that people wanted, that would cause them to pay an extra \$10 a month for broadband because it was available and possible.

You do not have to think about the government putting in \$5 billion to stimulate and to encourage that investment. You remove regulation to allow that sort of access to occur. At the moment the problem is that we are so focused on the pipes that we are forgetting what we are using it for as well. That is what concerns me. I think there is opportunity out there and a real role for the government to stimulate this industry, but it does not lie where you think.

Senator MINCHIN—Yes. In terms of the NBN itself, you refer to questioning the economic benefits. Do you think it should be a premise to this that a proper cost-benefit analysis is done of the investment subsidy of \$4.7 billion?

Prof. Gans—I think we need to do it very clearly. The previous government and the current government are at fault for relying on what are clearly some very hokey figures indeed in terms of the value of this to the Australian economy. There has not been a study to make very clear to everybody what applications and things they are expecting people to consume as a result. I think that needs to be done. We would require that everywhere else and I think we should require it here too.

Senator MINCHIN—You refer to what you describe as a ‘back-stop competition’ in relation to NBN. I would like you to explore that a little bit. Let us say that TERRiA wins this bid, does that mean that Telstra’s existing copper network remains in place so that customers can have the opportunity either inevitably to pay more for the fibre-to-the-node service, which much cost more, I assume—

Prof. Gans—Right.

Senator MINCHIN—Or they can stick with their current copper-based ADSL service.

Prof. Gans—Obviously it is not as simple as that because Telstra’s copper network under the current plans would have to be chopped up a bit for that to work. The copper goes all the way in. Not everywhere, because Telstra has been putting in fibre to the node. But copper goes all the way back to the exchange, and it has to be chopped up and reconfigured. That is Telstra’s and it should be compensated for it. However, if it were not to win this bid, it should be able to produce at no additional cost to itself the same services it currently does with that copper. That means that TERRiA would have to have a clear, regulated access price for Telstra for that service, taking into account the fact that when all that copper is pulled up it is going to be quite valuable and Telstra will be able to recoup that value.

The same applies for Telstra. Other carriers currently have access to ADSL services over the Telstra copper. If Telstra were to win this network, those other carriers should still be able to provide the current service at the current cost, even though nominally the way in which that service is provided is looking at it differently technologically. That is what I mean by back-stop competition. We use the fact of the existing broadband that people do buy as an option for them that is going to constrain the premium you could charge for the high-speed broadband, similar to what actually occurs now. But you want to keep that option in place because I have heard talk that by getting rid of all options and requiring everybody to get the high-speed service and stuff like that seems to be a bit worrying.

Senator MINCHIN—Finally, I refer to the primary issue raised before this committee. Indeed, I think this committee has been used as a vehicle for the advocacy of structural separation of Telstra if we are to go down the path of this national broadband network. Can you expound your views on that proposition?

Prof. Gans—I am on record as being a long-time advocate of being able to do that. I do not see at what state of the world that would actually occur unless Telstra voluntarily wished to do it, and I have never heard them say such a thing. The advantage to structural separation—and this is partly why a government-owned network might provide that by default—is that it means that you do not have this behaviour whereby somebody could have a bottleneck over one part of a network, and there is the potential for competition elsewhere, but that bottleneck makes it difficult everywhere else. If I own the bottleneck and I also have an interest down here, it is worse still. So, by structural separation we get rid of that leverage that might occur.

Strictly speaking, the clearest form of structural separation and the bit of Telstra I would like to place back in government hands would be the connection from the exchange all the way to the rest of the world, including across the Pacific and where have you. I would like to take that back and put it back in government hands and then we would not have to worry about the access

price, just the price that the government charges for that service. I do not think we are going to get to that stage.

Senator MINCHIN—Thank you.

Senator BIRMINGHAM—Thank you, Professor Gans. Senator Lundy and Senate Minchin have fleshed out most of what I wanted to pursue. You have spoken about questioning the need for a national solution. In your submission you particularly talk about the potential for localised solutions. First, do you have any examples of where you actually think good localised solutions have already been put in place? Secondly, if the government proceeds with its NBN, how do you think it might be able to facilitate such local solutions?

Prof. Gans—There have been some examples of it, but I do not have them on the tip of my tongue. These things have been explicitly pursued in Canada and elsewhere. There is also the case that the Victorian Government has for developments and experimenting with that as well. I think Aurora is not far from here. It is a new development where they wanted to have very high-speed internet connections and also use the same infrastructure for cheap telecommunications and things like that. As I understand it, they found it was tough to get access at the exchange and had to think about backhaul all the way to the CBD of Melbourne to access the services they needed. Being required to do that seems like overkill. Some things have been pushed, but I think they come up against the same regulatory hurdles that we have been hearing about all along. Even in areas where the Telstra copper does not exist, Telstra exists somewhere down the line ready to create problems. That is the difficulty we currently face.

Senator BIRMINGHAM—Do you think with the restrictions placed on the NBN and particularly those restrictions that require the network at a minimum to be state-based, that that curtails or constrains the potential for such localised solutions too much?

Prof. Gans—I am concerned that it does. What constrains it more is the requirement for it to be fibre to the node. I suspect that once you have access to conduits and things like that, there may be in many areas a return to fibre to the home or alternatively in other areas for wireless solutions as well. I do not have the technical knowledge to sort out the different reports that I hear about what has what potential, except I know that everybody seems to disagree. It could well be that consumers in Australia value not being wired to something when they want to connect to the internet and are willing to sacrifice a lot in terms of bandwidth to get there. If that is the case, expecting to earn even a public return on a wide option is unlikely to happen. We just do not know that.

The problem is that if we lay fibre to the node everywhere, we might never find out, because its very presence commits us. That is what makes me nervous about that. Three years ago it would have been great to have fibre to the node. But now, as we look around the world, you think we can do even better than that. There are enough survey responses that say, ‘Actually what I would like to have is no download limits’, or ‘I would like to be able to make phone calls over the internet more easily’, and things like that as opposed to greater download speeds per se. You see differences. Again, like any surveys, you have to take them with a grain of salt as well. It is the confidence that this is the solution that worries me. The state-based thing, while it might allow for some differing state solutions to come out of this—although I do not know how many

individual state bidders are in this; I know it was allowed for, but I do not know how many are there—

Senator BIRMINGHAM—Less than there were.

Prof. Gans—I think we are still constraining ourselves there. I think ultimately you will get solutions. The commercial pressures will recognise this. It would not be a surprise to me that we do not see everybody on wired technologies by the end of this.

Senator IAN MACDONALD—Thank you, Professor, for your evidence, which has been very interesting. When you say a ‘local solution’, I seem to recall a year or so ago when there were various groups competing for what was on offer there was a group in Queensland. There may have been others elsewhere, but I remember that there was already a network on the Gold Coast. The Queensland railway also had a network in some place and the local council had a network somewhere else. They were coming together as part of a bigger operation. Is that what you mean by local?

Prof. Gans—I think I know the one you mean. In fact, I was contacted by those guys. That is the sort of thing. Back in 2000 I came across an entrepreneur who saw the potential for running ADSL services over Caulfield. Literally, his plan was to take his own wires and string them up across the area and offer people an alternative. All he needed was to be able to connect to the exchange to do that. He just wanted to operate in Caulfield—that was it. The potential for that shows us that we actually have the possibility of competition, not everywhere, but in a lot of areas, especially where there is demand. This is the same deal with what is going on in Queensland.

It may be that Telstra or another incumbent carrier can more efficiently provide that service in those local areas. But the very fact that local entrepreneurs might be able to do it is going to constrain them in their pricing, so long as those entrepreneurs can actually do that and we give them the opportunity to be able to build locally but connect globally. That is basically what I was talking about. A lot of people have had that. The Albury local government authority took that initiative and set up a network in its CBD based on that same premise. There is potential for this. We do not have to think that the only people who can do the job are those who can do it nationally. There is this potential. It may be that even if you allow that possibility, what we end up with is national networks. But at least they are constrained.

Senator IAN MACDONALD—Do you remember better than I—perhaps I never knew—what the OPEL proposal involved? As I recall it, it was a group of people contributing bits of their existing network.

Prof. Gans—There was that. If I understood it correctly, it was also to be paid on the basis of connections along the lines that I talked about right at the beginning. There was an estimate subsidy for it. It has also been quite effective in the United States. State governments there pushed, not surprisingly, to have broadband rolled in the US more quickly, which in many respects is in the same position Australia is in in terms of its penetration. They have basically said, ‘Every time you get a connection, here is what the government will pay you’, and ‘If you can convince somebody to sign a contract for three years and they are getting a certain level of service, I do not care what price you sign them up for. That is good work, here is your subsidy.’

The advantage of that is that you can choose who gets the subsidy. You can say, 'We have assessed it and we think there are certain areas out there where it will harder.' You can target the government money there and let the rest of the economy sort itself out. We do that for most things, why not for broadband as well?

Senator IAN MACDONALD—The OPEL proposal, as I recall it, was along those lines, was it not?

Prof. Gans—Yes, I think it was.

Senator IAN MACDONALD—You would have been a fan of that proposal.

Prof. Gans—It seemed like it was going in the right direction. Again, it allowed the provider to specify whatever technology it took to get there, which is something I applaud. I do not have any expertise to work out whether it was too costly, not enough or whatever. In terms of its overall structure, it seemed like the way to go.

Senator IAN MACDONALD—It would almost have been up and running by now had it gone ahead.

Prof. Gans—That is hard to say.

Senator IAN MACDONALD—There were a number of different problems. Thank you very much.

CHAIR—Thank you very much for your submission and evidence, Professor Gans.

[2.21 pm]

CONNOR, Mr Andrew, Spokesperson, Digital Tasmania

CHAIR—Welcome. Thank you for your submission and your time today. I think you have been lucky enough to benefit from the wisdom of those who appeared before you today and also to hear the formalities upon which the committee proceeds.

Mr Connor—Yes.

CHAIR—On that basis, do you wish to add to or vary your submission?

Mr Connor—No, thank you.

CHAIR—In that case, please provide the committee with an opening statement if you wish.

Mr Connor—We are delighted to be here and thank you and your staff for organising this event. Digital Tasmania is a community action group formed early this year to promote the views and needs of Tasmanians in the digital world. Our goal is to strive for a better communications in Tasmania, not just broadband but also fixed, mobile and otherwise. We have a core team of about a dozen people and approximately 500 supporters through Facebook and our email lists. The team and supporters include small and medium business operators who are exporting their digital services all over the world. These members are in the education sector and are regular domestic internet users. They want a choice of services comparable to that offered to people on the mainland of Australia.

Our organisation has had a bit of success in promoting the problems that have faced Tasmania and we have highlighted the lack of reasonably priced backhaul from the Australian mainland to Tasmania. One of the solutions is the activation of a fibre optic cable that is part of a power interconnector between Tasmania and Victoria. That is the Basslink cable. That cable was installed three years ago and it has been in commercial service for two-and-a-half years. Since that commercial activation date, Tasmanians have been paying \$2 million a year for it. Unfortunately, it has not been activated to date. We are still hopeful of it being activated, and we believe that once it is activated it will provide much cheaper backhaul to Tasmania and then ISPs will be in a better position to offer better service to us, including the installation of their own DSLAMs in Tasmania.

Just to give you an idea about DSLAM and exchange numbers in Tasmania, according to the state government there are about 202 exchanges in the state, 136 are ADSL enabled, 44 of those with ADSL2+, but only three have non-Telstra gear in them. That is really quite a small number. Some ISPs have indicated that they would put more gear in Tasmanian exchanges if it were not for the very high cost of backhaul to the state.

We see the NBN as a great opportunity for all Australians to have equitable access to the broadband world. We want to ensure that it is future proofed so that it can meet our demands not just today but also down the track. In five, 10 or 15 years into the future we do not want to be

revisiting this and looking to shell out another \$5 million or \$10 million. We are calling for a fibre-to-the-premises network. This is a bit of a step, but it is a step worth taking. A fibre-to-the-premises trial is also already under way in Tasmania utilising infill patching. It is a rather quick way of deploying the network and is capable of supporting hundreds of megabits per second of data, television channels, telephone services and videoconferencing. If you look around the world, Verizon in the United States has 1.8 million customers connected with a similar service in quite a number of cities. They are providing 50 down and 30 up megabits per second and hundreds of TV channels. It is definitely possible.

The recent regional telecommunications independent review committee heard a lot about backhaul, as has this committee. The Tasmanian state government approached that committee for funding to assist with another fibre optic connection to Tasmania, but that request was declined. Instead, the committee thinks that prices should be reduced through regulatory mechanisms and market competition. But the committee's report also recognised that the Australian Competition and Consumer Commission's powers in this regard are not the best and could use some more teeth. That is another issue that we would like to raise with regard to the need for Tasmanians to have priority in getting the national broadband network deployed in our state first.

CHAIR—Thank you very much, Mr Connor. Given that we have no Tasmanian senators on the committee, I think you are in for some pretty robust questioning.

Senator LUNDY—I want to pick your brain a little more about the infill patching that you mentioned with the trial in Tasmania. Can you describe in a bit more detail how it works?

Mr Connor—I believe that before deploying the network they surveyed the footprint area and measured out to within half a metre the actual pieces of fibre that they would need to connect up between each power pole and then down to the house. Then they produce all this stuff in the factory, bring it out and pick the length necessary for that connection and then string it up between poles and bind it to the power cables leading into the house. I believe that is how they have accomplished that. It reduces the time of deployment in the field quite markedly.

Senator LUNDY—Are they running that from an existing pillar, or is it an overlay network using a VDSL?

Mr Connor—It is a total overlay network. It is done in conjunction with Aurora Energy and Aurora Telecom, a government business enterprise.

Senator LUNDY—What is your experience with the extent of use of RIMs and other pair-gain systems in Tasmania and its effect on broadband access?

Mr Connor—We are aware of a few places where that is a blocker for people. In some cases we have heard that people have been offered the alternative of a wireless service from the incumbent operator as their only solution.

Senator LUNDY—Not at the same price though, I am sure.

Mr Connor—No, it is not as attractive. But we do not have any concrete data on those roadblocks. There is a website ADSL2exchanges.com.au that highlight these areas quite well. That highlights it pretty well.

Senator MINCHIN—You described fibre to the node as a stopgap and referred to fibre to the premises. Have you any idea what proportionate increase in the total cost of the government's proposed national broadband network that would represent?

Mr Connor—I am afraid I do not, Senator.

Senator MINCHIN—Presumably it would cost a lot more.

Mr Connor—It may even double the cost of it. But it is a step that is worth taking because we are building the future infrastructure of Australia. There seem to be quite a number of funds around—the Building Australia Fund, the Other Infrastructure Fund, or the Telecommunications Infrastructure Fund. If all those funds could all be pulled together we could get a really great network that would serve us well into the future.

Senator MINCHIN—Is it your view that taxpayers throughout Australia should subsidise a fibre-to-the-premises network over and above just about anything else?

Mr Connor—Yes. I believe, and our group believes, that fibre to the node really is just a stopgap. Eventually it will be wasted money. The fibre part to the node could be reused but at some point down the track you will have to go out and overlay it again with fibre to the premises.

Senator MINCHIN—I am not a technician but, as I understand it, if you if you roll out this fibre to the node you will have huge cabinets on every street corner. If you want to go to the premises what happens then? Would those cabinets have to be—

Mr Connor—They might have to be gutted out.

Senator MINCHIN—They might have to be pulled out?

Mr Connor—And replaced, yes.

Senator MINCHIN—I am interested in another issue. If you roll out fibre to the premises at what point is competition for the retail market physically provided for? Currently we have competitors' equipment in the exchange. As I understand it, if it is fibre to the node that will occur in the future cabinets that we will have on our streets. What happens if you go into the premises? Let us say that Telstra is the provider of fibre to the premises. However, if I want to use Optus or somebody else in my premises do I have to have Optus equipment in my home?

Senator MINCHIN—Rather than add a node or an exchange?

Mr Connor—It is hard to tell at this point. Just going by what the NBN or the request for proposal was prescribing, the retailer is separate from the wholesaler, so you might not be tied to the gear of a particular operator.

Senator MINCHIN—It is not a requirement of the NBN prospectus or criteria that there be separation. Some are arguing that, but the government certainly is not mandating it.

Mr Connor—Right. It would be good to see a technology neutral service applied, or one that follows industry standards, such as ADSL modems at the moment. You can use them from a range of vendors. Industry would have to agree on a particular standard, vendor or specification for this network roll out, at least on a state-by-state basis or on a nationwide basis so that the gear is cheap enough on a per person basis or on a per resident basis and so you do not have to go and find your own sort of cable modem that works on this network or on that network. We are getting into some technical and economic questions on which we cannot fully comment.

Senator MINCHIN—It was just in the context of you saying that a lot of time and money could be wasted on a fibre-to-the-node rollout. If the government is to be doing anything it ought to be facilitating fibre to the premises. I was just exploring the cost and the physical issues associated with such a proposition.

Mr Connor—Yes. A previous example of a technology neutral service is GSM phones. Australia was one of the first countries outside Europe to take up that technology and it has served us pretty well up to this point. The success of that service was based on taking a phone and using it on any network in many parts of the world. That has again become fragmented with several flavours of broadband enabled phones.

Senator MINCHIN—Why has the Basslink cable not been activated? Whose responsibility is that, and what has to happen in order for it to be activated?

Mr Connor—We have heard from both sides that commercial negotiations are ongoing and nothing further can be said. We do not know where the problem is. We have tried approaching the state government and we have spoken with them. They say that they do not have a problem with the process and that they are not to blame. We have tried approaching the operator, Basslink Proprietary Limited and its parent company CitySpring Infrastructure Management Proprietary Limited, and they have not updated us lately. We would really like it to be activated in the near future, if not this week. We believe it is a first step in getting better competition to Tasmania and it would be logical for it to form part of the national broadband network—at least its backhaul to Tasmania. But any NBN award, or award of the tender, needs to include another link to Tasmania for increased reliability and cost-effectiveness.

Senator MINCHIN—In addition to the Basslink cable?

Mr Connor—Yes, for redundancy. That can be cut with a backhoe or by a ship's anchor. That is why you need a second link to back it up.

Senator MINCHIN—What is the current physical position at the moment? What does Telstra have?

Mr Connor—The incumbent has two fibre optic cables that run in parallel.

Senator MINCHIN—Under the sea?

Mr Connor—Yes, but they are not available on economical terms to providers in Tasmania.

Senator MINCHIN—Okay.

Mr Connor—The lack of competition in Tasmania has resulted in the operation of a monopoly. This has been highlighted in the past. At least one internet service provider, or ISP, has approached the ACCC with an arbitration request for a pricing decision on that route, but that request was declined because of their business interests and they decided it was not worth pursuing. In itself that is a drawn out process and it could be irrelevant by the time it is decided upon.

Access seekers are locked into that decision. During the arbitration process they are forbidden from commenting on it and they are stuck with paying what they were paying in the beginning. However, the market may shift at any time. That has been a real inhibitor for internet and broadband use in Tasmania, and all the subsequent uses such as Telehealth and businesses networking their offices around the country.

Senator MINCHIN—Thank you.

CHAIR—In response to Senator Minchin's question about Basslink, you referred to some of the reasons why you thought it had not been taken up. Your answer to Senator Minchin's question forms part of my question. Effectively you said that taxpayers' investment of \$60 million in Tasmania should not be wasted or rendered obsolete, but that we should build on it. On what do you base your statement? Obviously taxpayers do not want to see their money wasted. You state in your submission:

Given the foresight shown by the Tasmanian Government in investing in this infrastructure, the taxpayers do not want to see this asset made obsolete.

That is understandable, but do you have a more empirical basis for making that claim?

Mr Connor—It is a wasted opportunity in that it already runs past the majority of the population in Tasmania.

CHAIR—But what if it is not the right thing?

Mr Connor—I think many in the industry agree that our future is in fibre based communications. That fibre can be broken off at all the little towns along the way to supply them with a service if the NBN tender does not go to the incumbent. This can be used to get the NBN up and running faster than it would if another operator laid down another cable. For a long time there was only the Telstra connection between Launceston and Hobart.

When Optus came to Tasmania in the early 1990s they constructed a microwave link because the terrain was simply too rough, and they are still on that microwave link. At the moment the fibre that goes down there with a gas pipeline was fortuitously put in there because the ground was opened up at the time. Apart from the wastage it is about getting immediate access to it, getting it used straightaway for the national broadband network. That is how we can best use that resource.

CHAIR—Thank you.

Senator IAN MACDONALD—You said earlier that one of the competitors wanted to use the Telstra lines but they pulled out because they could not afford—

Mr Connor—The arbitration process?

Senator IAN MACDONALD—Yes. Is that correct?

Mr Connor—Yes.

Senator IAN MACDONALD—Have you or your group given any thought to a better system to enable a more speedy implementation by an arbitrator?

Mr Connor—The ACCC has done a lot of work in looking at backhaul. In particular, they commissioned a group to conduct an investigation to establish how they would agree on a price for that connection from Hobart to Melbourne, taking into account all the joins and cable splicing along the way. It is at their fingertips. They could make a pricing determination. They just need to set some indicative pricing so that the access seekers can take that to the access provider and say, ‘This is what is deemed to be a fair amount. Will you sell it to us for this amount?’

Senator IAN MACDONALD—Why is the ACCC not doing that?

Mr Connor—I believe that they have not received such a request for arbitration. An access seeker has to make an application to the access provider.

Senator IAN MACDONALD—I might be getting off the track a little, but are you saying that all that the entity had to do was ask—the entity about which you spoke earlier that gave it up? Are you saying that the ACCC was sitting there ready to go and give a price?

Mr Connor—No, I do not think they are ready to give a price but they should have a price available if someone starts an arbitration process.

Senator IAN MACDONALD—Are you saying that that is how it should be?

Mr Connor—Yes, and perhaps for other links around Australia where there are declared links. A declared link is fewer than three physical operators on a route.

Senator IAN MACDONALD—I am from the north of Queensland and I do not know as much about Basslink as other senators might know. Could you briefly tell me what Basslink is and why it is not operating?

Mr Connor—It is a fibre optic cable that runs through a large power cable between Victoria and Tasmania. Currently the power cable is the key to Tasmania’s lights staying on. About half our power is coming through that cable. When that was constructed a fibre element was added to the cable and it has not yet been operated. That fibre component is in use for telemetry on that link and it was even used at the launch of the link for a video conference between each side, but

it has not yet been made commercially available to internet providers or to other telecommunications companies.

Senator IAN MACDONALD—And nobody has given an explanation for that?

Mr Connor—No. When it was being planned a Tasmanian government business enterprise made an agreement with the cable owners which allowed for some rights of access. But after the cable changed hands last year that negotiation process had to start again. It does not appear as though the commitment to pay \$2 million a year to use that link provides the state government with exclusive access to the cable. The state government is committed to paying \$2 million a year for the cable but it does not have exclusive access.

The cable owner is able to sell the capacity of that cable to other providers. I think it has come down to negotiating who gets what out of that cable, and also whether the Basslink cable operator can use the state government's on-island network. There has been a lot of toing and froing and they cannot agree on reasonable terms for the provision of a service on that link.

Senator IAN MACDONALD—Did you tell one of my colleagues who is the current owner? Do you know who is the current owner?

Mr Connor—The current owner of the link is Basslink Proprietary Limited through CitySpring Infrastructure Management Proprietary Limited of Singapore.

Senator IAN MACDONALD—Is that SingTel?

Mr Connor—They share the same parent company.

Senator MINCHIN—I think the Singapore government has a 10 per cent investment.

Senator IAN MACDONALD—Okay. Essentially, it would not be much of an investment if it has been there for two years and they have not got a cent from it.

Mr Connor—They are getting quite a lot—

Senator MINCHIN—They are getting \$2 million a year from the state government.

Senator IAN MACDONALD—They are getting the \$2 million from the state government?

Senator MINCHIN—Yes, it is scandalous.

Mr Connor—The state government has not denied that. They are also getting a bit under \$100 million a year for the power component of that cable. So the fibre part of it is just the icing on the cake.

Senator IAN MACDONALD—Even so, one would have thought that the Tasmanian government would have been rattling the sabre a little more?

Mr Connor—Yes. Our Treasurer says that he has shaken it up a bit, but we are yet to see an activation announcement. In the meantime Tasmanians are just being held back by poor broadband choice. They are not getting the opportunities that people in metropolitan areas are getting.

Senator IAN MACDONALD—Thank you.

CHAIR—I have a final question. In your submission you talk about rolling out rather than rolling in and focusing on rural and regional Australia and, in particular, on Tasmania—which you say is currently underserved by existing broadband access technology. Do you have any empirical assessments on which to base your claim that Tasmania is underserved, perhaps ranking it against other states?

Mr Connor—Starting with the figures that I gave earlier relating to DSLAM equipment, that is three exchanges in Tasmania, which is a start.

CHAIR—Or maybe not? Sorry, continue.

Mr Connor—A subsequent choice of plans and value for money are not available in Tasmania. I believe that the most recent Australian Bureau of Statistics figures for take-up or home internet usage is at least 10 per cent less in Tasmania than it is in other parts of Australia. That is another key indicator that we do not have the choice in other areas as well as in mobile broadband. Higher education requires access to very high bandwidth services. At the moment it is just not possible, or it is very expensive, to share high usage datasets. If those costs come down the funds could be put to better use in education or in everyday homes.

CHAIR—The points that you have made thus far are not unreasonable. However, given the likely interest in whether we should focus on those areas that are currently underserved, if your organisation seriously makes that claim you might want to think about providing the committee with the basis on which you claim exhaustively that Tasmania is underserved and that, therefore, it deserves priority if there were to be a focus on underserved areas.

Mr Connor—Yes, Senator. We will provide you with that information in the near future.

CHAIR—Thank you again for your submission and for your time here today.

Mr Connor—Thank you.

CHAIR—The committee might take a short early break and resume 15 minutes ahead of the scheduled time, if that is convenient to everybody. I understand it is convenient to the witnesses, so the committee will resume at 3 o'clock.

Proceedings suspended from 2.46 pm to 3.03 pm

[3.03 pm]

BARR, Professor Trevor Frank, Media and Telecommunications, Swinburne University of Technology

CHAIR—I welcome Professor Barr and thank him in anticipation for the evidence that he is about to provide to the committee. This is the third day of a series of public hearings of the Senate select committee that is inquiring into the national broadband network. Evidence provided to the committee is public. If you wish to request that some or all of your evidence should be provided in camera you may do so and the committee will consider your request. The evidence that you provide is subject to parliamentary privilege and it is unlawful and, indeed, potentially in contempt of the Senate for other parties to attempt to interfere or otherwise influence the evidence that you may provide or have provided to the committee.

It is also unlawful and potentially a contempt of the Senate to provide false or misleading evidence to the committee. If you wish to decline to answer any questions asked by members of the committee you should state that you so decline and indicate to the committee the grounds upon which you are seeking to do so, in which case we will consider your request and proceed accordingly. Welcome Professor and thank you for your submission. Do you wish to add to it or vary it in any way?

Prof. Barr—Senator Fisher, I have a couple of useful diagrams. I appreciate that senators do not want a lecture this afternoon but I have provided a couple of models in this pack. It might be useful for everyone to have a pack so that I can refer to it.

CHAIR—I believe that we have already been provided with that pack. Professor Barr, I invite you to make an opening statement.

Prof. Barr—Thank you very much, Senator Fisher. Good afternoon and welcome to Senator Ludlam. I congratulate the Senate for convening these public hearings, which are refreshing. I was advised that I could make a five-minute opening statement, so I will take that time to make three or four points. I strongly support the planned fibre based network. There is some debate about the viability of and the need for such services. If all Australia's trading partners are embarking on high-speed broadband it seems strange to me that they might be wrong. It is conceptually possible but it is unlikely. I would argue that there are great opportunities to grow services and a whole range of economic and social practices can feed off broadband systems.

That is not only my view—I know you have had contrary views—but recently the Cutler Review of the National Innovation System received 700 submissions from the public. Those 700 members of the public spoke in their submissions about infrastructure and clearly pointed to the need for high-speed broadband as being the number one issue. This afternoon I will turn my attention not so much to the supply side, although that is important because you cannot offer services unless you have the right networks, the right regulatory structure and the right investment. I find remarkable that most of the discussions by networks and panels about public money reveal that we are prepared to invest \$4.7 billion in fibre, but there is not much discussion about the demand side.

Will we invest in exploration of services? Where is the exploratory work? Where is the work that is being conducted in researching overseas prospects and the lessons learned about broadband services? Everyone in this room wants to ensure that, if we spend \$4.7 billion of taxpayers' money—whoever is the successful tenderer will have to put in an additional \$5 billion to \$9 billion—at least at the end of the day, however long that might be, it will pay its way. A second major point is that in my view the NBN tender has five possible outcomes. Let me quickly state those outcomes. The first is Telstra on an open access model, the second is some form of structural separation, the third is a return to a public utility, the fourth is a state-based consortia, and the fifth is that we abandon the whole thing, particularly in light of the crisis.

CHAIR—Did you use the word 'crisis' rather than the word 'prices'? Did you state 'particularly in light of the crisis'?

Prof. Barr—The international financial crisis. It is too much money.

CHAIR—I was just clarifying whether you referred to crisis or to prices.

Prof. Barr—No, I was hurrying. We all live through crises, particularly those who work in universities these days. Briefly, there is now only one realistic scenario, that is, the first one. No doubt you will want to talk me about it. I refer again to the nature of services. I am sorry to sound like a lecturer, but I refer to a section on the third page of the Cutler innovation report. When it comes to services it is not widely understood that broadband is not internet. There is a little diagram with a section outlined in green. Conceptually, the green represents a thick pipe, that is, the broadband. You can see that the red pipe is a subset of the green pipe and that represents the internet.

So we have this huge pipe. This pipe that comes in is the internet. The internet is different from but related to broadband. The supplier that gets the tender will want the internet, but they will not be able to manage those services. They will not be able to manage Google, but they will want to offer a monthly rate for internet access. The four little movie channels above and below the red dot on the diagram are the managed services. The network supplier has a vested interest in putting in everything that is acceptable to the public and they have control. They compete with news, sports channels, pornography, et cetera. However, one issue is rarely discussed. I became aware of this issue as a result of the research that I have done relating to overseas broadband companies. If we turn the page of this report we find what is possibly the most contentious issue.

It has been argued that, if the government is to give \$4.7 billion to the operator—and the operator might be Australia's seventh largest corporation—why on earth would there be any public supported services? Why would you want that? To use an old line, the answer is, 'It is not easy being green.' You have to fill this space. Internationally, I have seen Educational Services, eGovernment services in Canada, eHealth services and community services. I think that they can all be developed. I could expand on a range of opportunities if you wish, but they will need some level of public support. The last point I make in my introductory remarks is that I think there has to be a process that leads out of the tender of having advisory bodies or advisory councils around broadband services.

As an academic I am not suggesting to smart operators in the private sector how they should run their business. Indeed, it is the other way around. You will find that many of the corporations

involved in this will say, 'Help! We can build networks but we do not know a lot about new services that will ultimately make this viable.' After talking to somebody in Alcatel and from working with Telstra I know that e-health is a case in point. Corporations will say, 'We know networks but we do not understand anything about these models of e-health. How can we get them into broadband services?'

That relates to just one of the cases. I am disappointed with bureaucracy. I have to say this sensitively as I am not attacking bureaucrats because I have gained a lot of experience from extraordinarily capable bureaucrats. In communications we have 700, but where is the systematic work on the demand side of the equation? We are into structural, capitalisation and regulation issues, all of which are important and I am not putting them down. However, what work is going on? Where is the white paper that sketches out models of broadband services? It could be said that the academic does not understand market demand. On the next page is a quote from Jonathon Adelstein, who is hardly a Marxist, on market forces:

The normal rule for the development of a technology should be left solely to the market place does not apply in the case of broadband—

That statement was made by the FCC chairman on the basis of American experience—

which promises an array of social and economic benefits, ranging from distance learning, to telemedicine, to public safety to democracy.

I would like to see coming out of the NBN some kind of systematic and ongoing process whereby consumers can be represented and service models can be developed. I understand that Senator Conroy has on the drawing board the Australian Communications Consumer Action Network. I do not know a lot about it as it is a fledgling operation. However, it seems to me—and I would want to know a lot more about it—that it might be very useful. That is also the practice overseas. Britain has a broadband advisory council and the Netherlands and Canada also have them. We may be different but somehow I do not think we are. Those are my five points.

CHAIR—Thank you Professor Barr. Have you concluded your opening statement?

Prof. Barr—Thank you.

Senator LUNDY—Thank you for your submission. I refer to the demand for services and ask: Apropos the observations of Jonathon Adelstein and others about the need for some form of intervention in the broadband marketplace, if we are to explore the extent and use of those services in the twenty-first century we need some intervention in the marketplace. Those opportunities will not be explored if the broadband service is not there on which to experiment in the first place. I am asking you which came first—the chicken or the egg? We, as a government, obviously think that we need to create the network and, at the same time, allow those services to populate that network. However, the demand for the services will not be there to drive the necessary investment for the network. Can you respond to that question?

Prof. Barr—Yes. It is a good question. I am just nitpicking but I am slightly uncomfortable with the word 'intervention'. I think it relates more to opportunity. Let us examine the potted history of the international telecommunications industry during the past 150 years. There are

three examples of brilliant public investment—an unusual line—from which services followed. Going right back to 1870, the South Australian government devoted 70 per cent of its budget to Charles Todd's overland telegraph and they built the Morse code network from Adelaide to Darwin. Did we recover that investment? We recovered it brilliantly!

I refer to the period of the Kennedy administration and to the NASA space agency, under President Kennedy's promise of 'One small step for man', et cetera. Through NASA Kennedy facilitated getting a man on moon and getting him back, and satellite communications resulted from that. That money came from NASA and NASA's money is taxpayers' money. Later, in came the private sector, for example, Rupert Murdoch and others and we had all sorts of satellite communications on which we were totally dependent. There was a unique synergy between the public sector and the private sector. The early days of the internet did not come from Silicon Valley and it did not come from Bill Gates, My Space or YouTube—it came from Washington science grants. That is where the internet came from.

Later, the private sector embellished it. Historically, there is a good case. I believe that the next step is the broadband network for Australia. Since 1 July 1997 we have had competition policy, which was supposed to let 1,000 flowers bloom. We had some problems with that but, basically, we had an investment strike, which is the problem. In its wisdom the Rudd Government said, 'We will have to put some public money into this.' As you know, it is a large sum of \$4.7 billion, with a couple of billion of that coming from the Future Fund. Senator Lundy, I am giving you a long answer but it seems to me that you make those infrastructure investments. You put in public money.

Does anyone believe today that the internet will go away? Economists say, 'But you are picking winners.' Will anyone really suggest that the internet will tail off or go away? We can feed in all sorts of new and innovative opportunities for the Australian economy, for the people that teach and for the kids who are worried about jobs. We desperately need that kind of innovation policy. To oversimplify it, we have a bipolar economy. We have a resource boom in China, which has been fantastic, but it now seems to have issues. We have a large service sector that is vital for the Australian economy and we have a wealth of opportunities to grow that sector. However, we cannot grow that sector unless we have a different kind of network, that is, a fibre network.

If we are to interact with our trading partners why is it that we have not done that before? We are having a crazy debate and we are saying, 'Perhaps broadband is for people who want faster email. Perhaps it is for all those self-indulgent freaks who want to see their videos on YouTube.' People do not realise that they are able to expand a whole set of exciting service possibilities, around which they can build the Australian economy.

Senator LUNDY—Thank you for your answer, which has helped to contextualise the challenge that we are facing. Some years ago George Gilder, a contributor to the technology debate in the United States, expressed a view about the relationship between applications and/or content and the availability of bandwidth. He asserted that in that cycle of content innovation and bandwidth availability was the place for involvement, if you like, or stimulation within the infrastructure side or the provision of bandwidth. Then, as you said, the private sector flows in behind that and provides a range of innovative new services on the top of a base load of government and community services. His latest contribution to the debate relates to cloud

computing and extracting the full range of services using the cloud and the provision of virtual applications online. Do you have any thoughts about where internet-based technology is heading with respect to the concept of the cloud and the necessity for the availability of high bandwidth networks in Australia? Are you able to utilise that innovation, if you like?

Prof. Barr—For a change I will give you a short answer, which might be good. I know George Gilder's work but I do not know of that particular work, so I cannot answer your question, Senator. Do you want me to expand on where I see the whole range of prospects for new broadband services?

Senator LUNDY—Please do.

Prof. Barr—One of the things that has to be understood about broadband is that it is high capacity. The nature of communication processes is such that people are now embarking upon rich media in their presentations. They are incorporating video. To put it crudely, the size of the pipe or the width of the tunnel becomes terribly important. Many government agencies are connected to the Alberta SuperNet in Canada. They do things that sound a bit dull but they can transport large files. I am in a university of technology. I am sure that my vice-chancellor would be pleased that I was making this point to a Senate inquiry, so please do not tell my vice-chancellor. I cannot transport files by email to College Press because I do not have the capacity. I can shrink the files and I can use other techniques—

Senator LUNDY—Are you talking about PowerPoint files?

Prof. Barr—PowerPoint files have a lot of colour and they are rich text. That is the first thing. I do not know whether you are aware that most oil companies have access in their rigs to 256 kilobits, which is terribly slow broadband. I have been talking to people in the oil industry who say, 'Why would we go exploring in Australia?' We can bring in satellite technology. Last year a rich Australia had a \$22 billion surplus. We are not looking very flash at the moment and we have no hope of keeping up on that front, but that is not our fault. Why is it that this country, which has a brilliant track record in telecommunications, has not made these investments before?

Why should an oil company put up with that? In my pack I have given examples of e-health. Very quickly, I have given an example of virtual critical care units. A patient who has been in an accident, poor fellow, comes into the Katoomba hospital and the local people do not have the expertise or the resources to treat him, but they can do a lot of online testing. They can do a pathology test, blood tests and brain scans and, through a high-speed broadband network, they can transport 60 kilobits to the Nepean hospital where a specialist is able to give them advice relating to that patient. You can do that only if you have 50 megabits. In a health system you cannot transport quality images unless you have 50 megabits. You want to be able to distinguish clearly on the screens the colour of corpuscles, so colour calibration is important. The Commonwealth Scientific and Industrial Research Organisation, in association with the old government department of communications, did those tests and the patients were happy, which was fabulous. But now it just sits. We need a high-speed broadband network to be able to do that. When Tony Blair became Britain's Prime Minister for the third time, on the Monday morning he said, 'Get me people who can talk to me about broadband.' He made that a top priority. Britain has done very well—much better comparatively than Australia.

In my submission I made a point about the digitalisation of library services. The British Library now has an extraordinary range of services because of the public investment to build up its services. How did they do it? Did they charge the taxpayers? No, Tony did something very clever: he did it through lotteries. If you ever have a moment to relax you should go into the British Library site and to Turning the Pages. Initially all those services went in but if you had slow broadband you could not have access to those rich services. If you had more than 1.2 megabits it would be on. Initially those services were free, but eventually the library could not afford to carry all those costs.

Charges are now being made and the British Library has done very well. Another example is film and television. We have extraordinary expertise throughout Australia. We fund film and television schools. How do many of the film and television post-productions, in particular, those coming out of Sydney, get their images of the final rushes to Hollywood on an Australian broadband network? It is pretty hard. I have about eight other examples. Across e-health, e-government, e-education, libraries and post-production film and television there is enormous potential for future services to be built around that. It is vital and it is in the national interest that we do that.

CHAIR—Thank you, Professor. I invite Senator Birmingham to ask you some questions, followed by Senator Ludlam.

Senator BIRMINGHAM—Professor Barr, thank you for your time today. In your opinion, will the NBN get us to a point where we will be able to deliver the services about which you are talking?

Prof. Barr—Yes. I think the NBN tender process was necessary for complicated reasons. The past 10 years have shown us that in trying to get the networks that we need we had irreconcilable responsibilities across government, Telstra, the regulator and consumers. That is extraordinarily complex. When we introduced competition policy we knew that that would happen, but it is unbelievably complicated and there are lots of vested interests.

I have noticed some publicity that states that the NBN tender is a silly way to go. In my view the NBN tender is an excellent way to go. If we continue to do in the future what we have done in the past—and I am not referring to partisan politics—both the Howard government and the Rudd government had structural problems in getting broadband in, even though the Rudd government is new. I would like to think that one of the five models that I articulated earlier—I might be wrong and there might be six, seven or even eight models—is agreed upon by the tender panel. In my view a recommendation should not then go to cabinet and cabinet should not make a phone call to whoever the tenderer is and say, ‘Go off to the ACCC.’ We will then have a process where history reinvents itself.

This is an unusual view but I would like to see, if it is at all possible, a continuation of the NBN panel that does the negotiation. Let us take as an example a case study to explain it further. Let us suppose that Telstra was the preferred supplier and we had a public announcement that Telstra was the preferred supplier. All the competitors would say, ‘Oh God, we have lost structural separation. It is Telstra again and we will have more dominance.’ The nitty-gritty policy stuff would then have to be negotiated. We would say, ‘Telstra, you are the favourite but we need to talk to you about ROI, or return on investment. We need to talk to you about access

charges and we need to talk to you about whether you are dinkum’—and I think they are—‘in relation to an open access model. Will you encourage wholesalers?’

It should not be forgotten that if Telstra was the tenderer and they were prepared to put in \$9 billion—I think they are the only game in town that can produce that cash—they have a vested interest in making this model work in a way that they have not done before. Remember: it is not easy being green. They want as many participants as possible. On the open access model they would be chasing service providers. In Canada I saw a model of structural separation. Axia, a particular company, did not build the network but it went touting for business all over the place. It said, ‘Come and join us. We are offering a standard charge—one price for access. Put all your services on it.’ Telstra has to do that otherwise it will spend \$9 billion and it will be struggling to get customers. The big debate in Europe is that you get about a 30 per cent take up, but it is then tough to get a 35 per cent or 40 per cent take up. I would like to tip in some public services that can eventually pay their own way as part of the top up. I am sorry, I might not have clinched the point that you were making.

Senator BIRMINGHAM—You traversed a fair range of issues, Professor. Let me come back to that issue in a slightly different way. The NBN proposal is for a minimum of 12 megabits per second. You talked about health services requiring a minimum speed of 50 megabits. You talked about the types of services that movie and television producers might need to upload and download material, and those sorts of things. In the end there is every chance that the NBN might not provide the requisite speed for those services. If that is the case, in your opinion is that then a successful process, or should the government have looked at something else?

Prof. Barr—Yes, it needs tightening up. I will have to tighten up my answers, Senator.

CHAIR—We will mark you, Professor. Remember the audience?

Prof. Barr—What a threat, Senator Fisher! I will be marked. I have been a marked man all my life. Ideally, but not possible, is fibre to the premises of 100 megabits. The cost estimates on that generally are of the order of \$30 billion, all in. We might have a compromise option with fibre to the node, which is NBN. After the Paul Budde forum, a big forum in Sydney, the minister then said that they would discuss either fibre to the node or fibre to the home. But 100 megabits for Australia at \$30 billion would take a lot of selling. It is not the case that every broadband system has to be 12 megabits; that is an average. You can have higher speeds in urban areas where greater agglomerations of population and corporate partners will pay more. It is not just one system of 12 megabits; 12 megabits might be an average, and 12 megabits will probably go to rural areas. I think it is a good plan to go fibre to the node and, generally, I am supportive of NBN. Is that a tighter answer, Senator?

Senator BIRMINGHAM—That is, thank you, Professor Barr. Earlier today we heard from your academic colleague Professor Gans. I think it is not misrepresenting either of you to say that he probably has a slightly different perspective to these issues than you do.

Prof. Barr—Totally.

Senator BIRMINGHAM—He argued that the government had failed to provide the right regulatory framework, or the right economic incentives, to fully allow private sector broadband

development. Let us take that a step further and say that if the government were to pursue those two avenues and a pot of government money was available to be invested in pursuing some of the types of services that you are talking about rather than investing in infrastructure, do you believe that might spur private sector investment in the infrastructure that would be required to enable the government more quickly and rapidly to develop e-health or e-education services?

Prof. Barr—The only realistic political option for any political party is to tie the \$4.7 billion of infrastructure to rural and regional services. Whoever is the preferred tenderer—and I think it will be Telstra, but that is very speculative—the deal would be, ‘Telstra, you have agreed to spend \$5 billion to \$9 billion, and essentially that will go on urban services’, which will keep them happy because that is really where they want to be. Telstra now affixes no pay phones. Why should they when they are fully privatised? They have argued their case for the business. Why should they lose money on pay phones and why should they be going into the bush? We really have to face the full outcomes of privatisation. Telstra is a fairly brutal commercial operator. It is a brilliant corporation.

I worked with members of Telstra at a senior level for a good number of years, and they are smart. They will not go into those sorts of uneconomic services. Of the \$4.7 billion—and these are just back-of-the-envelope sums—let us suppose that \$4.3 billion, or whatever amount, is tied to rural and regional services. I think that would make a lot of sense and that is a social equity policy. At the moment we spend \$150 million of taxpayers’ money on pensioner phones and we can justify a much larger sum than \$150 million because the network is expensive. Initially I would still like some government resources to build these complex public services—the tricky services. Health would benefit enormously from e-health services; there are rich opportunities there. Are you happy with that, or was my answer a bit lose again?

Senator BIRMINGHAM—No, that was fine, Professor Barr. If you are targeting the government’s input to those regional services where potentially it is uneconomic for the private sector to develop, do you believe that the prioritisation of build, by whichever corporation wins the contract, should go first to those uneconomic and currently underserved areas?

Prof. Barr—I am sorry; I am not sure.

Senator BIRMINGHAM—As some witnesses have said to us, should they first roll them in rather than out of those regions?

Prof. Barr—On my model, from day one both urban and rural services would roll out together. That would be a condition.

Senator BIRMINGHAM—Practically speaking, only so many contractors can go out and dig the trenches. Whoever builds it will have to start building somewhere first. They cannot build everywhere at once.

Prof. Barr—They could have some guidelines that suggest that they cannot wait for three years to start in rural and regional areas.

Senator BIRMINGHAM—That is my question. A lot of metropolitan areas already have reasonable speeds in varying proportions. A lot of rural areas have far from reasonable speeds. Should they be starting in the areas that are underserved?

Prof. Barr—The preferred tenderer should not get the first cheque. At the moment we are having discussions only about \$4.7 billion in fibre—all fibre. I am not aware of any other discussions. Whoever is the preferred tenderer, they should not get the first cheque until we get some kind of understanding of what will be their rural and regional roll out. There must be a plan.

Senator BIRMINGHAM—Sure. Where should they start to build?

Prof. Barr—They are not mutually exclusive. I might have misunderstood what you said, but we cannot only start either in urban areas or in rural areas. I do not see why, from day one, we cannot have simultaneous network building. Instead of six projects in urban areas you should have three and three. Am I missing something here?

Senator BIRMINGHAM—Yes. In a sense I think you are saying that there should be some prioritisation in those rural areas. It is not necessary for you to finish all of them before you start in the metropolitan area.

Prof. Barr—No, that would not possible.

Senator BIRMINGHAM—But you certainly should not have a roll out in inner urban areas. Frankly, if companies were doing it purely on a market-driven basis, obviously the rural areas would be the last to get it?

Prof. Barr—That is right. That is the basic reasoning behind my recommendation to tag the \$4.7 billion, or close to it, to a social equity policy.

Senator BIRMINGHAM—Thank you.

CHAIR—Thank you, Professor Barr. Senator Ludlam might argue that he finds it quite easy to be green.

Senator LUDLAM—Thank you, Chair. Professor Barr, I go back to where you began, that is, your reference to a group called the Australian Communications Consumer Action Network, or ACCAN. Last week we had a discussion with some of the departmental people at the estimates committee hearings and it seems as though that network is very much a work in progress. If you had your way what would that group do? Exactly what niche are we trying to fill here?

Prof. Barr—Before I answer the question—and I promise that I will answer it—I have been passed a note that states that a former witness in the room is a member of ACCAN. Professionally, I am somewhat embarrassed that I did not know that. That note has been passed to me. Senator Fisher, I do not know whether it is irregular to call back another witness to raise this point, but this note states that this person is a member of that group.

CHAIR—Professor Barr, it is open to the committee to do so, but we are interested in the information that you have to give us.

Senator LUNDY—Could we ask that person follow-up questions later?

CHAIR—Yes, I concede that we could do that. However, at the moment we are interested in utilising the time that we have with Professor Barr.

Prof. Barr—Right. Senator Ludlam asked a good question. At the moment consumer representation of groups in Australia is seriously underresourced. Most of the major participants have an advisory council and they do good work. You received a submission from Teresa Corbin, Executive Director of the Consumers Telecommunications Network in Sydney. An organisation such as CTN has done marvellous work under great pressure on issues such as equity and consumer complaints—why do we have a record number of complaints to the TIO?—and on standards and codes.

I must choose my language carefully, but I do not think it is denigrating to describe them as a resource-impooverished organisation. I will not name other consumer groups but that outstanding group, which has done very good work, could do much better work in the area of consumer consultation if it were properly resourced. Senator that would be a whole area of upgrading what currently happens. I would like to think that that group would make a major input into some of the things that I have been talking about this afternoon. They might have a look at their counterparts overseas in the Netherlands, in Britain and in Canada—I have not seen them all—and develop a white paper on consumer services because that does not exist.

So far as I am aware, our good friends at the Australian Communications and Media Authority, or ACMA, are not doing that kind of work. In addition, there are some complex arguments about whether we really produce the cleavage of information rich, information poor that broadband becomes. When Senator Button, formerly an old friend of mine, was talking about the introduction of pay television, he said, ‘This is very much in the silk department.’ I do not think we want to get to a situation where we have broadband rich and broadband poor, but it will be complicated and politically difficult to sort out policies of access, rules of access, equity and fairness, and the development of the services. As I understand it, at the moment that is not part of the thinking of ACCAN, but I could be corrected on that. However, that could be one of its principal roles.

Senator LUDLAM—Can you point to any good examples overseas that show where that user protection or consumer protection, to use that awful word, is being handled well and where it was handled by government as an intrinsic part of broadband services? I agree with you. I have been a bit surprised about the degree to which the conversation has been skewed towards technology, open access, and competition issues at that end of things, which obviously are important. However, we have barely discussed what people will use it for and what protections will be place as the network becomes more of an essential service.

Prof. Barr—The model I saw was a model from the Netherlands called Kenniswijk, to which I have referred in the pack. I think I also made a brief reference to it in my written paper, Senator. Dare I say it, but Kenniswijk was a national strategy, which might not be a good for some of the members in this room. That strategy was used to create those value-added services.

That advisory panel said to the government of the Netherlands, ‘Why do we not set up test beds?’

When I went to a test bed at a place called Neunen I saw that 15,000 households were connected to a broadband system for 18 months for free. However, they were clearly told that, at the end of the 18 months, a user pays system would come in. That group of people worked systematically with the network provider. They asked over 1,000 people what services they thought would be viable on a broadband network and what services people wanted. I saw those services, but some of them were not particularly exciting. They were kids’ soccer matches and there were four soccer channels on a Sunday night, but that is what consumers wanted. The model was 800 Euros to the household and that was until the end of December 2005.

On the first day of January 2006 it went to a user pays system. Surprise, surprise, what percentage of consumers stayed on the system? The answer is in excess of 80 per cent. That advisory council helped to build the demand and I think it created an understanding. There is an old line about the introduction of new technology which is as follows: The technology was introduced to the consumers but the consumers were never introduced to the technology. If you want to increase demand a lot of different work has to go on. It is not just a marketing or an educational question; it is collectively building, through consumer representation, a model that works.

The other point is that carriers themselves can do good things. Telstra had its present broadband at \$60 a month. When they dropped it to \$30 a month for some months they got 20,000 new subscribers per month. At the moment people on 1.2 megabits with Telstra who are paying \$30 a month are getting phone calls and they are being asked, ‘Why do you not have six months free?’ After six months consumers can then sign a contract, if they wish, to stay on at \$60. That is the thinking in the Netherlands. That kind of thinking has come out of good consumer advice. The Netherlands model might not directly be derived from Telstra, but at the moment they have a similar principle. Surprisingly, the seventh largest corporation is prepared to do that. It is good strategic thinking and it is building consumer demand, which ultimately will be to its commercial benefit. The Netherlands model was the best model that I have seen.

Senator LUDLAM—Thank you for that.

Senator IAN MACDONALD—Professor Barr, I take you back to the beginning of your presentation to us when you listed five alternatives. Of the two rumoured bids, are you saying that only Telstra has any chance of success?

Prof. Barr—I think it has the best chance of success.

Senator IAN MACDONALD—You did not mention TERRiA at all in the five that you listed, did you?

Prof. Barr—That is right. TERRiA is based on the second one, which is structural separation, is it not?

Senator IAN MACDONALD—I see.

Prof. Barr—Or it could build its own network. Did you want me to expand on why I think—

Senator MINCHIN—Expand on why you think option one will be the outcome.

Prof. Barr—All right. The short answer is, if it is not Telstra, politically it will be difficult and in my view it will create operational delays. I am sure that Senator Minchin is much more knowledgeable on this than I am. Telstra was fully privatised and, so far as I can remember, the prospectus was never floated. I wonder whether there might be some legal challenges if you go in the direction of structural separation. I am not sure.

Senator MINCHIN—I think we should stop there now.

Prof. Barr—With great respect to TERRiA—I am sure that the next witness will make this point—the old G9 has become the G5. Where will they raise their capital? Telstra will raise that capital. If we said tomorrow, ‘Telstra, you are it,’ and we got all the regulatory stuff, did all the agreements and went through all the formal processes, once that was done Telstra could start building it on Monday. I am convinced that Telstra has a vested interest in its open access model. I suspect that their submission will state that there is one charge for access pricing for everyone, that is, new service providers. If Telstra wants to run its own services on the new fibre based broadband they will have to pay the same, so there will be non-discriminatory pricing. They will have to do that. I am reasonably confident that that will be in their submission. However, it is such a private process and they are not allowed to speak.

Senator IAN MACDONALD—I want to fully understand what you just said. I assume that you are not in any way involved with Telstra?

Prof. Barr—I am not a shareholder and I am not a consultant to Telstra for their bid. I hope that clears it up.

Senator IAN MACDONALD—It is your business if you are, of course. You said that you thought Telstra would state in its submission, ‘We are setting out at the beginning what the price will be for everyone. You will not have to haggle, argue, take me to the ACCC, or go to the High Court. That will be it for everybody.’ Is that what you are suggesting?

Prof. Barr—Not quite. I am suggesting that if the NBN intends to continue, all those tricky regulatory pricing issues would have to be negotiated with Telstra. Of course, on the one hand Telstra has to get an adequate ROI and, on the other hand, the regulator will state, ‘You cannot charge consumers excessive prices.’ It is not so much that Telstra would set that middle ground; it would have to be another negotiation process. If that could not be agreed it would all be off.

Senator IAN MACDONALD—I would like to come back to that. I am curious about your comments relating to whether or not the tender is to proceed. Do you think there is some doubt and that the whole process might collapse?

Senator MINCHIN—That is option five.

Senator IAN MACDONALD—Was that option five?

Prof. Barr—Can I read this onto the transcript? I note that Jon Court, Telstra's public affairs adviser, publicly said:

Telstra has made absolutely clear that if further separation is part of the NBN, it is simply not in a position to bid or build. The reason is that Telstra's business case for the NBN is predicated on it continuing to be a fully integrated company. With further separation, the NBN simply does not stack-up for Telstra's shareholders.

Senator IAN MACDONALD—When giving evidence someone said to us, 'Telstra must have plan B.' After all, if this is the way it is to be, they are still in business, they still have shareholders and they still have a massive business around Australia and the world. Someone suggested that it might be a bit of sabre rattling.

Prof. Barr—Yes, I understand that. Reading some of the transcripts I noticed that there was a prospect of Telstra presenting in Brisbane. I think it is completely arrogant and irresponsible of Telstra not to have been here in the early days of this Senate inquiry.

Senator IAN MACDONALD—That might have been our fault, not theirs. We arrange for the witnesses, do we not?

CHAIR—We have been attempting to do so. It is under discussion.

Prof. Barr—Is it under discussion? It does not make sense to me that in such an eminent public inquiry the big player in town is not fronting up. Why not?

Senator IAN MACDONALD—When everyone is rubbishing it.

CHAIR—Let us see what transpires. They certainly have been invited. Let us not presuppose an outcome.

Prof. Barr—I would think, after reading the transcripts, that they would be pretty concerned about what seems to be some successful lobbying for structural separation. Get here Telstra! Please read that into the transcript.

Senator IAN MACDONALD—I digressed for a moment and I have forgotten the point that you were making.

Prof. Barr—We were talking about open access.

Senator IAN MACDONALD—That is right. We have heard evidence from any number of witnesses that if there is this alleged open access, Telstra, from their past efforts, would put every process in the way to prevent any of their competitors from gaining access to their network. According to evidence that has been given to us, much of it could be said to be self-serving. According to the evidence we will end up with a monopoly provider in Australia.

Prof. Barr—At the moment a lot of ISPs are operating under existing rules. However, I take your point that Telstra might not be the easiest company to work with. Let me repeat my point: If Telstra's submission states that the charging is identical for all parties, including any servers that BigPond might want to run, that ought to be a level playing field. If Telstra is the successful

tenderer—and let us suppose that they will invest \$9 billion—I repeat the point that it is different from the existing operation because much more capital is involved and they need as many participants as possible to get onto their network so that they can charge them. That must be central to their business plan.

Senator IAN MACDONALD—But if no competitors are left in the market they will have it all anyhow. They will not need to sublet to a competitor; they will do it all themselves. If you wanted, you could do theirs.

Prof. Barr—First, I do not—

Senator IAN MACDONALD—That is the argument. I am not arguing their case here at all.

Prof. Barr—No, but interconnection to Telstra's network has been legal ever since we have had competition policy. Legally, they have to do it. If broadband grows in the way that I think it will, a lot of companies will be there. Take a company like iiNet. In many ways it does wonderful work. You would not expect them to find the \$9 billion to build another network, but they will want to be there, despite what they are saying, to offer very specialised services that Telstra will not or cannot offer. I do not think it is all doom and gloom, or that Telstra is a big bad wolf that wants to knock out all its competitors. I think it will have a vested interest in making open access successful.

Senator IAN MACDONALD—In that scenario we hope that you are right. But witness after witness has come before the committee and delivered a litany of their experiences.

Prof. Barr—I know.

Senator IAN MACDONALD—Five years later they have had to take Telstra to the High Court to turn on a phone down the road.

Prof. Barr—I give talks at conferences and at times the line that I run is not particularly popular.

Senator IAN MACDONALD—Thank you; that is very interesting.

CHAIR—Thank you, Professor Barr, for your time and for your evidence before the committee today. It has been interesting and informative.

Prof. Barr—I am delighted to have had an opportunity to be here. Let us hope we get a good outcome for the country.

[4.00 pm]

MORGAN, Mr Kevin Leonard, Private capacity

CHAIR—The committee now welcomes its next and final witness for today—a witness who was referred to on several occasions during today’s proceedings.

Senator IAN MACDONALD—Mr Morgan, let me put that into perspective. I referred some witnesses who have different views to your submission and I asked them to comment on it. I said to them that I would also refer their comments to you.

CHAIR—It has all been entirely healthy and appropriate and it occurred during the course of debate.

Senator IAN MACDONALD—It has been open and transparent.

CHAIR—Welcome, Mr Morgan. This is the third day of a series of public hearings that are being conducted by the Senate select committee into the national broadband network. The evidence that you provide both in your submission and today is public. If you wish any part of it to be given in camera you may request to do so and the committee will consider your request. The evidence that you provide is subject to parliamentary privilege. It is unlawful and can be a contempt of the Senate if any party attempts to influence you in respect of your evidence or otherwise act inappropriately in respect of any evidence given to the committee. It can also be a contempt of the Senate for anyone to mislead this committee when providing evidence. If you wish to object to any of the questions that are put to you today you are at liberty to do so, but please state the grounds for seeking to decline to provide an answer and the committee will consider your request. Do you wish to add to or vary the submission that you provided to the committee?

Mr Morgan—No, thank you.

CHAIR—Do you wish to make an opening statement?

Mr Morgan—Briefly, if I may, thank you.

CHAIR—Do we still have Senator Ludlam on the line? If not, hopefully he will be able to join us later. Please continue, Mr Morgan.

Mr Morgan—Thank you for the opportunity of appearing before the committee. I back up what Professor Barr said: it is refreshing to have a Senate committee invite individuals, or members of the public. That is the capacity in which I appear. For the record, I do not work for any of the bidders. In 1993 I did a bit of work for Telecom and that is the last time I saw any money from them. Unfortunately, I keep sending them invoices but I do not get anything back. I do not have shares in any of the companies or any of the potential suppliers to the companies. Rather curiously, I take an interest in this policy as an individual.

I have been in the industry for over 30 years. What is sad about this debate is that it has become somewhat of a slanging match. There has been a great deal of misinformation about various issues around the NBN proposal. Maybe on occasions I have contributed to that. If so, I apologise as I have not deliberately done so. Let me restate what I stated in my submission. I focused on one issue because the most unfortunate aspect of this debate is the obsession with structural separation. Most recently I worked in Ireland for the employees of Eircom which owns 35 per cent of the Irish telephone company through an employee share trust. They were confronted with the issue of voluntary separation. I have worked pretty closely with people like Rothschild. It was not a tin-pot union organisation; it was the share trust which has a fiduciary responsibility to its members. Having gone through the process in Ireland over many months there is no doubt in my mind that structural separation is a discarded and quite redundant policy option. Mongolia is about the only example of structural separation that you can find. Let me repeat that structural separation has no part in this debate as a constructive contribution and nor has the subset of functional separation. Let me make a couple of general points. As I said, it is refreshing to have an opportunity to appear before the committee.

However, that is not the only refreshing thing about this committee. Having reads hundreds, if not thousands, of pages of submissions, notes, and papers on this issue, whoever drew up the committee's terms of reference ought to be congratulated. It is the only public document that I have seen—if not the only document I have seen—that acknowledges one simple fact: that this debate is about investing in and extending the current network. Having recognised that the committee has gone over a big and constructive hurdle, because it can confine the debate.

If it is fibre to the node, which is what we are talking about, that technology only has a meaning within the construct of upgrading the existing network. If we were talking about a bid for a radio network it would be quite different. If we were talking possibly even about fibre to the home, a complete new overlay network would be required, as in Singapore. Perhaps it would be different. However, we are talking about a technology that builds on and revitalises the existing network. That begs the question: Was a tender appropriate? I must be careful how I phrase this, but I can see how that might have come about. The former government could not get over some hurdles, or perhaps it was the ACCC.

I do not know what happened there—whether it was deferred or pushed back to the ACCC and they came back and said, 'We cannot get across the line with Telstra on this.' A circuit breaker, or a tender process, was proposed by the then opposition. It is a really curious idea. Notwithstanding the fact that \$4.7 billion worth of public money is on the table, tendering for that \$4.7 billion for a very specific purpose is one matter, but putting it into a big pot for one project and then saying to Telstra, 'Would you like to bid for the right to invest in your own network' is curious. It then becomes somewhat absurd when you invite others to invest in a network that neither they nor the government owns.

That has created a somewhat difficult situation, which has degenerated further—something that the committee has recognised. I read the transcripts from Canberra in which the Chair pointed out that we have a situation where even if this tender, for all its flaws, got to an end point, that winning or preferred bidder would have to come back to parliament at some point to get the key elements of their business case validated. What has the expert panel been asked to do? I have been involved in tenders and I have usually been on the losing side, which is probably

why I am still here. You have to have an objective set of criteria to assess a tender if you do not want to end up in the courts.

How can you possibly objectively assess a tender where the key regulatory inputs are not known? Regulation goes to the issue of risk and you cannot build a business case without understanding risk because no-one will give you money. No-one will tell you how much it will cost you to get money and you will not know what return you will want on that money. Unfortunately, I have to say that this process is fatally flawed. With due respect I do not think any party emerges from this with a great deal of credit. Perhaps Telstra should not have been so coy. Perhaps it should have said a little earlier to the then opposition, 'This is not a good idea. There are other ways of doing this.'

In fairness to them, you need to go back to the original digital compact when they said that \$4.7 billion would get them the rollout in rural areas and that that should have gone to tender. Perhaps there was a misunderstanding. Of course that was the essence of the Optus-Elders partnership proposal—that you tendered solely for rural areas and the public subsidy was available for a distinct purpose. It has happened. Because Telstra's relationship with Canberra, seemingly at every level, was so appalling that they could not talk to people, they played the institutions rather than the issues.

They attacked the ACCC which, in fairness, probably unlike any regulator in the world, has less discretion and is more bound by legislation under part 11C of the Trade Practices Act. It is very tight for them. They cannot do much else other than what they have done. The prime issue that Telstra should address is regulatory reform. Until you have regulatory reform this cannot go ahead. Until you have set regulatory rules you cannot go ahead. I can understand what the competitors are doing: they are gaming the process.

Fair enough. Over many years they have been invited into the market by government regulation and by government policy. They have invested and they have built businesses. I hasten to add that few of them are cash positive, but they have businesses and they employ people. Naturally, they are protecting their turf. I do not say that what they are doing is in the national good, but I can understand what they are doing. Basically they know that every day this is delayed and every day that the copper is still there—once the copper is gone you cannot resell the network in the traditional sense—it is \$400,000 to \$500,000 on their bottom line. For many of these ISPs that is the difference between the unbundled local loop—the margin that is offered in the resale of the copper network.

For most ISPs—look at the composition of TERRiA, or even what is left of it now—few of these companies are cash positive. I can understand what they are doing but I do not think it is constructive. Technology in this industry has changed dramatically over many years. Typically, companies have not been the victims of technological change: workers, employees, telephonists, technicians, or whatever, have been the victims. That is not to say that you should not treat people properly. I was fascinated by the comments that were made by the head of iiNet that were reported in yesterday's press.

Senator IAN MACDONALD—It is Mr Malone.

Mr Morgan—Thank you. If this does not go ahead it does not really matter. Contrary to what they are saying about this beast Telstra, and their difficulties in making a living, he said, ‘We can wholesale. Telstra is wholesaling ADSL2 now. We can carry on with that. There is a business for us.’ That is true up to a point. I will finish on this point and I am sorry that I have taken so long. That is true up to a point. I am not a technologist but after talking to people this is my best understanding of what they have been telling me. We have entered the age of suck-it-and-see broadband. That copper network is exhausted.

The other day when I was joking with someone that person said, ‘What is the key enabler of broadband—demand, customers, or technology?’ I said, ‘The drought.’ I said, ‘The fact that it has not rained in Australia for quite a long time now means that that copper is still working.’ In going out into the bush I forgot the other side of the drought—that as soon as it rains the rabbits eat the cable. It was not quite that simple. That network has to be renewed because there is a finite limit to how much DSL you can put on it. There is a finite limit to the life of this network and that essential infrastructure has to be renewed. Thank you.

CHAIR—Thank you, Mr Morgan. I will exercise my prerogative as Chair and seek clarification before I invite my colleagues to ask you questions. You indicated that the committee acknowledged in its terms of reference the upgrading of the existing network to deliver outcomes. You indicated that that begs the question: Is a tender appropriate? I think your proposition begs a second question: Should this be about upgrading the existing network in the first place, or should we be going about it in a different way?

Mr Morgan—Looking back at what brought about this unfortunate situation, it is unfortunate that Telstra went to Canberra a few years ago and sold the need to renew their network solely in the context of broadband, because it involved more than that. From their perspective it was replacing network that was 40 or 50 years old. They have to do this in inner Melbourne where I live, but they put it on this popular thing of broadband rather than being upfront and saying, ‘We have to invest.’ In doing that they came up with a very attractive proposal—what they thought was going to be attractive proposal to parliament and to political parties, especially those with a rural constituency. They said, ‘You can do this in the bush too for this level of subsidy.’

To come back to your question, I think fibre to the node is a choice that other telephone companies make. There is nothing unique or novel about it; it is a choice that is being made by operators in urban areas around the world. That is apposite because it is cost-effective. It is an incremental cost on the current network. If you want to go to fibre to the home, which of course is ideal; it is the Rolls-Royce model, the economics of that roll out are quite different and the timeframe over which you would do it would be quite different. True, you would get pockets of cities that would be getting 100 megabits fairly quickly, but that would be a gradual roll out. It is much more difficult in Australia.

In Australia the economics of fibre to the home and fibre to the premises are quite different from those in Europe, Hong Kong and Korea because we do not have apartment living. If you put 100 metres of fibre down the street in a European city, for example, Paris or Stockholm, you would probably pass 60 or 70 apartments. If you put 100 metres of fibre down a street in Australia you would pass four houses. I am saying in a roundabout way that fibre to the node, which uses that existing link into the premises, is great for urban areas. Harm has come possibly

from the OPEL tender, the flaws that were in that tender and possibly the way in which it was handled.

Radio has now been discredited and discounted as a means of serving rural areas. To do that effectively you would have to have something that we have not seen for a while in Australia, that is, a coherent communications policy. For rural areas the OPEL tender was flawed because they did not have spectrum and the efficacy of the spectrum that they were going to use would have been questionable.

It is unfortunate because you can come up with other spectrum. If we had a coherent communications policy in Australia and we had not allowed commercial television operators and others to bully governments into not turning off the analog broadcasting networks for another five years, and if we had done what the States are doing and we were suddenly going to unlock big blocks of 700 megahertz spectrum, I am sure it would not cost the government one cent to get broadband into the bush because people would be falling over themselves for that spectrum. To offer service on that would be cost-effective and it would give great coverage. The capacity is not the same but there are not so many people out there to serve. That was a bit long-winded.

CHAIR—Thank you, Mr Morgan. Hopefully my colleagues will now ask some coherent questions.

Senator BIRMINGHAM—Mr Morgan, do you support competition at the retail point of broadband delivery?

Mr Morgan—At the retail point, yes. Competition per se in services is a fact of life. That is healthy and it is constructive. As iiNet said the other day, they can do it; they can wholesale the Telstra product to maintain that service differentiation and competition at retail.

Senator BIRMINGHAM—Do you believe that the current framework provides effective competition?

Mr Morgan—The current regulatory framework does not. We do not have the time or the competence to do it, but one has a feeling that the same thing that happened in the fixed-line traditional voice telephone market is happening in broadband. You have an awful lot of confusion and you have dozens and dozens of differing packages—some capped and some uncapped—which all give an appearance of competition. But when you get beneath you find, whether you buy from AAPT, Telstra or Primus, that there is not a great deal of difference in either the price or the quantity that you are buying.

You get some unsustainable and uncapped offers that cannot be sustained by the ISPs that initially made those offers because ultimately they hit a bottleneck. They have to buy capacity to the states. Seventy per cent or 80 per cent of the traffic is going across the Pacific. Fibre to the node might offer a breakpoint. You might not be predicating competition on ISPs having to spend large amounts on hardware in exchanges, but you are saying to them, 'Here is the underlying bit stream. We will guarantee your access to that at a wholesale rate and you can then compete at the applications layer.' This competition will be in a fibre-enabled environment.

Senator BIRMINGHAM—Many of those who argue primarily for structural separation—some argue for functional separation—do so on the premise that it is about trying to provide some equality in access, in particular, in addressing not so much pricing barriers as non-pricing barriers that they find in access to their services. Do you accept those arguments as having some validity?

Mr Morgan—I will start with functional separation. Look at the debate in the United Kingdom, Ofcom's review in 2005, and the European Union's review in 2007. You are quite right. Functional separation was chosen as a remedy to non-price discrimination in the existing network. In economists' terms you had an opportunity for sabotage. You could lose the exchange keys. You could tell the competitors that there was not enough power in the exchange, or that the air-conditioning would not take another rack of equipment.

Senator IAN MACDONALD—There have been so many lies.

Senator BIRMINGHAM—We cannot fit in two tradesmen at the same time. I think that is what we heard this morning.

Mr Morgan—I worked for the union that represented Telstra technicians up until 1993. When competition came in my job was not to sell the idea but I found that people's first reaction was, 'Why are we letting you into our exchange?' I said, 'That is the law and this is the policy.' When they understood that, they made me a cup of tea or took me down to the pub. They would probably have preferred to take me down to the pub rather than to the exchange. I think this might be a little inflated. When I hear comments like those made by iiNet that it can make a good living off wholesaling I wonder about it.

Coming back to your issue, functional separation is about addressing perceived, non-price discrimination on the copper network where you need physical access to the asset. The Competitive Carriers Coalition pushed that initially but in their latest submission they said, 'It has nothing to do with this debate.' Once you push fibre out into the network it is not so much a question of non-price discrimination; the real issue is price. I cannot see how any structurally separated regime addresses price. We have been addressing price issues since competition first came in, with accounting separation. It is probably the most tried, trusted and widely used regulatory tool in the world.

The other problem, which I cannot articulate, is that there are differences. There is a belief that the vertically integrated model, Telstra, is somehow inefficient and self-serving. Obviously it is there to make money for its shareholders and, unquestionably, it enjoys efficiencies from being a vertically integrated company. Economic literature since at least the 1930s states that vertically integrated companies are more efficient. That does not please competitors.

Senator BIRMINGHAM—It also states that monopolies are inefficient.

Mr Morgan—Yes. You may get tinges of that but, rightly or wrongly, the American telephone network, up to the mid-1980s was the most superb machine in the world. It was built by a private monopoly that was closely regulated. There was gold plating in that and perhaps there were some excesses. It does not seem to me to be beyond the realm of governments to come up with a regulatory regime that will ensure that if you are to enjoy a monopoly on this asset and if you are

still to enjoy the benefits and efficiencies of vertical integration you must be transparent on pricing.

It might be that you need some oversight that is more flexible and cooperative within the industry rather than having to run off to the ACCC. There must be some kind of equivalence board or something that is independent that represents carriers, competitors, Telstra, consumers, and whoever. We need a body that can stand back a little, without immediate recourse to these complex and costly proceedings under the Trade Practices Act, and then, if need be, through the Federal Court and all the way up to the High Court.

Senator BIRMINGHAM—Just to be clear, your contention is that under an NBN framework, under a fibre-to-the-node construction, there should no longer be arguments over access or accessibility to the network? That purely comes down to a matter of pricing.

Mr Morgan—No. I suppose this is where Telstra has done themselves a disservice. This is a complex project and it cannot be undertaken without the cooperation of competitors. It cannot be done without agreement from competitors. From Telstra's perspective, putting out fibre to the node is about refurbishing its network up to internet protocol-based next generation networks. It is a whole new game for them. That offers them enormous efficiency gains. It means they do not need exchange sites. There is an issue for competitors because where they put their DSLAMs has now disappeared. In that sense this is not about letting competitors into the network level or the network layers; it is about ensuring that they have access at the application layers. Obviously they already have interconnection to do that and they have rights to use underlying bit streams within that network. It cannot be this simple and perhaps I am oversimplifying the issue. In large part the issue of non-price discrimination sabotage, call it what you will, cannot exist in a fibre-enabled environment. It really comes back to regulation, price and access, making sure that they are transparent and that the rules of the game are up to it and are not overly complex.

Senator BIRMINGHAM—A large part of your argument against any form of separation is based on the dual premises—again I may be oversimplifying—that Telstra is the only one that can build this in a cost-effective and time-efficient manner, and Telstra has said that they will walk away from doing so if any separation is forced upon them. If you took the second part of that equation off the table, that Telstra was not adamant that they would not do it, do you think there are any benefits? Even if you were starting from a clean sheet of paper do you think there are any benefits in the network owner having been separated from retail providers?

Mr Morgan—No. The network operator has to know the customer. They have to be part of that process that drives or generates new products. They cannot just sit back and wait for people to come to them and say, 'We would like this.' The other problem in the structural separation model that I cannot fully articulate is that a vertically integrated operator will build and dimension an engineering network in a certain and cost-effective way. But in a structurally separated model there is the club ownership that TERRiA talks about. Everyone comes along and boasts about how much capacity they want and everyone boasts about how much traffic they will bring to this network. You are going to build the world's biggest network and it will be fat. There are efficiencies, engineering issues and even traffic issues that underlie this notion of separation. As I said, I am not technically competent to go any further with that but, again, it is not that simple.

Senator BIRMINGHAM—Thank you, Mr Morgan.

Senator IAN MACDONALD—Thank you for your submission. As I mentioned earlier, it was in a slightly different mould to most of the submissions we have received. In fairness to you I referred your submission to Optus, which said, ‘It is all wrong and we are getting an expert from the United Kingdom to give a response.’ They will soon release that to the committee and you will be able to read it in the *Hansard* record, so there is no necessity for me to tell you. However, I said that in fairness to you. I was asking Optus about a point that you might have made, that is, that if TERRiA were successful would they be using the existing Telstra network.

As a person without much technical or legal ability I am paraphrasing what was said. I then asked whether the government would be confiscating the Telstra network and who would pay compensation for that? I again apologise to Optus for my poor summary of their answer, which was, ‘We have already been through all this. The regulator said in the last four or five years that we had access to their lines.’ You might recall a High Court case last year in which the High Court confirmed that that was all in order and that it could be the subject of regulation. Do you have any comments about the issues to which I am referring?

Mr Morgan—I read some of your questions about this issue and I understand your concerns. I also saw some answers to your questions when you raised this matter in Canberra. I thought that those answers were perhaps a little less than direct. Fibre to the node basically means that you start off with your telephone exchange here. At the moment running to a street pillar here involves 800 to 1,000 pairs of copper cable. At the street pillar it is split off and a couple of hundred pairs go this way and a couple hundred pairs go the other way. With fibre to the node you take out that copper, you put in fibre here, you move what we will call the electronics for convenience sake down to this node, and you put them in here.

You may reconfigure. You would want to use the existing ducts and you would to use some of the existing exchanges, but not all of them. For example, KPN in Holland believe that they can cover 50 per cent of their capital costs for a fibre-to-the-node network from getting rid of surplus real estate, so you can see that that is a factor. There are efficiency gains. With fibre to the node, once you put in that fibre you cut off the copper. If TERRiA own that piece of fibre and they are taking it somewhere else, and Telstra has to interconnect back here and use TERRiA’s link to there, and Telstra’s copper is connected to the TERRiA node, basically Telecom as we know it would cease to exist. It would no longer be a vertically integrated telephone company; it would be dependent upon someone else to deliver its service end-to-end, so it would be quite a different animal.

Any claim that that would not have a profound impact on Telstra would perhaps be a little misleading. It changes the nature of it. To quote Sir Humphrey, any minister that went down that path would be a really brave minister. It would be an extraordinary thing to do. It would be without parallel because it is not happening anywhere else in the world. I hope that answers your question.

Senator IAN MACDONALD—Indeed. Thank you for that.

Senator MINCHIN—The main thrust of your well-articulated submission is about structural separation. What do you think the government should be doing in this area? Should it essentially

be abandoning the current process and simply letting the marketplace decide the extent to which, if any, fibre will be rolled out without subsidy, or what?

Mr Morgan—After 20 years of being around the Labor Party and working for the trade unions I would love to think that they would listen to me.

Senator MINCHIN—I will tell Stephen to give you a ring.

Mr Morgan—The problem lies in regulation. I am making it a bit too simple and a bit too colourful but I think we have to go back and ask whether we are defending the competition. I suppose the essence of having this competitive tender was to create that competitive tension and to ensure all the best competitive ideas came out, whether or not we are protecting something worthwhile and whether or not it has delivered net benefit. Have we moved towards infrastructure based competition, because to my eye we have not. The government has to say, ‘We have to create an environment, as the German government did, in defiance of the European Commission, when Deutsche Telekom said they wanted to roll out fibre.’

Despite the threats from the European Commission they said, ‘Fine. It is a regulatory holiday. You will not be obliged to share this network, or you will be obliged to share it only on limited terms or in certain areas.’ Basically, that gave Deutsche Telekom sufficient regulatory relief to say, ‘We can now build a business case to do this.’ I think the government has to come back a step and say, ‘If want this investment we have to look at the provisions in the Trade Practices Act. It is unfortunate that Telstra attacked the ACCC in the way that it did. If you look at the act and at the tests under the act that the ACCC has to weigh in making the decision you find that it ‘is in the long-term interests of the end user’. First and foremost it is competition and, second, it is the efficient use of existing infrastructure.

With those two boxes to tick first the ACCC could not have done much more than it did. It was fine if there was any connectivity to keep technicians happy. Almost as an afterthought they promoted or encouraged investment. You have to reform the act to bring promotion of investment up front, at least with equal ranking and weight with the promotion of competition. I am not saying that they are mutually exclusive but at the moment one is crushing the other. I think the government should also try to sit down. I know you might say, ‘Greater minds and greater governments could not do it with Telstra’ but in the end it is worth trying to sit down to see whether there can be some regulatory agreement. There also has to be a more cooperative approach within the industry.

There has to be a forum, as there are in other countries, where this debate swings away from immediate self-interest about who will make money out of broadband or lose money out of broadband to, ‘Who will enjoy the benefits of planning the next generation network?’ These are complex issues that only the industry can address. You have to have some kind of forum that can bring people together. Although this is utterly unlikely they must also look at this issue of the digital dividend to see whether they can crunch in rural areas. It is unfortunate that the government chose to disperse a lot of money to try to boost the economy—\$10 billion, and a lot of it will go to consumer spending.

If that could have been tied into buying new television sets because people would be getting digital television next year, it could have gone to some slightly better purpose. It could have been tied together.

Senator MINCHIN—I think a lot will be spent on plasmas.

Mr Morgan—That is right, it will, but it could have been tied into a broader policy intent. I think they have to come back a couple of steps, look at what they want from competition, and at what they want from investment. If it means a change in the nature of the competition, that is the price that you have to pay. It is a different market structure and it is a different technology. In a sense, the current DSL competition has been opportunistic. By that I mean that DSL was conceived in the mid-1980s by the Bell Labs, that terrible monopoly that came up with so many brilliant things because it had a lot of money. DSL was conceived by the Bell Labs, and after the break up it was deployed by the regional Bells basically as a means for the incumbent company to ring a bit more value out of its copper.

Someone then noted, ‘That is quite useful. We can put competitors riding on this.’ You then got the debate about unbundled local loop. In a sense you have ended up with something referred to by some American commentators. I know that people like Optus would not like this, but I have had the same debate with the people in Ireland that Optus had in mind. They ticked my papers in Ireland, so it will be interesting to see what happens. DSL competition has been per chance; it has now been passed and you cannot have the same market structures. In the states they basically identified what they called the arbitrage mirage where you have two lines.

You get your first customers from resale or from arbitrage, or DSL and they are high-value customers. When you get the next customer the value goes down slightly. Your revenue is going down but your costs in acquiring them are going up, so you are consuming that margin. That is why this whole theory of the ladder investment failed. The margin that was supposed to go to investing in infrastructure got consumed in marketing and call centres. With no disrespect to some of the competitors, you ended up with a telephone industry where an incumbent with a very large network moved to a duopoly with a smaller network and then to a market structure where you had law firms with call centres.

Basically that is how the system now works. You have to ask whether it is worthwhile. You are moving into a whole new era because the competition has to come at the applications layer; it has to come in the services. Whoever is cleverest and most innovative in what they put over that underlying bit stream will be the ones that survive. I am sure that people like iiNet know that they can survive. They have been innovative. They were around before DSL and resale of this kind came in and I am sure they will be there after it.

Senator MINCHIN—Thank you for that.

CHAIR—Thank you very much, Mr Morgan. That completes our questioning and your evidence before us today. Thank you for your time, your energy and your commitment.

Mr Morgan—Thank you.

Committee adjourned at 4.42 pm

