



COMMONWEALTH OF AUSTRALIA

# Official Committee Hansard

## SENATE

SELECT COMMITTEE ON THE NATIONAL BROADBAND  
NETWORK

**Reference: Implications of the proposed National Broadband Network**

WEDNESDAY, 4 MARCH 2009

CANBERRA

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

**Wednesday, 4 March 2009**

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

**Senators in attendance:** Senators Fisher, Ludlam and Lundy

**Participating members:** Senators Abetz, Adams, Arbib, Barnett, Bernardi, Bilyk, Mark Bishop, Boswell, Boyce, Brandis, Carol Brown, Bushby, Cameron, Cash, Colbeck, Jacinta Collins, Coonan, Cormann, Crossin, Eggleston, Farrell, Feeney, Ferguson, Fielding, Fierravanti-Wells, Fifield, Forshaw, Furner, Heffernan, Humphries, Hurley, Hutchins, Johnston, Joyce, Kroger, Marshall, Mason, McEwen, McGauran, McLucas, Minchin, Moore, O'Brien, Parry, Payne, Polley, Pratt, Ronaldson, Ryan, Scullion, Stephens, Troeth, Trood, Williams, Wortley and Xenophon

**Terms of reference for the inquiry:**

1. To inquire into and report 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. The committee's investigation should 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. 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 met at 9.10 am****McCARTHY-WARD, Mr Peter Jude, BT Director, East of England, BT**

*Evidence was taken via teleconference—*

**CHAIR (Senator Fisher)**—The hearings of the Senate Select Committee inquiring into our National Broadband Network in Australia are public. If at any stage you wish to provide evidence in camera, please let us know and we will consider that request in the circumstances. It is unlawful and potentially in contempt of the Senate for a party to attempt to influence evidence that would otherwise be given by a witness to the committee, and I am sure you will also understand it is potentially unlawful and in contempt of the Senate for a witness to provide false or misleading evidence to the committee.

**Mr McCarthy-Ward**—I am presently BT's Director for the East of England, one of our regions in the UK, but I am giving evidence to the committee because I have had four years experience of developing and implementing the UK's process of functional separation, and BT considered it might be helpful to you to have direct access to somebody with that experience.

**CHAIR**—We have your submission. Would you like to make an opening statement?

**Mr McCarthy-Ward**—I will, if I may, but I will keep it brief so that we have the maximum opportunity for full questions. I would like to start by stressing that the reason I am talking to you is not that I know a great deal about the Australian marketplace, but because the experience that we have had in the UK may be relevant to you. It is not in the sense of proposing to you that the regulatory solutions of the UK are somehow directly applicable in the Australian market that I speak; it is simply to give you the evidence of our experience for you to judge whether or not it is relevant to your circumstances.

It might be helpful if I briefly describe what has happened in the UK. Since 1984 it has been a competitive marketplace, though the form the competition has taken has varied over time between capital intensive competitors and competitors who are investment light but who buy feature rich wholesale products from the incumbent.

In 2004 our regulator decided to review the state of the market and in that review concluded that the way the market operated was likely to be unsustainable in the long term. One of the things that regulators had failed to do was identify which aspects of the marketplace were efficient for the operation of competition and which aspects of the marketplace had some of the characteristics of monopoly bottlenecks, where duplication of those bottlenecks may not be economically efficient. Our regulator determined that the access network, such as the connection between the telephone exchange and the customers that it serves, had many of the characteristics of a natural economic bottleneck, and to an extent the connection from that local exchange to a central exchange also had some of those characteristics and that it would be unreasonable to expect competitors to construct those assets for themselves. Because of that they were therefore dependent on the provision of an effective product from the incumbent in order to complete their network builds and serve their customers. Our regulator concluded that the vertical integration of BT meant that BT had the incentive and the ability to discriminate in the supply of those access

and backhaul products to itself and to third parties, and that those circumstances taken together meant that the market could not function properly.

BT decided to offer a solution to that problem and that solution is what we call functional separation, the creation of a business dedicated to serving the market fairly with access and backhaul products. It was the process of coming up with that solution, developing the commitment that surrounds our delivery and execution of it, that occupied me, my team and my management for the best part of four years from 2004 to 2008.

Our experience of operating that contained a number of learnings. It was far from straightforward, very complex at times and quite costly, but the results appear to be that the UK market is functioning well in a competitive sense, that BT itself has not been hampered or harmed in its own performance, and that competition is operating on a much fairer and more equitable basis, so the consumer and the end user appear to be benefiting as well. That is a very brief summary. I am very happy to cease at that point and take questions about our experience.

**Senator LUNDY**—Going to the issue of having the experience of operating in a functionally separated telecommunications company, what are some of the key changes, for example, with respect to accessing backhaul and the process by which that is determined between the infrastructure provider and others wanting to use backhaul services on the network?

**Mr McCarthy-Ward**—This may be a slightly lengthy reply. Please interrupt me if it is not dealing directly with what you want to hear. One of the primary features of the regime we agreed was a principle called equivalence. Under the doctrine of equivalence the incumbent must buy the same products and services itself to construct its retail products as it sells to those with whom it competes in the retail domain for the same customers. It must buy not only the same products but buy them on the same terms and conditions, using the same business-to-business gateways, with access to information provided by the functionally separated supplier at the same moment in time to all parties. In making the transition from operating as a vertically integrated enterprise to one which is capable of functioning in that mode is actually a very complex process and takes quite some time to achieve.

If I take the backhaul products and services, BT had to reconfigure the way in which its retail business is operated such that they could place an order with the internal supplier, Openreach, through its business-to-business gateway and then construct a service for end customers based on the Openreach sale product. That proved to be an extremely complex and difficult process for virtually all of the transitions that we had to make.

An interesting piece of learning was that it was very rarely a question of whether or not the retail business could absorb the price that was being charged. The complexity often crept in when using the same gateways that we were making available to third parties, and in using the same information flows that surrounded the products. Often it was a series of small but subtle and very important changes that we had to make to the wholesale services to render them fit for BT itself to use. This is quite a salutary piece of learning, because we had believed that we were behaving ethically and properly to our wholesale customers, but when confronted with using the same product under the same conditions we found that it was not fit for purpose for our use. The changes that we made to make it fit for purpose for ourselves flowed through as benefits in



product improvements to our wholesale competitors. I am sorry if that is a rather lengthy reply, but that is a generic description of the process of moving to equivalent service.

**Senator LUNDY**—I appreciate that and it really goes to the heart of the issues that were being discussed yesterday, particularly those issues from a number of telco companies that continually describe the lack of equivalence and the ongoing frustration that they experience. To dig a little deeper in that regard, you talk about the process being complicated, expensive and so forth, but you also mentioned the challenges that the company had in the retail arm in being able to absorb the cost. That implies that there was a cost increase to the retail arm once these principles of equivalence had been put in place. Was that the case and how did that wash through over time?

**Mr McCarthy-Ward**—It certainly was the case and in our published accounts you will find that we have made, over the first couple of years of operation of the undertakings, three provisions for exceptional costs arising from primarily costs of changing systems architectures to be able to work under the new trading arrangements. Those provisions we have made totalled something like £153 million over two years.

On the other hand, if I look at it a different way, our retail business has increased its profitability steadily throughout the period of time since the undertakings were signed. There are costs that have been incurred, but if I look at the picture in overall terms those costs have been absorbed alongside a continually improving overall performance. It is worth saying that one of the reasons that performance has improved was that the corollary of building a very robust and satisfactory wholesale regime was that our regulator felt able to deregulate retail prices, and from that flowed some advantages to our retail business in terms of the flexibility and freedom that they had in pricing.

**Senator LUNDY**—What was the level of oversight from the regulator in the transition process going from old to new?

**Mr McCarthy-Ward**—It was extraordinary. The regulator published a report to the industry twice a year at first, which reviewed all of the undertakings that had fallen due during that period and the degree of BT's compliance with them. It also called for regular meetings with my team and me to review progress at a more informal level. On top of that, one of the things that the undertakings obliged BT to do was to create a very high level of audit oversight of its own delivery of the undertakings. We created a body called the Equality of Access Board. This was a board committee of BT PLC board, but with a majority of non-BT members appointed in consultation with the regulator and the industry. That board was charged with overseeing and reporting on BT's delivery of its undertakings. Our regulator, Ofcom, thus had two or three sorts of insights, the informal day-to-day tracking at official level, the official report that they generated on a half-yearly basis, and the oversight that the Equality of Access Board provided and reported back to them. It was quite rigorously monitored, and indeed it still is, because compliance with the undertakings is an ongoing thing.

**Senator LUNDY**—Are those structures still in place? Is that Equality of Access Board still functioning in that way?

**Mr McCarthy-Ward**—Yes, it is. If I may offer a personal observation, for the company it has actually been quite a valuable asset. If I may be completely honest, when we agreed to do it we felt it was a little bit heavy handed of our regulator and also possibly an opportunity to save on their operating costs of oversight. But the practice has been that we have an internal body that is unpolluted by the sorts of conventional wisdoms that can arise within a large organisation. Large organisations have an extensive capacity for self-deception sometimes, and it has been quite salutary to be challenged on our assumptions and to have somebody within the organisation saying, ‘I don’t think that’s at all defensible. Go back and think about again.’ That was probably inconvenient at the time that it happened, but with hindsight it has been a better outcome than going down a route that either the regulators or competitors later discovered to be flawed; correcting it from that point of time would be more expensive and more costly in reputational terms.

**Senator LUNDY**—I have two questions but they are heading in different directions. We had a suggestion at the committee yesterday about a mediator role to manage disputes between competitors and the incumbent carrier. What was the mechanism that perhaps the Equality of Access Board or others used in the UK to facilitate non-litigious resolution of disputes between BT and competitors, that is, when they felt they were not getting the right access and so forth?

**Mr McCarthy-Ward**—There are four routes. Obviously BT itself offers a complaints procedure to its competitors. That is used sometimes, but generally people with a deep-rooted complaint look for some sort of degree of objectivity in the point that they turn to in order to have it investigated. Under the undertakings the Equality of Access Board is given a specific role to investigate complaints that other operators brought to it, and it has worked quite hard to encourage other operators to use it. There have been some complaints, but these are handfuls rather than large volumes.

Our regulator, Ofcom, also established a body called the Office of the Telecoms Adjudicator. It is not formally expressed in this way, but perhaps what I say is a good guide. It really has two roles. One was a function of adjudication in terms of looking across the competing demands of competitors and seeing whether or not consensus could be brought about what solutions the industry as a whole would accept to meet those sometimes differing demands. Secondly, it also provided a means of resolving or addressing disputes with BT. In terms of things such as service quality standards, penalty terms and so on they have proved quite useful in closing those things down. They act under the general umbrella of the regulator and nothing can prevent a competitor who so wishes from taking a complaint to the regulator itself and asking them to rule upon it. But the regulator would be fairly keen to see that other mechanisms for resolving the complaint had been addressed.

What we have found is that the creation of our functionally separated enterprise has significantly reduced the heat of complaints. It has less significantly reduced the volume of complaints, because there are always things that people want that they cannot necessarily always get, but the debate is conducted in a much more even tenor than was the case with the rather strained relations that existed prior to the passing of the undertakings.

**Senator LUNDY**—A question in a different direction: what was BT’s experience when you embarked upon the transition process moving to a functionally separated entity with regard to the quality of your own information systems? Not only did you have to transition to something

that everyone could access with equivalence; was there also investment required internally to update your own information systems about your network?

**Mr McCarthy-Ward**—Yes, there was. This was, and still is, one of the most complicated areas of the undertaking. We are obliged under the undertakings to have moved by now to logical separation of our management information systems and of our OSS, the systems that drive the actual delivery of service, which was delivered some two years ago now. We are also obliged to physically separate the systems, that is, to have entirely separate systems within our Openreach business and the rest of our business, on a schedule which has had a number of deliverables already but actually runs until 2010 before it finally closes. That has proved quite complex to do. I think I would confess that we underestimated the complexity of this operation at the outset, and it is one of the elements of the undertakings, if we were back in the negotiating frame with our regulator once more, where we might well have dug our toes in a little bit more firmly. I offer the thought that our belief is that logical separation systems are much more consistent with the way that modern systems architecture is developed and are a relatively painless and cheap way of achieving the necessary separation of systems.

The extra advantage that accrues from physical separation is that, should you subsequently decide to structurally separate the business, it has its own independent systems estate. If that is never going to be the intention then it is moot whether or not the full cost of physical system separation is proportionate.

**Senator LUNDY**—I understand the point you make. Going back to the quality of information within BT and the investment required to bring that to a point where the information is accurate, to what extent did BT have to audit their own network to ensure that accuracy, or was it more just an information systems finetuning/updating exercise? Was it more about getting techs out in the field and having a look?

**Mr McCarthy-Ward**—It is slightly more complex. At the time that we signed the undertakings we were also planning to renew much of our systems estate, and it is almost impossible to disentangle the costs that we incurred because we made undertakings from the costs that we would have incurred through upgrading the systems estate from a 1980s COBOL based set of processes to something more modern.

One observation I would make is that one of the things we did find was that we believed we had mature, cost-effective and highly efficient systems that supported information flows within our business and that these had matured over a long period of time to the point of superb performance. What we discovered was that they were in fact significantly fault prone but the faults that they threw up were resolved by local initiatives amongst staff who used informal networks to close the gaps in the information that they received. Our operator services in our retail business would ring up their network colleagues and say, ‘What’s happened to this repair because the system is giving me nonsense?’, and get, through that informal contact, the information that they needed. We had systems that appeared to us to be working well but in practice were not, and we were shielded from that knowledge by the initiative of our staff. Our staff were exploiting networks that are not available to them under functional separation. They were exploiting informal contacts, leads and so on. Once you are functionally separated, the Openreach business will not disclose to them information that they are not providing to a third party.

The consequence of this is twofold. One is that we have to productise many of the information flows that informal networks were covering. Having productised them, of course, we then are making them available for our competitors, so it is better for our competitors, too. The second sequence of it is that we are beginning to generate a degree of improved efficiency in our end-to-end operation because we are having to productise it and therefore to automate it and not rest on our staff taking manual interventions to bypass the frailties of the systems in order to operate. I am sorry if that is a rather lengthy answer, but it is an example of pain producing benefit.

**Senator LUNDY**—The practical description helps us make sense of what that transition looked like for BT. Chair, I am happy to pass on the questions. I do have some more for later.

**CHAIR**—It is possibly implied in what you have been saying, but does BT retain ownership of the infrastructure?

**Mr McCarthy-Ward**—Yes, it does. It is a single legal entity that is BT and that single legal entity owns all of the network infrastructure. The Openreach business has managerial control over the assets that form part of the accounts that it produces, but there is still only one legal entity.

**CHAIR**—We have had views expressed to us, which I will not attempt to weight, that the supplier should not be able to compete with its customers. How would you reflect on that?

**Mr McCarthy-Ward**—I think it is a good principle. Both Ofcom and us, at the time Openreach was created, were keen that Openreach should not extend its activity along its value chain to the point where its customers were somewhat schizophrenic in their view of it. The purity of that position is a bit difficult to maintain in absolute terms, because what one Openreach customer would dearly like to see them provide may be what another Openreach customer would like to self-provide. As the market becomes more complex the boundary is not a taut and easily defined one but certainly at the level of principle it is preferable for the business that is supplying residual quasi-monopoly services to do so on the basis that its customers need have no fear that there is any ambivalence in their attitude because they wish to capture part of the value chain.

**CHAIR**—Your president suggests that competition is flourishing in this market in the UK. Would all participants in the UK market agree with that claim?

**Mr McCarthy-Ward**—No, because it is a competitive marketplace and therefore they are not all winners.

**CHAIR**—That is right. What would be their reasons it is not competitive?

**Mr McCarthy-Ward**—It is not that they would say it is not competitive. What happens as a result of Ofcom's change in philosophy is that those parts of the marketplace that were asset light and that bought feature rich wholesale products started to be relatively disadvantaged against those competitors that were making substantial investments and were buying unbundled local loops and products fairly low down the value chain. That has led to a process of consolidation in the UK market. If I go back to the days of Ofcom's strategic review, I think they were finding that there were hundreds of service providers operating, but very few of those

service providers were operating on the basis of producing a positive cash flow. Now we have a reduced number of players. We have some very large groups that are beginning to emerge with very significant presence, such as Carphone Warehouse, Cable and Wireless and so on, and they are becoming material and durable, which is the quality that Ofcom was concerned that they previously lacked. Functional separation does not produce a solution that every participant that is not the incumbent can relish necessarily. If the regulator chooses to say, 'I am going to promote competition, but competition at the deepest feasible level in the network', then competition which is based outside the deepest feasible point in the network may not do as well.

**Senator LUDLAM**—In your submission you state that in terms of functional separation there are conditions that relate to price and non-price access conditions. What are the most important of the non-price access conditions that are part of that picture?

**Mr McCarthy-Ward**—Practice has shown that a few of them are particularly important. One is the use of the same systems and processes for the purchase of service and for the provisions of things like a repair. Because the same gateway has to be used by both BT and its competitors, BT has the strongest possible incentive to make it feature rich and fully fit for purpose. There are two other areas that are important. One is notice of planned product changes and product developments. Our Openreach business cannot give notice to the rest of BT that it is going to change its price, add a feature or withdraw a product ahead of telling everybody else, so the industry plans on the basis of common knowledge. That is a big change.

The third one is product development. All of Openreach's customers have the same right to make a request for product development. It was a disconcerting and unusual sensation for BT to realise that it had to form its own place in the queue rather than having the divine right of use of our finite development resources.

**Senator LUDLAM**—That is helpful. In Australia there is a degree of competition in wholesale because people have built bits and pieces of the backbone apart from Telstra. What is the situation in the UK as far as competition at the wholesale end, or is the entire backbone owned and operated by BT?

**Mr McCarthy-Ward**—No. There is probably more capacity than the market demands in terms of long haul networks. If you think of a network as having three components—access, backhaul and trunk—there is plenty of capacity in trunk networks and there is a vibrant market for transit traffic over those trunk networks. There is a limited degree of self-provision of backhaul networks. By and large those that self-provide their backhaul networks do not choose to wholesale it on to third parties. Although there is a degree of self-provision BT is a de-facto supplier of most wholesale backhaul services.

In access networks there are really two mass market access networks, BT's and the cable companies' networks. Cable companies cover something like 65 per cent of the population. BT covers virtually 100 per cent of the population, and only BT provides access services because only BT, as found by the regulator, has what it termed significant market power.

In terms of how the market is developing overall, the UK is a market of something like 33 million lines in total and about 24 million households. Of those 33 million lines, about 5.6 million lines are unbundled local loops, about 5.4 million lines carry wholesale line rental

services, and about 4.1 million lines carry carrier preselection services. The carrier preselection number is falling as operators choose unbundled loops in preference to the wholesale call service.

**Senator LUDLAM**—I was interested in the comments that you made right at the very beginning. When did the regulator do the review? Did that occur in 2004?

**Mr McCarthy-Ward**—It was 2004.

**Senator LUDLAM**—They obviously made some findings, at which point BT came forward and offered functional separation. Had the regulator or the reviewer put a bunch of options forward at that time?

**Mr McCarthy-Ward**—It did. BT offered functional separation at a point in time when the alternative to offering functional separation was that the regulator would make a reference to what is called the Competition Commission stating that there was a significant flaw in the operation of the market working to the detriment of competition. That flaw was BT's vertical integration and its strong role in both the wholesale and retail marketplaces. We had to contemplate a choice between crafting a solution that our regulator would accept or going down the route of referral. Referral would take between two to three years, during which time markets tend to fight shy of companies whose future is somewhat uncertain, so our share price would probably be hit, and it would be difficult during that period of time to ask our shareholders to fund a significant program of network renewal, which is what we had planned to do.

Without making a judgement as to the possible conclusions such a reference could make, we had a very strong incentive to find an alternative to the reference taking place. The choice that we had was a referral that could have led to structural separation or might not, but only after two to three years of protracted uncertainty, or crafting a solution that would avoid that. Our decision was to craft such a solution.

**Senator LUDLAM**—It all sounds so peaceful. I am sure it was—

**Mr McCarthy-Ward**—The facial expressions might have been a little bit more tortured and wrenched.

**Senator LUDLAM**—I am just trying to visualise that process occurring in Australia and it all seems kind of remote.

**Mr McCarthy-Ward**—May I make a comment on that?

**Senator LUDLAM**—Please do.

**Mr McCarthy-Ward**—A lot depended on the positions that both the leadership of Ofcom and the leadership of BT were taking at the time. We had a very visionary director-general in Ofcom in Stephen Carter and we had a very visionary CEO at BT in terms of Ben Verwaayen. Ben Verwaayen was very keen to put an end to what he saw as years of endless squabbling with the industry and the regulator and was willing to make a bold step to try to craft a solution that

would defuse that environment. Had he not been of that frame of mind we would never have got there.

**Senator LUDLAM**—Who came up with the eventual structure? Is it possible to trace whose idea was the creation of Openreach?

**Mr McCarthy-Ward**—That is me. That is a little bit of an arrogant thing to say. I was a member of the review team that was charged with coming up with an organisational solution and with the governance and product structure that surrounded it.

**Senator LUDLAM**—Is the job of Openreach to stand between the wholesaler and all of the retailers including BT Retail?

**Mr McCarthy-Ward**—It is to be a wholesaler of a particular range of services to both BT and the rest of the industry, yes. It serves all of the customers on a precisely equal basis.

**Senator LUDLAM**—I have had a very quick look at the website and I am getting a sense of the structure. Can you tell us what BT Wholesale actually does?

**Mr McCarthy-Ward**—Yes. BT Wholesale deals with call transport services. It is probably best to get to BT Wholesale by subtracting Openreach from a traditional network business. Openreach owns the access and backhaul networks—the duct, cable, boxes in the street, jumpering and frames in the telephone exchanges. Wholesale owns the plant that sits on those lines, and services them. If you want to buy a carrier preselection, wholesale calls, wholesale IDD, transit services or mobile call terminations, wholesale will supply them to you. If you want to buy a wholesale broadband service—we call it IPstream and data stream—then wholesale will sell it to you. If you want to buy the underlying asset, the copper loop, or in future the fibre loop service, then Openreach will sell it to you.

**Senator LUDLAM**—That is helpful. Thank you for taking an interest in the Australian market. Since this occurred around 2004 what has been the degree of litigation and argy-bargy? How peaceable is the market generally?

**Mr McCarthy-Ward**—The undertakings provide for BT to be taken to court by Ofcom or by a third party if we fail to deliver, but nobody has taken BT to court as yet. That is the smooth surface of the pond. Underneath the surface of the pond there is a fair degree of turbulence, which arises in two ways. One is where BT and Ofcom differ in terms of the interpretation of the undertakings, and there have been a number of examples of that. The second is where BT fails in its delivery of some part of the undertakings and the question then is: can we satisfy the industry and the regulator that the failure—I will not use a legal term like ‘reasonable endeavours’ or ‘best endeavours’—is despite making a determined effort to fulfil our obligation or is it a result of lack of commitment and neglect? Those things go on and there are a lot of those. I would not wish to represent it as a process of total harmony, but the debate has not gone nuclear in the way that it might have done.

I do not know if the committee is aware, but this morning our regulator, Ofcom, published its proposals for the regulation of fibre based next generation access and set out an approach that BT has been proposing for Openreach to become the provider of fibre based services in the

future. The model that we developed for historic networks is showing a capability of migrating to future networks as well.

**CHAIR**—In terms of what Senator Ludlam referred to as the argy-bargy, I presume that the final resolution, in the event that disputes are not able to be resolved by the Office of Telecommunications Adjudicator or the board itself, would there be access to the court system?

**Mr McCarthy-Ward**—If it is to do with the undertakings. If BT is in breach of an undertakings, any third party that is damaged as a result of that can take us to court for recovery of damages. If BT is in breach of an undertaking and Ofcom are dissatisfied with our efforts to remedy that, then they can take us to court to get an order made requiring us to do what they deem to be right and we are then in contempt of court if we fail to do it. Those are the two legal remedies that exist if people are in dispute with us, but neither recourse has been used.

**CHAIR**—Neither has been used?

**Mr McCarthy-Ward**—No.

**CHAIR**—What about if disputes are not able to be resolved through your dispute resolution processes to a customer's satisfaction?

**Mr McCarthy-Ward**—That is a different matter. Here, if an individual customer has a complaint, they can raise it with the service provider that they dealt with, whether that is BT or one of BT's competitors. If they fail to deal with it they can escalate it to Ofcom. It is outside of my area of specific knowledge, but I believe there is an ombudsman service that also helps with the resolution of customer complaints. But that is a conjecture rather than a firm statement of fact.

**CHAIR**—It is instructive in itself that you are not actually sure.

**Mr McCarthy-Ward**—The whole philosophy of undertakings is to resolve issues about service to competitors in order that the market may then choose between competitors, none of whom is disadvantaged by virtue of their dependence on the incumbent, and the forces of competition will then secure that the consumer gets a good deal.

**Senator LUNDY**—You were discussing earlier with Senator Ludlam the drivers or the leaders that were pushing this process. Could you reflect a little on what was happening at the political level at the time, because my recollection was that there was a significant amount of encouragement from ministers at a government level to move along with the changes, and that the political environment was such that there was a strong intention to proceed with regulation if in fact the issues could not be resolved through the industry sector in the way that they were. Is that the case?

**Mr McCarthy-Ward**—You are inviting me to give you hearsay evidence here, of course, because I am not a member of the cabinet. I do not think Stephen Carter, who was then the director-general of Ofcom, would recognise that description. Mr Carter was fiercely defensive of his autonomy from the political process and I think Mr Carter would say that the solution Ofcom crafted was a solution Ofcom crafted independent of ministers. He would go so far as to say he



had the courtesy to keep them advised, but he also had the statutory obligation to maintain the distance.

**Senator LUNDY**—I would like to go back to some of the nuts and bolts issues and the physical challenges of providing equivalence. How was that handled at a resource level given that the demands on the human resources of BT to make physically accessible aspects of the network, in some cases, would have been drawn upon? How did you reconcile that within your own accounting and how did that factor into the concept of equivalence?

**Mr McCarthy-Ward**—When we signed up to equivalence it was a typical deal struck between a small community of BT people privy to what was going on. It was a group of about 25 or 30 and no more. Similarly, it was a relatively small group from the regulator. We took the precaution of gaining operational sign-off to the primary deliverables, but most of my operational colleagues would feel that they did not have full disclosure of the facts because things were being played very close as they were share price sensitive. There was a degree of retrospective recovery, having come to an overall deal, where a number of people were deeply crestfallen to find what it was that they had to deliver. For the first year or so we had to provide an internal mechanism where anybody whose initial budget request did not match the subsequent demands being made upon them could escalate that. I had a pot of money I could allocate out to people who found themselves in that position. We were fairly diligent about it, because the minute you say you have got that then everybody uses it as a label to bid for more. We did have a control process.

Subsequently—BT runs through a series of committees and there is a group called the Operating Committee, which is chaired by the chief executive, and that would have regular updates on the progress of delivery of the undertakings, together with a surfacing of any matters, including resourcing matters, that we had been incapable of resolving at a lower level.

**CHAIR**—Is there anything else you would like to say before we allow you to sign off for the day?

**Mr McCarthy-Ward**—There is one point that did not come up in our discussions and I wonder if I might just register it?

**CHAIR**—Yes.

**Mr McCarthy-Ward**—As to the process of crafting the undertakings—although in law and in practice these are BT's undertakings and BT alone is accountable for their nature, to make the whole process work we had to spend a period of probably six months going through a draft that we produced first with our regulator and then with our competitors, undergoing line-by-line test scrutiny and change until we had crafted not only what we were willing to offer but what we knew our regulator and our industry would be willing to accept.

There are two important points that come out of that. For these things to be workable we felt there had to be that level of ownership. BT had to feel that they were its undertakings and it was then committed to their delivery. But they are meaningless if they are not at a detailed level bought into by the players in the industry that the undertakings are there to satisfy and placate. I

think that was a very important part of our process of high-level of engagement with both the regulator and the industry. That is an additional point that I would like to make.

**CHAIR**—Were consumers included? Was there consultation to that extent?

**Mr McCarthy-Ward**—We spoke with some consumer groups right at the outset, but the primary focus throughout all of this was the regulator and the customers of our wholesale enterprise, that they were being reasonably dealt with.

There is one other point I should make. I received, over the weekend, a report that BT had commissioned from a group called SPC, which looks at the application of equivalence to what we call next generation networks. It is relevant to some of the discussion that we have had. If it would be of interest I will send the site where it can be found to the secretariat. Had it been published at the time that we gave you evidence we would have attached it, because it was of general interest. If that would be useful to the committee I will make it available to your secretariat.

**CHAIR**—Thank you, it would be. Ms Alison Kelly and able helpers will gratefully receive it.

**Mr McCarthy-Ward**—I will send it across. Thank you for your patience and listening.

**CHAIR**—Good night. Thank you very much.

[10.02 am]

**PETRESKI, Dr Bill, Principal Adviser--ICT, Electronics and Electrical Sectors, Australian Industry Group**

**SHARP, Mr Roger, Principal Adviser, Public Policy, Australian Industry Group**

**CHAIR**—The committee now looks forward to hearing from the Australian Industry Group. The proceedings of the Senate Select Committee inquiring into the National Broadband Network are public. If at any stage you wish to give evidence in private then please state your request and the grounds upon which you are seeking to do so, and the committee will consider it. It is unlawful and potentially in contempt of the Senate for any party to attempt to interfere or influence evidence that would otherwise be given by a witness to this committee, and it is also potentially unlawful and in contempt of the Senate for a witness to give false or misleading evidence to the committee. We have your submission that you lodged at the end of last year and very much welcome your appearance today. Given that there have been some reasonably significant developments since then would you like to make an opening statement?

**Mr Sharp**—Yes, I would. Firstly, we very much welcome the opportunity to present evidence today and want to put on record our thanks to the committee for inviting us to put forward our views. We feel very strongly that the National Broadband Network is of critical importance to our members, whom we are here to represent, and we also believe it is of critical importance to Australia's future competitiveness and productivity. We also believe that government makes better public policy when the views of industry are taken into account.

As an organisation, you would be aware that we represent roughly 750,000 employees and broadly 10,000 companies, and the key point to make about our membership is that we span all aspects of what I would call the physical and the digital economy. We have companies that are directly involved in the NBN process who are bidding for aspects of NBN work, and we have a wide range of users of internet, broadband, technology services and so on. We feel we are quite well placed to provide the committee with some oversight on how business generally, both in terms of the technical expertise but also the practical application of the NBN, might be taken forward.

From our submission you would be aware that we did some survey work of our membership. We did quite an extensive survey drawing on over 526 CEOs representing companies with a turnover of \$482 billion, and that survey work showed a number of things that we would like to draw to the committee's attention. Firstly, business believes a National Broadband Network is both needed and beneficial. Ninety three percent of the companies that we surveyed indicated that they thought a high-speed broadband network would be of positive benefit to their productivity and efficiency. Sixty-six per cent believed that they would benefit greatly from faster broadband. In particular, 69.7 per cent of the regional firms in the survey said that they thought it would be of great benefit. Thirty-six per cent of businesses expected a large increase in their financial activity as a result of faster broadband.

In speaking on behalf of our membership, there is a fairly clear signal from them about the need and the benefit of a National Broadband Network. Also, in looking across some of the research we have seen from around the world, we are aware that there are issues with Australia's current broadband performance. The World Economic Forum, for example, has had Australia broadly down at twenty-ninth in terms of the cost of broadband, the nineteenth nation with regards to the number of high-speed broadband subscriptions, and twenty-third in the rankings with regard to access to digital content. We think there are some areas for improvement and we hope that the NBN will help address some of those points.

We also feel very strongly that there are a number of ways and means in which a national broadband network can be delivered, but it is most important that there are some key principles that underpin that. As an industry group, in some ways we are less concerned about the processes and the structures that deliver the NBN, as long as it is delivered on time and in the right way. What we mean by that, as we flagged in our submission, is that we think principles that promote competition, investment, access and inclusivity, flexibility, fair and open markets, and a strong regulatory framework are both necessary and ideal when taking forward the practicalities of the NBN.

We are also very clear in our views that we believe that remote and rural users have a right to expect a comparable high-speed broadband service to their metropolitan counterparts, and in particular partly reinforced by our survey work there is a clear need and desire in remote and rural Australia to realise the benefits from a high-speed broadband network. Given the size of the country and some aspects of the sparseness of the population, those remote and rural communities tend to gain disproportionate benefit from the right network.

We are unashamedly pro-competition. We believe that it is absolutely appropriate for a fair and equitable return to be delivered for whoever constructs the NBN, but equally we would want to see a regime in which there was fair pricing and open access for new entrants to come in and deliver new products and services on the back of the NBN.

With regard to the regulatory environment, we feel that a strong framework is required to ensure that there is a pro-competition, pro-access approach. We also feel that there are opportunities presented by the NBN to allow for some convergence of regulation as well as some convergence of technology. In essence, let us seize the opportunity to bring ICT and technology regulation into the twenty-first century from the twentieth century.

A key issue that came up from our survey work in which Ai Group is very keen to be involved is looking at how we equip business with the skills to maximise the commercial opportunities presented by an NBN. Our survey showed that 29.6 per cent of SMEs indicated that they had a low degree of ICT skills, which they felt would prevent them from realising some of the benefits of the NBN. For one in three SMEs essentially to be in that place where they can see some of the benefits of the NBN but are not clear about how to realise them is an issue of concern and something which public policy and industry need to target.

We obviously want the NBN to be resilient. I think that means resilient to both e-security, cyber security threats, but also actual physical attacks. As we have seen from the dreadful events in Victoria with the bushfires, and also from the floods in Queensland, if you are looking at a situation where physical challenges to digital infrastructure of that scale are taking place, there

needs to be thought put into the system now as to how it would deal with those types of challenges. A fibre-to-the-node network would face real challenges from the types of temperatures and the types of water levels we have seen in Queensland and Victoria in recent times.

Finally, we should think of the National Broadband Network not simply as a faster internet. From our point of view, it really is an opportunity to look at a whole range of next generation services from, e-health, remote working, smart grids and so on, and I think we would have missed an opportunity if, when we move forward with the NBN, we do not factor in the ability for this to be used in a way that produces a range of new industries, a range of new products and services, and the maximum possible boost to Australia's competitive position.

**CHAIR**—Dr Petreski, do you wish to add any comments at this stage?

**Dr Petreski**—No, I do not wish to add to that introduction.

**CHAIR**—Thank you very much for that opening statement. Mr Sharp, you talked about the fibre-to-the-node in the context of the bushfires in Victoria and the floods in Queensland, and the extremes of water and temperature. Wouldn't any sort of infrastructure have difficulty dealing with that?

**Mr Sharp**—Yes. In response to your question, there is only so much that can be done given the sheer size of those particular shocks. When you are looking at rolling out a National Broadband Network you need to take the necessary steps to plan, project and to factor in a certain amount of physical challenge as well as the cyber challenges and the more ICT based challenges that I referred to. For example, there is scenario planning going on in a number of telecommunications companies in Europe about the impacts of climate change in terms of projected increase in flooding, wind, storm damage and so on. The main point we want to make is just for people not to forget, in the obvious enthusiasm to roll out the NBN, that there are things you can do at an earlier stage to mitigate some of those challenges. I do not think you can completely cover yourself with regard to them, but you can minimise some of the risks.

**Dr Petreski**—That also includes backups to the network as well. In consultations with some of our members there are certain preventive design aspects that could go into the network design of the NBN at the node to, as Mr Sharp said, at least mitigate some aspect of it and minimise future possibilities, especially when we are seeing ever-increasing environmental scenarios.

**CHAIR**—Can you give the committee a couple of examples of the sorts of initiatives that your members are suggesting in that respect?

**Dr Petreski**—One of the examples is looking at the nodes in terms of their positioning or the land that they sit on. Another example is the bushfires in Victoria, and having backup wireless networks as well.

**CHAIR**—I would like to ask a few questions about your survey and the feedback from your membership. When was the survey done?

**Mr Sharp**—I will double check on that.

**CHAIR**—Roughly when was it?

**Mr Sharp**—It was towards the end of last year. I believe the actual survey results were taken from a June to October period and then we published them.

**CHAIR**—Was it perhaps before the realities of the global economic challenges dawned in full?

**Mr Sharp**—Yes, I think that is fair to say. Since that time some of the enthusiasm may have tapered off given the general consensus.

**CHAIR**—I note your observation that many of those surveyed said they were prepared to pay a premium price to gain access to higher speed broadband, and I wonder whether current circumstances would cause them to reflect on that?

**Mr Sharp**—It may do. It is difficult to predict without going back to the members and surveying them. About 25 per cent of those surveyed at the time felt that they would be prepared to pay a particular price premium to get high-speed broadband. Based on my knowledge of the results, it is essentially those who are the most advanced early adopters of technology amongst our membership. They see clear competitive advantage in getting to that high-speed broadband access point earlier than other businesses.

While it is fair to assume that in general business is less keen to pay additional prices and to look forward to spending money at this time when there is real uncertainty out there, as a general point of view with regard to our membership those that see a real benefit in high-speed broadband would probably look to continuing to utilise it or invest in it in a way that will give them a competitive advantage.

**CHAIR**—Does your membership have a view as to how you might satisfy that demand, wanting to pay more for better, without effectively forcing up the price for the residual who may not particularly care to the same degree about whether they get faster or better? Part of the concern that has been expressed to the committee is that the current proposal could result in consumers having to pay more for pretty much the same as what they are getting at the moment or, if they are able to get more than they are getting at the moment, many of them will not actually want it yet but will have to pay for it. That is perhaps oversimplifying some of the evidence. Can you flesh that out?

**Mr Sharp**—If I understand the point you are making, it really does come back to the type of regulatory and competitive framework that is put in place around the NBN. Our view is clearly that if you have a competitive environment in which market forces are allowed to work that will promote a greater amount of innovation and lead to a fair and equitable price for both consumers and business.

I have to say I do not see a scenario in which you would have a massive price increase. At the moment Australia, by international benchmarks, is relatively expensive in terms of its broadband offering. If you look in other areas of technology, the general tendency is for the price intensity to come down. I would say as long as the NBN is brought forward in a way which maximises competition that would continue to be the case.

**CHAIR**—In which area should the government spend its bucks? They have supposedly laid out a plan for the \$4.7 billion, but how would your members say it should be spent?

**Mr Sharp**—Our members are very keen to see the NBN brought forward as soon as possible, particularly in this time of economic challenge. Any public investment into critical national infrastructure—which I think the NBN is—would be regarded as beneficial by our members. There are very real issues connected to that about the ability of the private sector to raise finance in current economic conditions and that is something which needs to be fully explored and thought through with regard to the NBN, because market conditions are not what they were when the government announced this policy. Essentially, the membership would like to see the money spent in implementing the public policy commitment, which is 98 per cent access at those speeds, as soon as possible and in a way that enables the private sector to also put investment in and deliver the network as soon as possible.

**CHAIR**—Are your members saying it should be done in a way to allow investment of taxpayers' money in areas of the market where it is attractive for the private sector to invest? Should the money be spent there or should the money be spent in areas where it is not attractive to a commercial operator?

**Mr Sharp**—You would have a divergent view amongst some aspects of our membership on this. I am nervous to say the membership thinks X or the membership thinks Y, because it is a diverse membership and they come from different parts of that argument.

Essentially, our institutional position would be that it makes more sense for the government to spend its resources in those areas where competitive market forces will not naturally go, and I think that means reaching the access points out towards rural and remote communities. As we said in our submission, there is a developing argument from Europe that you could look at a geographic segmentation model that allowed intense competition to operate, as it is already doing in many cases, in major metropolitan areas and then look towards a more structured regulatory solution in those parts of the country where there are not natural commercial incentives to roll fibre or to provide high-speed broadband access.

As a point of principle, we would be supportive of an approach that saw the taxpayers' money being spent in a way that maximises the outreach outside areas where natural market forces would ensure the NBN could be delivered by the private sector.

**CHAIR**—Your divergence of membership is reflected in your survey results. This is oversimplifying it, but about two-thirds of your CEOs are saying, 'Our business will benefit from a faster broadband network', and yet about 40 per cent of your membership say, 'Actually, we don't know how fast or slow we are at the moment.' How did that 40 per cent interrelate to the almost two-thirds of the CEOs? Were they different people in the organisations you surveyed?

**Mr Sharp**—We essentially surveyed the business leaders within each organisation. Obviously, in smaller organisations the CEO does a whole bunch of things. It can be a one- or two-person outfit up to large companies where there is a more traditional CEO position taken forward. What those results reflect is that a number of our members do not fully understand all aspects of the technology but have an understanding or a belief that it can be of benefit to them.

They do not quite know how they should be utilising it, but they are aware that there are other people in their sector or other companies in their industry where broadband technology is being used for positive results. We feel there is a great need to shine the light on where those problems are occurring and how they can be fixed in order to get the well intentioned who say, 'I want to use this. I think this is important for my business' into a space where they say, 'I know how to apply this in my business and release commercial and economic gain from it.'

**CHAIR**—Thank you. Senator Ludlam.

**Senator LUDLAM**—I have a couple of questions about regulation. You have talked about bringing together twenty-first century infrastructure with twentieth century regulation. In your view what does a twentieth century regulatory environment for this sort of thing actually look like?

**Mr Sharp**—In terms of the future regulatory model, we are seeing technologies converge at a rapid pace. If you look at some aspects of the current organisational structure and also some of the established regulatory models, they appear to be running behind where the technology is going. I think a very positive model, in terms of a forward look, is the Ofcom model from the United Kingdom. I am conscious that you have probably just been talking to BT, who have probably said some things about that. That is an organisation that has brought together traditional telecoms regulation, broadcast regulation, aspects of internet regulation and so forth into a structure that is well regarded by consumers, government and industry. It has grappled with some pretty thorny issues and has come up with a sensible model for regulating the digital economy.

It is interesting that there is a considerable amount of debate in the UK already about whether they need to update the Communications Act 2003 to refine some of the powers and responsibilities of Ofcom to reflect technological development. There is a very real question which industry, regulators and government need to constantly keep an eye on about how we ensure regulatory structure and public policy keeps abreast of this rapid acceleration of technology and technological application.

**Senator LUDLAM**—Mr Petreski, did you have some comments?

**Dr Petreski**—Yes. In terms of the convergence of the networks, the NBN is a fibre-optic network and there are other fibre-optic networks connecting into that, which include the fibre-to-the-home and obviously the fibre backhaul in each of the states that are all operating separately to the NBN at the moment. A convergence of those is probably important in terms of how the end delivery of services is going to end up to the house. We feel that probably some of those need to be inclusive of regulatory and other policy developments in the future as we go forward when the NBN is in place.

**Senator LUDLAM**—I do not know whether you heard the evidence that we just took from BT. They functionally separated BT into three different units. Do you have a view on the degree to which separation of wholesale and retail would be advisable in Australia?

**Mr Sharp**—Firstly, I did not hear the particular comments from BT, so I am not well placed to comment on specifically what was said. With regard to the functional separation model taken



forward by BT in the UK, as we referred to in our written submission and also in my initial opening remarks, from our group perspective we are less concerned about the precise structural model that is taken forward. International experience shows across Europe and other countries that you can functionally separate or you cannot functionally separate. A number of governments and industry players are looking at the best way to do this. In my view, at the moment it is not clear that a functionally separated model necessarily is the way that needs to be adopted. The experience in the UK has shown some positive benefit from the way BT was structured, but I do not think all that is taken forward with regard to broadband uptake in the UK is down to that move.

**Senator LUDLAM**—In the original request for proposals that was advanced by the government last year the minister stated that the government would rather take an equity stake in the National Broadband Network rather than debt. Do you have any in-principle objections to public ownership of the backbone, of the wholesale component?

**Mr Sharp**—I do not think we have taken a formal view on that as an association. Speaking today, I would say that I would not have an in-principle objection to it, but there would also need to be good, solid public policy and commercial reasons for that being the right way to go. To be blunt, we do not have a very strong view either way.

**Senator LUNDY**—You reflected on what BT has been able to achieve as far as functional separation goes. But as far as your organisation's interests and concerns, how important is the principle of equivalence to your members, that is, having an effectively functioning functional separation?

**Mr Sharp**—If we look across the vast body of our membership and particularly companies that have expressed a direct interest in the NBN process, the overwhelming message we get back is that they want a regime in which there are very strong competitive forces at work at both the wholesale and the retail end. As I said, you can do that via a functional or structural separation model. In my view, you can do it without going down those routes. It really does throw a lot of emphasis back on the precise aspects of the regulatory framework that the government wants to put in place alongside the NBN.

**Senator LUNDY**—The AiG's involvement in this issue and debate is very helpful, because from a users perspective we have seen study after study showing how critical to economic development, growth and opportunities the availability of broadband is. I know you mentioned in your opening comments this relative importance, but are you able to provide the committee with more detail about how that relative importance is perhaps growing in times where we are obviously facing a global financial crisis but also the challenges of finding further efficiencies and productivity increases?

**Mr Sharp**—There is one caveat that needs to be put in place just before I say something on that. When you look at some of the research that has been done around the world about the economic impact of broadband, that is focused on current broadband speeds and the move from current broadband speeds to a high-speed broadband network, depending on what megabyte per second target you go for there. That means that some of the benefits are perhaps less spectacular than a move from no broadband to broadband. For example, there has been some work done by Accenture in the states which said there was a huge stimulus to potential productivity from the

adoption of broadband. I cannot remember the precise figure, but I will happily double check it and provide it for the committee. That is if there is no broadband currently being used, but the move from, as I said, an established speed to a high-speed network will create some tangible benefits but not quite perhaps as spectacular as one or two of the initial numbers may suggest.

There are various reports and pieces of research. There was something that just came out of the US by a market research organisation called the Yankee Group which said that they foresee a \$1 trillion US market in high-speed broadband services by 2012. There are other pieces of research that have said, for example, recently published in the US by the ITIF that, if you were to invest in the region of \$30 billion US in developing high-speed broadband networks as part of an economic stimulus measure, that could lead to up to 900,000 new jobs in the US. These projections are always open to challenge and I think you have to be very careful to look behind the numbers to make sure that the projections are as credible as they appear, but the body of evidence out there suggests that there are clear economic productivity, competitive benefits, and jobs benefits from investing in high-speed broadband networks. It is just the scale of those numbers that is open to debate.

**Senator LUNDY**—This policy has been in place for quite some time now. It was in response to the economic benefits that could be derived from broadband. Would you agree that in the context of the global financial crisis and the economic downturn it is even more important to proceed with this investment and it is the type of investment that is even more necessary and timely in these challenging economic times?

**Mr Sharp**—The short answer is, yes. We talk about what is needed to stimulate the economy in times of economic difficulty, and across the world governments are trying to find some ways to manage this current crisis. There is a strong feeling, and a strong body of evidence, to suggest that if you invest in the right things when the economic cycle is less positive you will be better placed to emerge from that downturn in a stronger position. We would very much see investment in high-speed broadband networks, as I referred to earlier, as critical national infrastructure. We feel that it is something that should not be left off the government's economic stimulus map and there is a clear case for investing in these types of networks because of the social and economic gain they provide.

**Dr Petreski**—I would like to answer that in a slightly different way. We feel it is imperative that this network goes in with the high capacity. Looking at it from an innovation perspective and a new economy perspective, in terms of what services are developing in other countries, and the particular focus of now bringing services such as efficient grid management of electricity networks that are being invested in other networks, this is an example of second-phase investment of the usage of such NBN networks. We need to work on that innovation side, from our perspective, to actually stimulate the economy in these new areas as well. I think it is highly imperative that that happens.

**Mr Sharp**—Dr Petreski raises a very good point there. If we look at the Ai Group survey again, in terms of the benefits our members saw from a high-speed broadband network, 90 per cent of it was the ability to download larger files and use more than one application simultaneously. That is not using the full innovative capacity of high-speed broadband for maximum commercial and productivity benefit. There is a challenge there, once you build the

network, getting it to be used in the right way and really fostering a culture that drives innovation.

**Dr Petreski**—Among our members we have a lot of different areas that are developing in terms of delivery of services and new applications in the economy. It is imperative that this broadband network goes in. As we state in our documentation, NBN is not just about the internet and it is not just about social networking and making that faster. There are actual significant gains to be made from an economic perspective in a number of areas that we have listed already.

**Senator LUNDY**—Thank you for that. I am familiar with the paper you refer to, the Information Technology and Innovation Foundation paper titled *The digital road to recovery: a stimulus plan to create jobs, boost productivity and revitalize America*.

**Dr Petreski**—Yes.

**Mr Sharp**—We have seen President Obama in the US and we have seen the *Digital Britain* publication by the government in the United Kingdom put down some clear markers with regard to the importance of digital infrastructure high-speed broadband networks as both economic stimulus and future productivity mechanisms. We would hope that the importance of that is recognised here in Australia as well.

**Senator LUNDY**—I commend the AiG's engagement with this particular debate. It has certainly been an issue that I have campaigned for over a very long time, but without the full engagement of business and their representative organisations we are not going to reap the benefits that you describe.

**Dr Petreski**—Ai Group is investing in industry development in this area.

**Senator LUNDY**—We are in mutual agreement about the importance of it. The other point I would like to inquire about is to what extent you have investigated the analysis of that digital products and services style industries, for example, where fat pipes globally connected companies as a sector in itself becomes a target for specific growth strategies. Has the AiG focussed any of its attention on those digital sectors where businesses can grow, innovate and expand and export?

**Mr Sharp**—As a point of admin, I should probably say that we refer to ourselves, particularly in the current financial environment, as Ai Group, not AiG, just because there are some issues with a certain American insurer. I would like to just put that on the record. We very much thank you for your comments and we are working hard to try to do what we can to ensure that business does understand the potential of this technology, and also do what we can to ensure business has the skills needed to really release the commercial benefits from this.

We are seeing, both in Australia and around the world, the development of new digital businesses and a new creative economy. Obviously, a critical piece of that infrastructure is having the bandwidth and the capacity to really drive those interactive products, services and new ways of doing things. It is a little bit of the cart and horse. You need to get the infrastructure in before it really provides a boost for that. Certainly, around the world there are numerous examples of new and clever industries emerging on the back of this technology.

**Dr Petreski**—One specific area that I would like to raise is the rollout of data centres as an industry and not simply as a big room with computers. Data centres as an industry have been rolling out in North America and other areas for quite some time now, and I think our lack of fat pipe is probably constraining that opportunity to become a data centre industry within the Asia region from our perspective.

**Senator LUNDY**—Which in turn facilitates virtualisation of computing needs of various companies.

**Mr Sharp**—Absolutely.

**Senator LUNDY**—Just on that innovation bandwidth cycle, having said a few things about this in the past as well, again it is a bit of what comes first, because unless the bandwidth is there the businesses cannot explore what the potential is and the applications are not created for the higher bandwidth services. My view is that the point of intervention is in the creation of the high bandwidth network and that is an appropriate place for public policy to direct its energies, and that is exactly what the Labor government has done.

**Dr Petreski**—I would like to put that in a slightly different context. When we talk about innovation it is not just about the technology. In terms of getting access to that fat pipe it is about developing the business models around providing these services, and without that investment into developing those business models innovation in itself would not be the total solution.

**Mr Sharp**—I absolutely endorse that. Through some of the work that we have done with Ai Group's digital technologies forum we have also been responding to the government's consultation process on the digital economy and the future directions of the digital economy, the road map the government is working on there. We feel very strongly indeed that Australia can position itself as a digital hub, particularly in the Asia Pac region and attract investment accredited businesses to the region as a result of that. It is very critical to point out that this is about applying the technology across established industry and the length and breadth of the country, not just looking to create new and niche high-tech businesses.

**Senator LUNDY**—Yes, it is a bit of both.

**Mr Sharp**—Yes.

**Senator LUNDY**—Finally, in going down to a very practical issue, has the Ai Group done any work on looking at the proportion of costs to business that their connectivity costs constitute? I saw something some years ago that showed connectivity costs as a rising proportion of things that businesses must pay for just to keep ticking over. I would be interested if you have any studies or research in that area.

**Mr Sharp**—To my knowledge, we have not done any specific work on that in recent times. Certainly, my understanding from other research I have seen suggests that ICT costs, connection costs and so on have become an increasing proportion of business costs over the last five to 10 years. You would expect that with the increasing reliance on technology and business applications, but we have not done specific work on that, to my knowledge. It is something we could potentially look into.

**Senator LUNDY**—I am interested because it informs the comparisons of cost to business here and overseas. It is about attracting businesses to Australia and retaining them. It is also about making sure that business is getting a benefit from competitive tensions that are created in the regulatory environment. Finally, the forward looking agenda is what reduction for those costs can be achieved through the use of green IT and power consumption associated with ICTs within businesses and so forth. There is a whole green IT agenda there that I know is attracting a lot of interest for ICT hardware providers.

**Mr Sharp**—It is a very crucial component and it is an area where we feel government policy could be slightly better joined up. Looking at the applications arising out of the NBN and connecting that up to some aspects of the climate change policy agenda is very important.

On the competitive point you mentioned, we very much support the findings of people like the OECD who have said, in general—this is not universal—the competitive processes that have been released more widely in the telecommunications market around fixed, mobile and so forth have over time delivered strong competition and downward pressure on prices, spurred innovation and so on. We feel that a similar approach can and should be taken forward with regard to high-speed broadband. We think there can be a win-win scenario where you get a fair return on the cost of capital for those building the network, you can attract new people to the network who are going to innovate and provide new products and services offered, and you can provide fair and equitable pricing at a wholesale, retail and consumer end.

**Senator LUNDY**—Thank you very much for your contribution to this inquiry.

**CHAIR**—Thank you. The committee will take a short break.

**Proceedings suspended from 10.47 am to 11.14 am**

**MORGAN, Mr Kevin Leonard, Private capacity**

**CHAIR**—You have heard much of this morning's proceedings, but for the record these proceedings are public. If at any stage you wish to give evidence in private, please make a request to that effect and we will consider it. It is unlawful and potentially in contempt of the Senate for anyone to attempt to influence evidence that would otherwise be given before this committee and it is equally potentially so for a witness to provide false or misleading evidence to the committee. We have your submission, which was lodged at the end of last year, and your supplementary submission. Do you wish to make an opening statement?

**Mr Morgan**—If I can just briefly? I did pick up a couple of comments from the BT director this morning that were very interesting so I might try to come back to those. Firstly, I would just restate that I am here in a private capacity and I still have no connection with any of the parties either initially associated with this tender process or still associated with it. Having said that, I will admit to Telstra loaning me a Next-G mobile modem kit after the cows ate my telephone line for a third time in six months, and that might make me a little indebted to them. But we can come back to the state of the current network, if you like, particularly in rural areas.

**CHAIR**—You might feel as if you have earned it rather than it being a gift.

**Mr Morgan**—A lot has happened recently, but to me the story has not changed. The kind of evidence that is still being given to the inquiry is by and large still weighted towards one particular issue, which is separation, whether it be functional separation or structural separation. I said fairly strongly in my initial submission that these issues of separation are quite irrelevant to an NBN rollout. There are certainly many that are pertinent to current regulatory structures and the perceived shortcomings of regulations of the current copper network, but in essence they have nothing to do with the kind of regulatory structure you would need for enabling deep fibre, that is, the NBN fibre based approach.

Typically there was a supplementary submission from Optus which had expert opinion from Dr Chris Doyle of Warwick University attached. The paper he presented on behalf of Optus repeats a lot of the misunderstandings that have plagued this debate and perhaps taken it away from the real issue, which is: how do we enable new investment and how do you sustain competitors in the copper based era? Dr Doyle is an expert. He is acknowledged to be one of the world's leading regulatory experts. He seems to believe that FTTN is somehow a new discrete network, and he makes that assertion in his paper. It is not. He says that you have to put structural separation in now because to break up the network after you have built the NBN would impose additional costs. He really fails to understand that if you are talking about FTTN, which is what the tender requested, it is an upgrade of the existing Telstra network.

If you want to structurally separate the NBN you are going to have to structurally separate, break up or summarily dismantle large parts of Telstra. Also, it picks up from the BT evidence this morning—I missed the early part so he may have gone to these issues—but really Dr Doyle also says in that paper that functional separation is helping; it is appropriate for the rollout of deep fibre. He quotes BT in that paper saying, 'We're going to spend one and a half billion pounds on rolling out fibre'—or the next generation networks, they say, which would include

fibre-to-the-node. They call it fibre to the cabinet in the UK. He says, ‘We are going to do this and functional separation will help this process.’ The trouble is that he gives this quote about BT from BT’s chairman, Ian Livingstone, about spending one and a half billion pounds, but then the quote stops. If you then go on to the rest of that quote, it is really important to know what BT’s attitude is. I think you were trying to get to this this morning: what is BT’s attitude to regulatory change now? When he made that announcement about spending money on fibre, Ian Livingstone, the chairman, stated:

A supportive and enduring regulatory environment is essential if this investment is to take place ... will be discussing with Ofcom the conditions that would be necessary to enable this programme to progress. These include removing current barriers to investment and making sure that anyone who chooses to invest in fibre can earn a fair rate of return.

That sounds a bit familiar, doesn’t it? In essence, despite being functionally separated, BT confronts exactly the same issues as any incumbent in the world does over fibre investment and there are questions of rate of return, there are questions of regulatory symmetry—not perhaps being as heavily discriminated against in regulation as they have been. There are also questions of getting a higher wholesale price, because like it or not if you are going to spend an awful lot of money it somehow has to be paid for. However, it does imply, as BT readily acknowledged, potentially higher wholesale prices. This argument is still being skewed towards questions of separation. They are clutching at straws to support this argument for separation.

In fact, Dr Doyle cites in that paper for Optus—a couple of Swiss government academics perhaps—Salina and Salina as being an authority for saying NGNs, next generation networks, which is in essence what the broadband network will be, can be deployed as vertically integrated or they can be deployed as separated wholesale only, and some. That sounds impressive, citing this source. If you go to the source there are 257 pages, but this technical tract does not mention regulation once. It does not mention separation—functional separation or structural separation. It does not even consider the economics of the NBN rollout. It is a good straightforward introductory technical text. It is no more than that. They are clutching at straws.

They are not the only ones who are clutching at straws, because given what has happened where has this whole process got to? If we are to understand that there are four or five bids still standing—how they are still standing I do not know. But they seem to have been deemed to comply. The minister says, ‘I will sign the contract this month.’ He said, ‘March’. We will presume he meant March of this year; he did not say which year he actually meant. But let us say March of this year. This is going to be fascinating, because if the bids comply, Acacia, Optus, the two regional bids, will be fibre to the node. They will need access to Telstra’s network, ducts, subloop, et cetera. It is going to be a fascinating contract, because the Commonwealth is going to have to write into this contract a caveat that says, ‘Some time in the future when it’s all resolved one of us is going to have to pay several billion or many billions of dollars of compensation to Telstra.’

It is going to have a second caveat, too, because what if Acacia or Optus—and it is implied I think in the regional bids—ask for protection from overbuild, essentially monopoly rights? Obviously there would have to be significant legislative change. What if the parliament does not agree to that? You are going to have a sort of ‘get out of jail’ clause that says, ‘If parliament doesn’t agree within a certain time it is all bets off. We will all walk away from it, forget it.’ You are also going to have a caveat that says, ‘We have to get an exemption from the US free trade

agreement, or even the Singapore free trade agreement, which I think is rather humorous given that Optus is pushing that one. There are so many problems with this notion of signing a contract I think it is inconceivable that the minister could suggest he will sign this month.

I am a simple person. Perhaps I am just misreading all of this and creating difficulties that do not exist and far greater minds will get over. I find it fairly extraordinary that with a department of 500 or 600 people, an expert panel, \$3 million worth of independent legal advice to date and other expert advisers, someone has not said, 'This might be a little more difficult than it first seems.' As I say, perhaps there is a little advice in train. Perhaps the government will hold a referendum on the new section 51 of the Constitution to put beyond any doubt you could confiscate Telstra's assets. Having said that, I will leave it there.

**CHAIR**—I read your comments about allegations about Telstra's conduct, and I also see your concern about the state that the tender process is in at the moment. On the assumption that there will be a fair bit of angst as the process is rolled out, how do you think that angst should be able to be resolved? I am reflecting on submissions or evidence that we have had that there should be a mediator or some sort of regulatory role to resolve, as Senator Ludlam referred to earlier, the argy bargy?

**Mr Morgan**—Let us say it goes ahead. There will be questions of access, pricing, particularly if this thing happens, whoever owns it, questions of sabotage and discriminatory behaviour will lie more in the realm of pricing more than in actual physical sabotaging or denying access to an exchange or purportedly denying access to an exchange.

**CHAIR**—On what basis do you say that?

**Mr Morgan**—At the moment the current regime is about unbundling the local loop. This is an actual physical act, and installing DSLAMs, super modems that run broadband in Telstra exchanges. Obviously, to do that you have to have Telstra's cooperation and agreement. Of course, it is all underpinned by legislative requirement and regulation, but it still requires a working relationship. Yes, there may be scope or it may be perceived that Telstra is being obstructionist. It may be, and certainly under the current management team, which has a very much more aggressive and litigious approach to things than perhaps former management teams, there have been problems. But by and large at the moment you need physical access. I think a lot of these problems have been overstated. As to Mr Malone's evidence, having said that no-one emerges from this process with any credit, let me say that I will give Mr Malone a great deal of credit because I think he has been extremely forthright in a lot of the points he made. But I think his evidence on that working relationship with Telstra about access to capped exchanges and so on coming from someone who was a network person was pretty spot on. He did not see malice. He did not see some of the tricks that were supposedly seen by other people.

To come back to your question, there will still be questions of access, timeliness of connection, but as you move into an NGN environment the services and the intelligence action will lie outside the network. It is up to the service provider to decide where they want to put that. It might be nice to have a Telstra exchange to put equipment into, but I do not think that would be likely because the whole architecture of the network changes.



The real issue is not so much the physical access now, it is pricing, timeliness of service and maintaining quality of service. Again, these issues become less with a next generation network because all the interfaces are designed to certain standards. They have to perform at certain standards or it just does not work. An equivalence board perhaps just to make sure it is all running sweetly would be quite rational. You do not have to go as far as structurally separating or even functionally separating. As Mr Malone was referring to, in Western Australia, because most of his staff are ex-Telstra, he has an informal network that does that. Just formalise those informal networks slightly with a board that represents the industry, independent persons, perhaps an independent chair, Telstra representatives or whoever the major network operator is. But it would have to be Telstra if it happens, of course. That would probably avoid some of these lengthy delays. It would certainly avoid getting into the quagmire of action under the Trade Practices Act or through the ACCC. I think that would be quite a good move. I think that is something that should be looked at.

**CHAIR**—Can you expand on what you mean by that, when you referred to that being quite a good move?

**Mr Morgan**—An equivalence board—creating some sort of mediation process rather than leaving it all to law or to regulation. There was evidence from iiNet; they are network people and they want things to work ultimately. They do not want to create problems for each other. A less antagonistic environment might be better where operational people can have their say rather than devolving it lawyers, regulatory specialists or whatever.

**CHAIR**—What do you think should be the ACCC's role in that respect?

**Mr Morgan**—At any point I think the regime that BT was outlining—I forget the chap's name—this morning would work. Ultimately you will have to have some sanction. You will have to have the ACCC probably being able to intervene and take action if it finds that whoever owns this network is being recalcitrant or unfair in the way they are behaving. But I certainly think you could look at creating an intermediary step as they effectively have in Britain now with this adjudicator and so on.

**Senator LUDLAM**—It was put to me a couple of months ago by one of the other bidders to the RFP that in March last year the High Court found seven to nil against Telstra in a case it launched attempting to use section 51 of the Constitution to deny competitors access to its network without just compensation. They lost that. It was put to me that that has actually set to rest most of the legal argument that would arise from another bidder being given the NBN tender. Do you have a view on that?

**Mr Morgan**—First and foremost, I am certainly not a lawyer.

**Senator LUDLAM**—Neither am I.

**Mr Morgan**—I could send you a reference to an excellent article by a very well respected regulatory lawyer, David Lindsay, in the Telecommunications Journal of Australia in the middle of last year. I will send you the reference, anyway. If I understood his argument, the gist was that it does not have implications like that. Certainly Telstra lost. But on my reading of what happened—and again it goes back to this management group that Telstra has, who perhaps failed

to understand the nuances of the Australian constitution—they put what was in essence a very well understood regulatory concept in the US, which is called regulatory takings. It is about the actual fairness of the conduct of the regulator. I think that was in essence what they were trying to argue. Of course, the High Court did not want to go there. It just said, ‘Of course you knew you had this access obligation when the company was sold and the Commonwealth has the right to impose this access obligation.’ It did not go to the merits of whether the actual pricing was fair. I do not think it went to any of those particular issues. I think this article argued that it does not really take us anywhere in terms of giving greater rights or greater ability for someone to gain access. It is fundamentally a different thing.

For a totally lay person, if you look at the two situations that may emerge, currently you have an access arrangement which is expressed in giving rights to competitors to the unbundled local loop. Someone goes into the Telstra exchange, rejumpers that local loop from the Telstra side to the competitor’s input, their DSLAM, their voice circuit, whatever it may be. But it is not actually confiscation of that asset, because next week someone can go back and put the jumpers back if need be and Telstra can then use that line again. If we go down this path of fibre-to-the-node with someone other than Telstra, there are two things. First, to do so in a cost-effective way certainly in metro areas they will need access to the ducts and they will need access to the copper subloop. Firstly, in those ducts at the moment is the existing copper cable, 800 pair cables that go to those street pillars from the exchange. In some areas where the ducts roll there will not be physical space to run both. But even if there were there are technical reasons and, above all economic reasons, that you will not run both. Once you put fibre in, that copper comes out. Telstra’s copper network is gone. Similarly at the node, although there was an initial argument and certainly there was an attempt by Telstra’s competitors to imply you could have subloop unbundling, that is, you could have the copper coming from Telstra and you could have this fibre coming from somewhere else, and then basically spit it all up at the node and then at the pillar—subloop on bundling. Technical and economic reasons again demand—and I think this is now absolutely acknowledged by Optus and other bidders—you have to cut over the pillar totally. Once that is done, if it is someone else who puts the fibre in and the copper is then cut over to that fibre, the network in essence is not Telstra’s.

**Senator LUDLAM**—Isn’t the theory that Telstra will be given access to that infrastructure on exactly the same basis and same level playing field as anybody else?

**Mr Morgan**—It is an interesting idea. I am not saying that Australia cannot come up with unique insights. But it would leave us as the only country, including developing countries—I cannot think of anywhere in the world—where the national telephone company or national telecommunications operator would then not own an end to end network. Whether it is rational or not, it sounds interesting but why bother? On the same terms and conditions they would have to transfer their traffic to that network. Their margins would be different. Their earnings would be different. Their ability to sustain the network would be quite different. Rightly or wrongly, if we so chose the nature of Telstra I do not think its shareholders who paid a lot of money to buy the company would readily agree to that. I was no fan of privatisation, but I think in some respects the merits of privatisation are that it has created a shareholder constituency that can possibly stop some of this irrationality. Compared with the early 1990s when competition was first introduced Telstra was wholly publicly owned and large chunks of value were given away to stimulate competition. At least the privatisation policy got some cash back.

**Senator LUDLAM**—You have been pretty critical in both of your submissions to us about the way the RFP has been organised. We have heard evidence that it is overly prescriptive in terms of technology and very underprescriptive in terms of the regulatory structure that we will be left with. Do you have a view of how that should have been done?

**Mr Morgan**—The tender prescribed fibre-to-the-node or fibre-to-the-premises. You can write your own figure on fibre-to-the-premises. You might be talking \$40 billion, \$50 billion, who knows? No-one knows, but basically it is off the planet in reality. Once you prescribe fibre-to-the-node technology in the tender you are really limiting it to an upgrade of the existing Telstra network and then you created all these issues of access to the Telstra network, compensation and all of these complex problems. You are right in the sense that it is very prescriptive. I find it an extraordinary situation that the Commonwealth is suggesting they can sign a contract with a third party to upgrade a network that neither the Commonwealth nor the third party own. It is a very curious proposition to me, but that is what this tender takes you toward. That is the logical outcome of this tender. The problem was of course that inviting bidders to propose the regulatory structure ignored the obvious self-interest. Bidders certainly proportionate to their size who have invested very heavily in DSLAMs and in copper unbundling are not going to blithely say, ‘Well, that was interesting. We have not made any money on it in 10 years but we will just wipe it off by writing this new regulation.’ They have run arguments that essentially are defensive of those investments, and understandably so. I do not think it is necessarily very productive, but I can understand why they have done it. Telstra itself of course I think again, unfortunately because of the management style over recent years, went to the other extreme and tried a crash through or crash approach. Basically, as an old trade unionist I could see that they went for the big ask. They went over the top because then they could fall back a bit. That did not necessarily help. I think that was perhaps misunderstood. You have two extremes in that regulatory debate. Telstra thinking they can claw back a number of things such as an excessive rate of return and so on, and existing copper based competitors thinking, ‘We can protect this.’

**Senator LUDLAM**—Given the tangle of circumstances and situations that we have and the different interests in play what would you do if you were the minister? What would you leave us with?

**Mr Morgan**—Paradoxically, I think you would have to go back, particularly in these economic times, having had a company that was competent and seemingly had the ability to raise the capital which said, ‘Look, we will build a network in urban areas’, I cannot see why you should not let them do it. Let them do it commercially. Let Telstra do that with the safeguards, with some kind of equivalence board to make sure that competitors can transfer to this new network. This is where I say the humour exists, because basically where this government is going is back to the former government’s policy of having a tender perhaps just for the rural areas. If you recall, the \$4.7 billion was identified by Telstra as a rural subsidy. It was a subsidy estimated at \$900,000. It was not precise, of course. As we now know, it was not enough money. It was Telstra’s estimate of the subsidy. I think you would have to take that back out, let Telstra get on with the commercial upgrade so it did not cost the Commonwealth money in the urban areas, and go back and revisit backhaul, but not necessarily Opel. Mr Price obviously would have a great deal to say about the merits of a better backhaul network in rural areas. You will need an augmented backhaul network and a bidder who comes to the table with spectrum this time instead of circles on a map. But I think basically to lump the \$4.7 billion into

the whole pot and say we want an equity investment has made the thing even more complex and less resolvable.

**Senator LUDLAM**—That sounds suspiciously like starting from scratch.

**Mr Morgan**—Unfortunately I think that is where it has got to.

**CHAIR**—Is there anything you would like to say by way of closing?

**Mr Morgan**—Thank you for the time. I could tender the piece of cable the cows ate.

**CHAIR**—We could speculate as to what that might look like.

**Senator LUDLAM**—What is that?

**CHAIR**—That is the piece of cable that the cow devoured.

**Mr Morgan**—As I say, this is the real tragedy of this whole debate. There is a pressing need for massive investment in the telecommunications network in Australia and some revised regulatory regime that makes Telstra perhaps a little more responsive to rural needs than running a cable down a barbed wire fence when they get a fault and the cow is eating it. I think we do perhaps, as you say, regrettably have to go back to the start and rewrite a whole series of regulatory imposts and obligations.

**CHAIR**—By presenting the committee with that cable exhibit have you deprived your cow of her rumen?

**Mr Morgan**—No, because there are lots of other bits of the cable left in the paddock.

**CHAIR**—Thank you very much for your evidence today.

**Mr Morgan**—Thank you for the opportunity.

[11.45 am]

**PRICE, Mr Arthur, Chairman and Chief Executive Officer, Axia NetMedia Corporation**

**CHAIR**—These proceedings are public, as you are aware from your appearance last time. If at any stage you wish to provide evidence in private please make a request to that effect and the committee will consider it. It is unlawful and potentially in contempt of the Senate for anybody to attempt to interfere with or influence evidence that would otherwise be presented to this committee as it is also potentially unlawful and in contempt of the Senate for a witness to give false or misleading evidence to the committee. We have your submissions. Do you wish to make an opening statement?

**Mr Price**—I will just make a very brief one, because I know primarily this is a question and answer session. We approach this whole NBN opportunity on the basis of allowing a transformation in the telecom sector and the experience of the end users in Australia. If you step back and say how much latitude was available, in our view the latitude was there to make a proposition that was transformational in character and that transformation is multileveled. One level would be the quality of service as opposed to the quantity of service as an example. Australia has the best efforts of two-type quality of service, which is the bottom tier of any quality of service matrix. All the digital economies are moving to a high performing quality of service as opposed to quantity of service discussion. Another plane at which transformation would be enabled, or at least have the opportunity to put it on the table, would be transformation from a dominant vertically integrated carrier to a marketplace that has choice without necessarily requiring a regulatory change to that existing dominant carrier, Telstra. This is a multilevel opportunity for transformation, whether it is in the performance of the service, the coverage of the service, the quality of the service or the structure of the industry from a competitive playing field. Given that latitude, that is how we approach the process and we are happy to answer any questions.

**CHAIR**—Yesterday we heard evidence about the need for a body to have a mediation-type role to resolve disputes. From your experience do you have a view on that?

**Mr Price**—What sorts of disputes were talked about?

**CHAIR**—That is part of what you might unfold. In what areas do you think there will be disputes if the NBN were to be unrolled much as we know about it at the moment and how ought those disputes be dealt with? Is it access to infrastructure? Is it access to and standard of service? Is it pricing?

**Mr Price**—The industry, structured the way it is today, is full of disputes and conflicts, and that arises because typically the industry players are playing at all levels of the industry and at least in fixed wire line there is the dominant carrier who is in conflict with all the competing customers. I would just say in the broader context that nobody has been able to create a high-performing value chain based on a supplier competing with their customers. In no other industry has that worked. What competing with your customers actually does is create the ultimate conflict because you are not sure of what winning really is. In the telecom industry the vertically

integrated approach where the network owner and carrier is competing with people at the services layer the conflict is built in, perpetual and cannot ever be dealt with. That is the industry that Australia has today and it is not unusual, because the incumbents around the world have that dominant position with that fixed wire line network. You can see less of it if you use examples. There is much less conflict and much more positive competition in the mobility industry. Where they are competing in a normal course the conflict there only arises when they end up back at the fixed wire line again for backhaul.

At the end of the day to have a functional, competitive environment you have to get rid of this 'compete with your customer' model. That does not mean everybody has to do it. It just means that the industry cannot rely on a supplier who is doing it. If you can create an alternative that does not have that conflict, that creates the normal value chain of a supplier not competing with their customers and that leaves the incumbent to compete however they want, because people no longer depend on the incumbent as a key supplier of their fixed wire line connectivity services.

**CHAIR**—Is that scenario possible in Australia now given that we have Telstra not as part of the tender process. We heard evidence yesterday about one outcome of this process being that someone other than Telstra—and it may be one or more successful bidder—and Telstra then continues to operate in parallel at the same time as whatever transpires as a result of the government sponsored NBN process. If that were to happen, you are not going to have your others, are you, because essentially you would have Telstra as the supplier in part competing with its customers, albeit not as part of the same system.

**Mr Price**—If everybody has choice that does not depend on Telstra, the conflict is gone. The question is: is there an alternative that other players in the industry have access to that does not have this customer conflict problem? The fact that one person has it is not relevant if they have a choice.

**CHAIR**—Your earlier comment that you do not have to have everyone, yes.

**Mr Price**—You can then have the industry structure of it. Once the vertically integrated guys can approach the business that way, odds are they are not going to get much wholesale traffic, because they really do not want to, anyway. The whole track record is that the wholesale business is the end of the business that the incumbent never really wants to win at. If they have to compete with an alternative where the alternative does not have the conflict with the customer model, then they have to compete with a different value chain. In the markets that have done that, that is what the incumbent has to do; they compete with the other value chain. They are not competing with one party, they are competing with a value chain that is diverse and flexible, and that value chain competes with the vertically integrated monolithic value chain, and that is a good kind of competition. The key thing is: can you have a fibre grid? Because it all comes down to fibre much more than copper. The question is: can you have a fibre grid that has an open access, level playing field character where the owner of that fibre grid is not competing with their customers? If you can have it then that creates the marketplace against which everybody competes.

**CHAIR**—You are suggesting you can have that?

**Mr Price**—Yes, you can have that. You have to use a process and a framework to get it, but in this NBN bid we took the view that the bid allowed such an offer, so obviously we think you can have it because essentially we offered that.

**Senator LUDLAM**—In the submission that you have provided to us you provided some details on Alberta, France and Singapore. Could you maybe just go through each of those for us and pick out the key details? I guess I am interested mostly because geographically all three of them are quite different from Australia. Could you outline the regulatory structure for each of those three markets?

**Mr Price**—In Alberta that was all done at the province level in Canada. The equivalent in Australia would be the state level. The regulatory framework there is as it is in Australia. It is a national regulatory environment. It was all done without any regulatory changes whatsoever, because it was done at the Alberta level and it was done within the regulatory framework. The regulatory framework there basically deregulates IP. The whole internet protocol traffic is deregulated. The answer was all IP so automatically we were deregulated from the outside. Therefore, we fit into the regulatory framework by only doing IP and only doing transport. There is transport connectivity, which is the break that we talk about where the difference is: are you in the transport business or are you in the services business? For instance, in Alberta if we were to add a voice to our services we would then be regulated, because that is in the regulatory framework. But if we are just doing IP transport, that is all deregulated. It is actually the same as here in that sense. The Alberta objective was to solve the rural/regional digital divide. The Alberta policy objective was not to deal with metropolitan. The political challenge was: Alberta has two cities that have a million people and then it has everywhere else, much like every state in Australia. The only difference with every state in Australia is that they really have one city and then everywhere else.

The solution in Alberta was to create a community-wide transport grid that is all next generation network, all IP, all real-time and to create a marketplace in each of those communities where choice of local access technologies would flourish off the end of the network no matter how small that community was. We came up with that answer and it was the winning answer. It was not prescribed. It was invented for the situation. Subsequently to that it has been proven to be the one truly successful rural type of IP network implementation which harnesses competition even in small markets. That is the Alberta framework. Actually with regulatory oversight there is nothing special—no concessions and the incumbent continues to operate in the model that they are in, sometimes as a customer of that network, sometimes not. The rest of the market has created a value chain of people, some 70 specialty local access providers take the business from the point of presence in the community to an end user. They do that in the open market. Again, those people are only in transport. They are typically not in the services layer so they are not regulated, either. That model in Alberta has that character for that purpose. It is really quite a good parallel for rural Australia. It is not a parallel for urban Australia because it was not even targeted at urban Alberta.

In France the regulatory framework from a regulation point of view at the telecom level does not regulate IP transport, but the framework that is being used is a contractual framework that you bid into. That contractual framework says that you bid a set of wholesale prices that you must offer for a long-term period. You bid the amount of financial support that you need in order to make your fibre grid work, and you then take the risk of market adoption. You build that fibre

grid if you win, and those bids are in a 20- to 25-year concession. It is like winning a franchise for 20 to 25 years.

**Senator LUDLAM**—Is that for a particular region?

**Mr Price**—And it is always done at a regional level. It would be as if Australia said it would do that at a state level. We have won 13 networks in France, which would be one more than the evidence there; we won one a few weeks ago. The population in those is about four and a half million people. It is a much higher density network deployment than Alberta, because Alberta is dealing with the very small markets outside. France—this is the business model that applies to any market. So, it can be a city like Seine-et cetera-Marne, which is a million and a half people, which would apply to any similar market in Australia save two, Sydney and Melbourne. The regulatory framework there is aggressive on DSL unbundling. They have a strong regulatory framework for access to the exchanges and access to the copper local loop. One of the pieces of the business model in France is putting fibre into the exchange so that those DSL unbundlers have backhaul alternatives to the incumbent from the exchange. That is one key piece of France that is different from Alberta. Canada does not have aggressive copper local loop unbundling from a regulatory point of view. In France they do. When you do that you get quite aggressive competition on the copper local loop. The evolution in France, we would say, is to fibre-to-the-premises, though. It is quite interesting in France that there is no fibre-to-the-node discussion. It does not make any sense. Once you have a core fibre grid within a market that is independent from the incumbent—which is what these are; we have never lost a DSP, a local region, to France Telecom—and once you have that fibre grid that is like a core fibre grid, and if you do the incremental economics from there fibre-to-the-premises is a better option than copper upgrade. That is transparent there because these independent fibre grids are in the market, and so nobody is talking has done fibre-to-the-node in France. The only person who ever talks about fibre-to-the-node is the incumbent carrier who is protecting their copper. If you have anybody else talking about it, they do not do it.

**Senator LUDLAM**—What is the incumbent doing? I see you have marked off 13 of these geographical regions. What is the incumbent doing in those?

**Mr Price**—Before they go out to bid they lobby the region not to go out to bid. That is the first thing they do. They spend all their time trying to stop the region from going out to bid. They make whatever promises they make in that context. We do not know how many they convince not to go out to bid, because we only see the ones that actually come out to bid. Of the ones that come out to bid we have never lost to France Telecom. Part of the reason was they wanted an alternative. That is why they went out to bid. Once we were there, in our business model—because Axia is not at that service layer again, we are only in the transport layer—we find that when the incumbent needs a big bandwidth service they use our network, because we are actually not competing with them at the service layer. It makes a big difference for us to be the guy that has that network than let us say another party who is competing with them in voice, video, ISP services and their holistic bundle of services. If they won, France Telecom would not use their network. We find that when we win and with our business model the incumbent still uses their network if it will do the job because that is all internalised. But if their network will not do the job they use the new network.



In Singapore, the regulatory framework there evolved the way it would evolve if you were looking just at a city, because Singapore of course is a metropolitan centre. It is kind of interesting there, because they have the most aggressive use of copper. They have tapped out the copper. They have got every kind of copper service that technology will enable. DSL, VDSL and hybrid coax—it is all in Singapore and it is all high penetration. The government came to the conclusion that that was not good enough and that they needed to move to a more knowledge service based economy and to do that they needed no compromise infrastructure, and no compromise infrastructure on the fixed line is fibre. Copper is a big compromise. Fibre is not. They went through a competitive dialogue process where they got expressions from industry for the best ideas. Having gone through that process they then finalised an RFP. They actually finalised two RFPs, one RFP for the passive, the fibre grid, and one RFP for the actives that go on the fibre grid. You would only really come to that conclusion if you were talking only about a metropolitan centre, that is, to separate the two, the passive fibre grid and the actives on the grid. It made sense for them in their situation, but it would not make sense for any smaller market or more diversified marketplace.

They also put rules on the governance. The regulatory framework said there is going to be one fibre grid for all of Australia, and nobody in the telecom sector can own more than 30 per cent of it. You will see the owners that won that grid are all 30 per cent or less, because that was the limitation on ownership. That was to create a neutral ownership of the fibre grid. That bid was awarded to a consortium named OpenNet, which Axia was actually the founder and leader. That result was the award of a fibre to every premise award. The underlying cost of that environment would be, if you were building it from new, something more than S\$2 billion dollars. That is the underlying cost of that kind of fibre grid starting from scratch. The consortium had amongst its strengths a company like Axia that is a specialty player in this space with the open access, no conflict model, but it also had the two owners that owned the ducts in Singapore—SingTel and a subsidiary of SingPower. An arrangement was put together where the use of the ducts was part of the bid, and the result was that the rate structure that came out was S\$15 a month for a residential premise for the access fee for the fibre grid. There were some grants or financial support available, S\$700 million, but the message out of Singapore really is that you can create a whole new fibre grid for that range of \$15 a month if you know you are going to have high adoption or take-up. The bid that they have that is just drawing to a close this month for the actives will then have a party who at the outset will be the individual party but over time there will be more than one, where the party buys the access to the fibre grid, adds the electronics and on-sells a bandwidth service to the end user. That bid is scheduled to be awarded by the end of the month, March. In all of these three business models that Axia is involved in, all those places, one thing was clear and that is that at the services layer you do not compete with your customer, and then you can create a viable sustainable value chain. In Singapore they added the neutral fibre grid piece partly because it was focused as a metropolitan area and they could create a neutral fibre grid independent of the actives. They actually could so they chose that path.

**Senator LUDLAM**—Thank you for that detail.

**Senator LUNDY**—I wanted to explore how the principle of equivalence was applied to the way Axia manages its networks in the various markets that you have.

**Mr Price**—Equivalence from an access and pricing point of view?

**Senator LUNDY**—Yes.

**Mr Price**—Interestingly, in this business there is no economy; a big volume buyer does not reduce your costs. There is no underlying reason to have volume discounts to individual customers from a cost point of view. If you are looking at it from your own cost point of view it makes no sense to have volume discounts. From a public policy point of view it makes no sense to have differentiated pricing if you have the only access grid. Axia's business model is always same prices for everyone and you buy it by the drip, so to speak. If you buy a million drips you pay a million times one drip and if you buy one drip you get to pay one times one drip. That business model allows the small guys to compete without a different disadvantage in cost structure at least as it relates to the access network. Then you have other advantages and disadvantages of scale or not in their own business. That is not our world.

But one thing that is critical is that they do not have to face big upfront payments to get into business or face competition from somebody who has big volumes because of history and therefore has lower access costs. Right across-the-board we let the regulator decide who is eligible to buy and whoever the regulator says is eligible to buy we offer a service. As long as they pay their bills, they are the same as everybody else. If they do not pay the bills, of course we turn them off, but they have to pay their bills.

**Senator LUNDY**—I want to pursue your point about how there are not any underlying volume discounts that can prevent perhaps the smaller companies, as you say, from accessing the market. Has that resulted in a lot of small companies accessing the market?

**Mr Price**—In Alberta there would have been essentially no independent small companies doing local access business before we deployed the SuperNet, and now out of 70 customers that do that 55 would be small companies. The business can be made quite simple. Here is one of the things that happens in this whole industry: everybody wants to make it really complicated. Or not everybody, but some people try to make it very complicated. The transport business is really quite simple. If you say, 'I'm in the transport business and I am at IP', then you are just doing standards based transport business. You have to do it right. But we have people in Alberta that run a hardware store who say, 'I'll open up this wireless local access business and sell it to 40 people.' For them it is accretive to their business. If they do it right, it works while they are sleeping. There is a whole business there that a vertically integrated party would not even be interested in. The key is to create an environment where that person is viable, and of course the other bigger guys are competing with that person. At the transport layer you can do that. If you turned that around and said, 'I have to include media', then immediately you would see how the small person would be challenged to do that. Or if they had to add services like ISP services, then they need more scale. If they need services like voice services, they need more scale. But really those services are now in a different category entirely.

Technology advancements have allowed us to separate the transport business from all of those other things. Let the people who are in the scale business do that. You get people who say, 'I will offer a voice service for all of Australia.' If we had a nation-wide next generation network grid, there would be people who would only be in the voice business; they would not have any network, because they would just use the new one. To the extent that the new one would then go to an individual premise, in that small market the hardware owner took care of that piece, so the voice person does not have to do it. Now they just become a service riding over the network.

They are no longer a network company. I just pick that as an example, but it is true for video, too. The evolution is clearly in that direction, so get ubiquitous IP, no compromise transport connectivity and then let the service guys compete over that network. That business model is proven. If you see the big winners in the IP world they are all headed there. That is Google's model and they are winning and they are headed there. The legacy guys are losing. The old TV broadcast model is in big trouble because the end user would prefer this other approach. Where the end user has choice they are choosing it. The way they get choice is they get a transport network that connects them to a global auction market. Once they are connected to that global auction market for services they buy whatever service they want from whomever they want it, as opposed to the network company saying, 'Since you are connected to my network here is my bundle of services you can have.' It is just a total transformation of that paradigm.

**Senator LUNDY**—We have taken evidence on open access networks as being quite critical to the capacity of businesses to innovate in the twenty-first century—I know that is a very esoteric term—but also to be a platform to create jobs, boost productivity and revitalise the economy in the context of the global financial crisis. Is it a fair comment to say that, applying the principle of equivalence as you have described, is a key feature of a network if it is going to serve those purposes in the current economic climate?

**Mr Price**—Yes, because all of those are new things. Every new initiative, if it is burdened by a network barrier, that is a big barrier. If all it is burdened by is their ability to develop a high performing knowledge based service, which is not the football on TV—that is not what we are talking about; it is the new thing that is not there that is catering to a very narrow market—if they then have to create a specialty network to deliver it it is out of the game. If the network was already purchased by the end user so all they are actually doing is saying, 'I'm offering you an online service', and you pay for the network already, the incremental cost is just the service, not the network. That is transformational. That opens the door. If those people can create that service without going to the carrier and the carrier says, 'That's a good idea. I think I'll do that one. I like that idea. Thank you for the idea.' That is the current world. In the new world the carrier is not even in that business, so they are never cherry picking, they are never saying, 'What does it mean to me if that person does that?' It is fundamental that you unbundle the transport and make it compelling so that the end user buys it for their purposes and then all the new services are incrementally only to the cost of that service, not the network. That is the pivotal thing there.

**Senator LUNDY**—Therefore, entry into a digital product or service market is not inhibited by the necessity for those companies to have any knowledge or management of network infrastructure per se at all?

**Mr Price**—No, it is taken care of in much the same way as all the other services are used to.

**CHAIR**—You were talking about Axia not having an interest in RFP. In terms of the members of the Singaporean consortia, do any of those members have an interest?

**Mr Price**—An interest in which?

**CHAIR**—In the second RFP.

**Mr Price**—Yes.

**CHAIR**—Sorry, in Singapore, yes.

**Mr Price**—Yes, SingTel is bidding in the second RFP and they are a member of OpenNet, the winner of the first RFP. We are bidding on the second RFP and we are a member of OpenNet. The other two are not, because they are in different businesses. It created an environment where a different kind of investor, if you take SingPower as an example, was interested in the fibre grid because that is basic infrastructure and they have a bunch of ducts and they are the power company in Singapore, but they were not interested in the next layer. You end up with some people interested in the next layer and others not. Of course, there are other bidders that were not winners in the first award. They were on the other side of the award process; they did not win. They are bidders as well. StarHub and N1 are bidders for the second portion. They were also bidders in the first, but they were unsuccessful.

**CHAIR**—Are there any lessons that you think we can learn from that looking down the track?

**Mr Price**—I would say the main lesson is you cannot let a person in the services layer control the network. At the end of the day that is the primary answer. If you want to be in the services layer you cannot control the network layer.

**CHAIR**—You would already say we should have learnt that lesson for where we are at the moment, wouldn't you?

**Mr Price**—Yes. Then the question is: how you get to that place you need to be? There are two paths. Create an alternative that is not, or regulate the one that is there to change that person. You only have two paths: change Telstra or make them compete with the vehicle that you actually need. You end up at that fork in the road and every regulator and policy maker does, that is, you must either change the incumbent, break them up, get them out of that conflict position, because regulation does not do it; you cannot regulate them well enough. We have all tried. You either break him up or we take the other fork in the road and make him compete. There are only two. There are not any more. They are either one or the other. This government by policy basically said, 'I am open for proposals', and people can propose whatever they want on that front. Some might have proposed to break up Telstra or use a whole bunch of regulations to get rid of that conflict. Others might propose the other fork in the road, which is create an alternative and they can compete. We are always on this other fork. Axia never advocates a regulatory change for the incumbent. We simply give the government an alternative that makes the incumbent compete. We do not think the other fork in the road is actually doable or functional. There is too much history and too many complications. Whereas we think the fork in the road that says to make them compete is actually doable and actually creates the next generation outcome in the best transformational way.

**CHAIR**—We have heard evidence about whether or not there should be a prohibition at the other end of this process on overbuilding. Does that feed into your making them compete equation?

**Mr Price**—No. That fits into regulating the incumbent to change their business. That is that other fork. The fork in the road that says to make them compete, if anything, would put less regulation on Telstra.

**CHAIR**—Indeed, if there is competition the job is done?

**Mr Price**—I understand that is actually what they want. All the evidence is that that is what they want.

**CHAIR**—We heard evidence yesterday about potentially two scenarios, there being a successful one or more bidders out of the RFP process that then goes on to construct the NBN with the \$4.7 billion as appropriate. At the same time, Telstra, given that it is no longer part of the RFP process, would be developing its national broadband network in parallel. That was a scenario put to us by a witness yesterday. Do you think that is a potential scenario and, if so, what would be your comments or observations about that?

**Mr Price**—We are just comparing these two forks in the road?

**CHAIR**—Yes, but looking at it in another way perhaps.

**Mr Price**—A fork in the road where you regulate Telstra into a different business structure. Put on a whole bunch of rules and make a whole bunch of changes and make a whole bunch of limitations as to what they can and cannot do. That is fork in the road A. Fork in the road B is to make them compete through a process where the rest of the industry does not depend on Telstra. That is simple. Keep it simple. The rest of the people competing with Telstra cannot rely on Telstra for anything because they are competing with each other.

**CHAIR**—You would say that that scenario would be acceptable provided that the successful bidders were not reliant on Telstra?

**Mr Price**—I am saying that anybody who was smart in that process would organise their bid so that they were not reliant on Telstra and then all of their customers would not be reliant on Telstra, because that party is not reliant on Telstra. At the end of the day the government has a choice between those two forks in the road. We know they have the choice because we put one of them on the table, the one that does not rely on Telstra. That is not unusual. That is what we do everywhere. We never make a proposal that relies on the incumbent, because we are relying on a competitor that really does not want us to succeed and that is not reliable, so why start with a foundation that you cannot get aligned with because that party really does not want this next party to succeed? That is why we are in the process we are in; the incumbent, Telstra, does not want this process to succeed. In their view, they are better off if it does not succeed.

**CHAIR**—Last year we heard evidence that, despite the active interest in the tender process, no-one actually wants to get the gig, they just want to keep everyone else out.

**Mr Price**—All you have to do is look at the actual—

**CHAIR**—It is my expression of the way you put it.

**Mr Price**—They can just stand on their record. Nobody has to interpret their record. All you have to do is what they are actually doing. At the end of the day the incumbent is always better off with the status quo for themselves. Nobody else is better off, but they are. The policy environment has to deal with the fact that the incumbent has not got any motivation to invest a

bunch of money to create competition and to advance services. They have no commercial motivation to do that. Therefore we have regulators and we have people who set policy and we have RFPs. Then they can go to the RFP and competitively bid and then the competitive bid process goes to people who make decisions in the national interest and they decide. You are in the right process and then you will get an answer.

**CHAIR**—Has the global financial situation changed anything since you were last before us?

**Mr Price**—It makes it tougher for everybody. It does not make it tougher for any individual; it makes it tougher for anybody. Therefore, it just crystallises the requirement for clarity of public policy and clarity of regulatory framework, because all of those things make a tough situation impossible. If you think of it that way as an example, we would never in any environment propose a business model if it relies on the regulator doing something to the incumbent. If we just walk through that, what actually happens? I need the regulator to stop the incumbent from doing this list of things. How reliable is that? Through elections, public policy, hearings and court challenges, and the capital markets just will not make that bet. They would not make that bet in the good times so they are sure not making that bet in these times. I would just flatly say, in my view, any proposal that depends on the regulator doing longstanding commitments against the incumbent are probably just not financeable. In these economic markets, for sure it is not. These capital markets will not make the bet that that legislation will be that tough, in this case on the other party, for the period required for this long-term project. You have to come up with an answer that does not depend on special regulation of the third party. That is the only kind of answer you can finance in this kind of climate.

**CHAIR**—It highlights what you have been saying is a fundamental tenet in any event.

**Mr Price**—That is right.

**CHAIR**—I guess I am leaping sideways to a very important event in Australian terms—the bushfires in Victoria. I do not know if this is within your expertise, but do you see any particular ways that the NBN rollout could assist in those sorts of tragedies?

**Mr Price**—It could assist if it were already approved, because then it could be very quick to put priorities in that situation.

**CHAIR**—Do you have any particular insight into what and how or is that part of your expertise?

**Mr Price**—We would have insight if it were thought that the right thing to do was replace the old network with a next generation network, because that is what we do. If somebody was saying, ‘How quickly can we replace the old network? We do not do that.’ We would have no insight into that. In a situation like that the challenge is: what do you do between now and the next generation network? We would say the logical thing short of that issue would be to put in the next generation network. Do not put in the old one. Do not replace the old one. Put in the new one. But that is a tough timeline. Those people are all quite devastated in a number of ways, so the practical thing is to get the communications back up. Practically it is hard to wait. We would kind of say the sequence here is not to everybody’s advantage if this decision is not made that quickly. You can do very quick things with mobility and wireless.

**CHAIR**—Thank you very much. Is there any further final observation you would like to make?

**Mr Price**—No, not if there are no more questions.

**CHAIR**—Thank you very much for your time again.

**Proceedings suspended from 12.33 pm to 1.50 pm**

**FORMAN, Mr David, Executive Director, Competitive Carriers Coalition****MARCUS, Mr J. Scott, Department Manager, WIK**

**CHAIR**—The committee is resuming its public hearings into the National Broadband Network. As you would be aware, the proceedings are, as I said, public. If at any stage you wish to provide your evidence in camera then please ask the committee and state the basis upon which you might seek to do so, and we will consider your request. It is unlawful and potentially in contempt of the Senate for anybody to attempt to interfere with evidence that would otherwise be given by a witness before this committee and it is also potentially unlawful and in contempt of the Senate for a witness to give false or misleading evidence to this committee. Would you like to make an opening statement?

**Mr Marcus**—I am very pleased and honoured to have the opportunity to be here today. It seems to me that Australia is very much at a critical juncture just now. The decisions that are being made are likely to have a very significant long-term effect on communications policy here. The main thrust of my comments is to emphasise the importance of paying adequate attention to the competitive structure of the industry and toward maintaining appropriate pro-competitive remedies as Australia moves forward with its key and new initiative of an NBN. In making these statements I draw heavily on my experience. I have worked both as a senior engineer and a chief technology officer for one of the largest internet backbone firms in the world, GTE Internetworking. I was with the US Federal Communications Commission in Washington from 2001 to 2005, when I was their senior expert on internet technology and policy. Currently I work for a research institute that focuses on economics and regulatory policy for network industries. I have also done a secondment with the European Commission during 2004. I am in the unusual position of having seen regulatory policy related very much to these issues on both sides of the Atlantic and also in a number of other countries around the world.

Australia in my view has a market structure that is somewhat more challenging than in many of the countries I deal with. On the fixed network side you have a very high concentration in the hands of the incumbent. Aside from that, as you look forward, the question is: how will this competitive situation be changed by the implementation of NBN. My firm, the WIK, is a well regarded research institute. We recently conducted—not me personally but my very talented colleagues—an extensive study of next generation access, fibre based access, that most people would view as the definitive study for Europe. It included comparisons of multiple countries and a fairly detailed business model of next generation fibre for France, Germany, Netherlands, Italy, Spain and Portugal.

Some key conclusions were, first, that it is unlikely that any country would achieve a full deployment over the national territory without some level of stimulus. In that sense certainly I see the NBN as being on the right track. Secondly, though, it identified that the likelihood there would be replication of next generation fibre—that basically anybody other than the first mover would be able to build it—was extremely low. In most countries it was felt that there would be a viable business model for less than one per cent of the national territory. Only in France would it reach levels of seven per cent because of the unusual characteristic that they have an unusually good sewer system that reaches the buildings. There are real challenges in injecting competition



into this environment. The second major thrust that I wanted to focus on, if I might, is to talk about US regulatory experience in comparison to Europe, and what that really implies and why I would argue so strongly that it is important to maintain an appropriate competitive structure.

In the US for many years incumbent operators argued that the system should be very extensively deregulated in order to provide adequate incentives for the incumbents to roll out fibre to homes. During the Republican years, during the Bush Administration, the FCC largely complied with those requests. In one area after another, pro-competitive remedies were withdrawn. That actually had a number of consequences. Firstly, the share of broadband provided by competitors, which had been growing since the telecoms act of 1996, declined. It actually peaked in 2003 at about six per cent, which was still not very high, and in subsequent years declined. The latest FCC published figures put it at only 2.9 per cent, which is clearly too little competition to effectively constrain incumbent behaviour. By comparison, the average figure for Europe would be about 40 per cent. Essentially the FCC in deregulating gave up a great deal of competition. There were a number of different consequences. There has been a substantial fibre rollout in the United States. Again, the same FCC statistics put that number as at the end of 2007 at about 1.8 million. It is substantial. It is not as good as Japan and perhaps not as good as Korea, but it is still substantial. But there has been a price.

I would contend, firstly, that the rate of broadband deployment in the United States is much lower than it could have been because there is inadequate competition. Secondly, it has meant less consumer choice and, thirdly, largely as a result it has led to a problem in the United States known as network neutrality that is very likely at the end of the day to require a re-regulation of the industry that could very well be more intensive than that which was lifted. For all these reasons, I think it is vitally important to focus on competitive structure.

Expanding on that for a moment, relative to the rollout of broadband in the US many apologists for the current system would argue that the US rollout in global comparison is not so bad. In comparison with other OECD countries the US is about in the middle. Call it number 15 or so out of 30. The view is true, but I think this is beside the point. The United States should have been if not first then certainly in the top three, by any reasonable expectation. The United States was rolling out broadband before anybody else. I was actually one of the first broadband users in the eastern United States. I think it was 1994 or 1995 that my company happened to be rolling it out, and it was a good five to seven years before most of the rest of the world got on the broadband bandwagon.

Secondly, the United States had the extraordinary advantage of cable television access to nearly all households. Those cable systems have been upgraded to be broadband- and digital-capable. Again, the US had the extraordinary advantage of a second wire to nearly every home. Thirdly, when you factor in high GDP and high disposable income, again, all of the conditions were there for the US to be one of the very top in the world. My contention would be the broadband rollout compared not so much to where other countries are but rather to where the US could have been was substantially delayed as a result of inadequate competition as a direct result of an ill-considered deregulation. As to the network neutrality, which was the other issue that I raised as a concern, there has been considerable worry that broadband operators would discriminate against certain forms of content in favour of others. For example, that a cable company might, let us say, cut a deal with Yahoo!, the search engine, and therefore

disadvantage/disable access to Google, degrade the quality of access to Google network, or otherwise favour affiliated content against unaffiliated.

To an economist this is a worrisome kind of scenario. It smacks of economic foreclosure, of projecting market power into an uncompetitive segment upstream or downstream into a segment that otherwise ought to be competitive. My contention would be that the reason that this is a concern at all in the United States is largely a function of market power, of concentration of the markets. If you look at the numbers casually in the US you might think there is a lot of competition. The good news in the US is you do have tremendous presence of cable. However, competition otherwise is pretty much shot. As I said, the number of DSL lines provided by competitors is down to less than three per cent. It is really a duopoly system, a series of different geographies each with its own duopoly. But what it means is from the perspective of Joe consumer, there are two options, neither more or less—sometimes less actually, but not more than two. There is one phone company and one cable company.

Historically the clear intent of the communications act was to provide different ways that competitors could enter—not only loop bundling but shared access and other pro-competitive alternatives as well. All of that is what went by the board during the past eight years of the FCC with the result that competition contracted. As a result, whereas normally competition would have prevented this kind of anticompetitive discrimination—normally you do not care if there are differences in price or quality in a competitive market. You do not care if there are differences between business class versus economy class seating in a plane. You worry only when there is a competition problem, when there is a risk that this kind of discriminatory pricing can be used in anticompetitive ways. That is actually the problem that the FCC created. It cannot easily be fixed under US regulation. They have attempted in a couple of cases to rule on specific problems, but they are looking to do it on a case-by-case adjudication basis without underlying rules.

I was the FCC's expert on internet policy. I think once the competition has degraded to this level it will be extraordinarily difficult to craft rules that appropriately deal with these problems. It is very hard to distinguish bad discrimination from good, anticompetitive from pro-competitive price and quality discrimination. I really question whether five commissioners sitting on the eighth floor of the FCC's building whose composition will change over time will be able to make good or consistent rulings over time without underlying good process. The thrust of my comment there would be that it is extraordinarily important to maintain at the wholesale level or the underlying level proper competition of the underlying markets. It is a much better way to approach the problem.

To put a point on why this is a US issue, once you consider that in Europe there is a discussion of net neutrality but with not nearly the same fervour or intensity as in Europe. It is really not as much of an issue in Europe. Nobody worries about it so much, the reason being that even though many European countries do not have cable there are lots of alternative providers. There are people using a mix of techniques, the so-called ladder of investment, that combines something called bit-stream access and access to other providers' to the incumbent's DSL with loop sharing, which is a program that exists here, with local loop unbundling. The combined effect of those is that the average European has access to lots of broadband providers, four or five or more. That is enough. It means that if someone tried to cripple Google, let us say, in favour of Yahoo!, they would simply lose market share. They would lose customers.

You do not have to argue about whether it is to be regulated. You do not have to argue about whether it is moral. You simply say it would be unprofitable for someone to discriminate. The market takes care of the problem if you have the correct structure in the first place. In Europe, they have proposed some changes to deal with net neutrality, but they are extremely minor. It is essentially a truth-in-advertising provision that the European Commission has proposed, and it is now working its way through the European Parliament and the council. It would mean that providers have to inform consumers about any possibility of their content being blocked, their access being blocked or degraded. It would also have to notify them if there are changes. In the event that there is a change the consumer either can insist on getting their old terms back or they can leave the service without cancellation penalty.

Again, the feeling was that, where you have adequate competition or you have adequately informed consumers, the market can deal with it. The problem is not beyond a level where that level of protection will be sufficient. The thrust again is that it is critically important to maintain correct competitive structures. Just by way of wrapping up, my point then would be in the context of Australia and NBN it is really important to look at the competitive structures, ensure that competition is maintained, or to a significant degree to ensure that it is created. What that means, among other things, is that to the extent that there is a single NBN provider there need to be assurances that services are being provided on a truly non-discriminatory basis. Either that implies some kind of non-discriminatory provisions, separation from retail functions, or prohibitions on retail functions.

Basically, one has to ensure that there is no tendency for the NBN provider to discriminate in favour of one entity over another. More generally, since we do not know at this point who will provide NBN—that might be the current incumbent, it might not—I think the overall competitive and industry structure in Australia needs to be thought about very carefully in terms of how one establishes a proper competitive structure so that the incentives do not get out of hand. With that I would close my opening statements.

**Mr Forman**—I might seek your indulgence at the end to raise another matter just very briefly.

**CHAIR**—If I hear you correctly, it is critical that we maintain competitive structures and have our regulatory structure and rules set in advance rather than attempting to develop them obviously after we have established but also once the disputes are breaking out. You touched upon it at the end of your address but how is our current process tracking to deliver both of those targets?

**Mr Marcus**—I would have to say that there is not that much information available—and of course I am an outsider—as to what the current process is. I have certainly seen intent that the NBN should be made available on a non-discriminatory basis. I do not think I am in a position to comment yet on how well they are actually being maintained. My perception is that in the overall market it seems to me that you have a rather concentrated incumbent and that regulation really needs to think hard about that. I would point out, too, that in Europe, as I mentioned before, there are multiple remedies. There has generally been a feeling that it has to be possible for competitors to scramble their way up the ladder of investment, that there are different remedies ranging from bitstream—each of which requires different levels of investment. As a competitor gets more established and builds its customer base and builds its revenue streams it works its way up. It seems to me that here the reliance is largely on unbundled local loop and at

least in that regard there is access to the incumbent's last mile access facility. That may not be enough. In the United States, that is the only remedy that has actually been left in place. It is not very well enforced today, which is a separate problem, but it seems pretty clear that that is not enough.

Working from some European examples, I would also argue that it is not enough. Germany historically had a very good loop unbundling program. They had the largest number of unbundled loops in Europe but did not have the other rungs on that investment ladder, and as a result they had a relatively weak broadband deployment until just a couple of years ago when the European Commission really pushed on them and forced them to introduce the other forms of competition, including bitstream. France, by contrast, which had a relatively weak deployment of broadband up to 2001 and 2002, implemented very aggressively the full range of programs. As of about 2003-04 it had about 33 per cent, as I recall—about a third—of broadband access provided by competitors but using the less intensive forms, using the line-sharing and bitstream forms, the ones that require less investment, and then subsequently got a massive take-up of loop unbundling, which would tend to show that this notion of the ladder investment can work. It has to be implemented carefully by the regulators. In any case, this concept of the ladder seems not to be functional in Australia. The fact that you have such a huge incumbent share argues strongly to me that one needs to have an effective ladder. It is not just an NBN issue, it is a general competition issue for Australia.

**CHAIR**—You talked about there being an intent to deliver non-discriminatory services—an intent having been voiced here. How do you define that in our NBN marketplace? How do you define 'non-discriminatory services' in Australia's marketplace?

**Mr Marcus**—I guess one way to think of that is if there were an operator that had no business other than to deliver products at wholesale to firms that would then deliver retail services to consumers, and that had no reason or no ability to favour one of those retail providers over another, that could achieve the objective. Maybe to give an example, if we look at the kind of functional separation that was done in the UK—and in this case we may not be talking about functional separation for Australia; it may not be the same provider that is doing your other services—but in the case of the UK the way that they achieved non-discrimination was by separating off the parts of British Telecom that delivered last mile access.

In other words, the parts where there were potential competitive problems. They put that into a separate access services division known as Openreach. Openreach was to have its own branding, uniforms, marketing, personnel and, most important, its personnel were to have their own compensation structure linked to the profitability only of the division not to that of the mother company. In addition, they created a couple of pragmatic means to sort of monitor and facilitate enforcement in ways that would not involve constant involvement with the regulator. For example, they created a so-called equality of input board, as I recall, which was essentially a board that would include people from Openreach and also outside experts to monitor the performance of the access service division in delivering the same service to competitors that it did to the other portions of British Telecom itself. By doing that, they seem to have gotten a reasonably good outcome.

The number of unbundled loops in the UK had been very small prior to the implementation of Openreach. At the point when they put this separation in place, the numbers shot up. It is in the

millions now. I do not happen to have the direct figure, but I think by all accounts it has been a successful program. It was not the only reason that local loop unbundling took off, but it was a key reason and it enabled a pro-competitive outcome that I think generally has been successful and effective and can be well respected.

**CHAIR**—You discriminate positively in areas that require it due to lack of competition? Is that oversimplifying it?

**Mr Marcus**—I do not think I would call it ‘discriminating’. In this case what they did was to establish a non-discrimination obligation, rather, that said that they could not treat—

**CHAIR**—That is why I say ‘positive discrimination’. You basically say it is not discrimination because there is a valid reason for doing it a little differently.

**Mr Marcus**—Discrimination against BT or discrimination among the people that the access division serves? I think I miss your point a little.

**CHAIR**—In deciding to serve a particular portion of the population in a particular way due to the fact that otherwise they would not get service or they would get inferior service, so it is positive discrimination but for those reasons, is it?

**Mr Marcus**—I think the UK is actually doing something different here. In this case BT was actually serving the entire country already. Basically they had loops going everywhere. Here it was not so much about getting service to other places but rather about ensuring the loops that were available could be used equally well by BT and by its competitors. If I understand you correctly, I think the thing you are driving at is a little different, which is how do you get to serve the parts of the national territory that would not be so easily served just by commercial incentives?

**CHAIR**—That is another aspect of it. I am just trying to make sure I understand what your description of Openreach is essentially. We heard from Mr McCarthy-Ward this morning. He gave us a very good description of it, so I am just trying to get a bit more of a feel for your description of it.

**Mr Marcus**—It is more akin to notions of common carriage, of serving all parties indifferently. That is really what it is about.

**Senator LUNDY**—Picking up on this issue of equivalence and that is making sure that the services are available to your retail on an equivalent basis to competitors, how in your experience does that play out with the next generation networks in Europe and what are the key attributes of fibre networks that have that principle of equivalence in their regulatory frameworks in place?

**Mr Marcus**—The key challenge with fibre networks generally is that a lot of the traditional remedies such as loop unbundling become much harder to implement. In today’s networks, there are a certain number of central offices where a competitor interfaces to obtain loop unbundling. The central offices have main distribution frames. That is a point of interconnect for access. The network migrates to VDSL, a high-speed fibre based fibre-to-the-cabinet alternative. The

technology is sort of a side issue. The key question is: what does this do to competition? The answer is that the point of interconnect is no longer the central office. The point of interconnect becomes the individual street cabinets. This poses big challenges for competitors.

Firstly, there are a lot more of those cabinets and therefore a lot more points that must be interconnected. Secondly, one needs to get equipment into those cabinets. There may be limited space. There may be management issues in terms of how one physically gets access either to install new circuits or change things or fix them when they break. Also, there is the question of the physical access to the cabinets. In most countries, the access from the central office to the cabinet has to be buried. That implies big civil engineering costs. In fact, the whole challenge with fibre access is on the civil engineering side. That is where most of the cost is. In this case, it introduces a new competitive bottleneck in the form of the ducts from the central office to the cabinet.

All of these things mean that traditional remedies such as loop unbundling become harder. They become more difficult for competitors. It means that migration tends to be substantially easier for the incumbent than for competitors and yet given the importance to the competitive system of having other entrants, of having competitors, it is vitally important that these issues be solved. There are similar challenges with fibre-to-the-home and fibre-to-the-building. I do not think we need to go into those at the moment.

**Senator LUNDY**—What are the examples of how that particular challenge in a migration style environment from an existing network where there is a copper bundle leading to that node, if you like, to change to a piece of fibre leading to that node and that node becoming the interconnection point for competitors? How does the competitive regulatory framework look? To whom do rules need to apply to ensure that that framework can be put in place to achieve equivalence?

**Mr Marcus**—I think I would have to say, firstly, I do not regard this as a fully settled problem anywhere. I think this is a problem that the regulators are still grappling with, but there are a number of pieces that are coming into focus. There is incidentally a consultation paper that the European Commission put out not long ago on next generation access. There is some very good work that has been done in a number of countries. My feeling is that the functional separation model in the UK is likely to be more effective than others in dealing with it, but the UK has actually been a little slow in its move to fibre, so it really too early to say how well it will work. Generally, one of the things that has been looked at very hard in Europe and that you will see noted in the European Commission's paper is the notion of access to ducts. This is not an area that was historically thought of as part of the telecoms unbundling scenario, but it seems to be a critical piece of it.

Further, the notion not just that there should be unbundling available from MDF but that it needs to be available from the street cabinet and that the other logistical, administrative and managerial bits of that have to be worked out, I think comes out clearly. The report that my colleagues did for ECTA, the European Competitive Telecommunications Association, I think most people would view as the definitive study on this in Europe and that was certainly one of our recommendations, that both access to ducts and subloop unbundling should be maintained. There are some issues that need to be considered for fibre to the building as well. In particular, the wiring inside the building in a multiple dwelling unit itself becomes an enormous bottleneck.

One of the approaches that has been considered in Europe and is being promoted heavily in France, where I think they have done quite a good job, is the idea that whoever the first mover is should be obliged to share infrastructure with others. In effect, that might be done through commercial arrangements. Since they have different first movers, it is one of the few places where you have multiple providers of fibre to buildings, so that if firm A wants access to building wire in a building that firm B initially wired they should be obliged to open up wiring/fibre in buildings that they wired first so that it is a reciprocal arrangement, an infrastructure sharing arrangement. It is a promising approach. I think there is still a lot to be done on it, but it is promising.

**Senator LUNDY**—I would like to go back to the comments you made about the deregulation in the US and the resulting reduction in competition that you have observed. One of the things that is argued here by the incumbent is that the US model has demonstrably worked. Can you go into a little more detail about the sorts of issues that were considered at the time when those decisions to deregulate occurred and the sequence of events that then followed, that is, the behaviour of the telcos as they took advantage of that deregulated environment to shore up their markets?

**Mr Marcus**—I think there are several pieces to that question. Firstly, as to the claim itself, in many markets you see incumbents claiming that monopoly profits are the best way to motivate them to do next generation fibre rollouts. The claim is commonly made. It rests on economic theories that come from Schumpeter. The counterargument, which I think most Europeans would argue, is that incumbents are not the only people who invest, that in the aggregate investments by the competitors can be as great or nearly as great as those from incumbents and that by favouring only the one side you actually can depress total levels of investment.

In the US frequently there was a tendency, even in the original broadband rollouts, to do them not so much for profit maximisation in the raw sense but rather as a competitive response. The initial phone company DSL rollouts tracked pretty closely the places where the cable companies were providing broadband. In other words, until there was competition you did not have broadband rollout at all. I think a concern is that that could easily happen with upgrades of the network to fibre as well.

**Senator LUNDY**—We have certainly experienced that already, where exchanges are upgraded to provide ADSL2+ only when competitors go in and install their own DSLAMs and seek to provide a higher grade service. We have had a pattern of that kind of behaviour in the market here with respect to broadband.

**Mr Marcus**—Basically, if you have an incumbent, particularly as powerful an incumbent as exists here, unless there is competitive pressure it may be more profitable for them to milk the market in its current form. If they are providing a basic broadband, why should they improve it if no-one is offering anything better?

**CHAIR**—Are you aware—I am sure you are—of the US stimulus package in respect of broadband?

**Mr Marcus**—Yes, I have looked through it. I provided some advice. I was an outside adviser to the Obama-Biden transition team for the FCC, but this is not particularly an area I advised them on. By the way, I certainly do not speak for the US administration or FCC.

**CHAIR**—Are you able to talk about how in your view that might compare with what our government proposes here?

**Mr Marcus**—I guess in very general terms the first point to make about the stimulus package is that in terms of its broadband components it is a relatively limited measure. There are two key components to it. The first is a rural component of US\$2.5 billion primarily to offer broadband in parts of rural America that are subject to rural electrification stimulus as well. That part of the program is administered by the department of agriculture. This is really to get to the back country. The other part of the package is something like US\$4.7 billion. That is administered by part of the Department of Commerce, the NTIA. That is to get to unserved and underserved areas. The definition of unserved and underserved is to be done by the Federal Communications Commission, I think within 30 days after passage, which means that there must be people working pretty hard on it even as we speak. But that second portion then could potentially fund urban and suburban areas.

A part of the thrust for the package is to deploy these services into areas that would not otherwise be served through commercial mechanisms. I think this comes back very much to where you were asking earlier: how do you get the service to places that would not otherwise be served? Also, how do you avoid introducing an effectively subsidised competitor into a market that has already got some service from other parties? You do not want to distort competition in areas that can be commercially served. These are substantial challenges and I think they are substantial challenges in every universal service and universal access program.

**CHAIR**—Can you extrapolate on that point? How do you use that to roll out the National Broadband Network here in a way that invests the dough in the areas that would otherwise not be served or be underserved by the private sector?

**Mr Marcus**—In terms of what I would think of as best international practice, I think there are a couple of lessons that can be drawn from writings from the ITU and from the World Bank. Interestingly enough, a lot of this tends not to get looked at in developed countries. It is only imposed on developing ones. The first notion from ITU is that you can think of the national territory as having three chunks, however defined. The first are places where commercial deployment would happen without any stimulus at all. There, obviously, the right thing to do is to leave them well enough alone. Another portion of the national territory not only would not be profitable for deployment but is likely to require ongoing stimulus indefinitely.

The third—and this is perhaps the most interesting part and the one often overlooked—is that there may be substantial bits of the national territory where a service could be economically self-sustaining once initiated but where you would not get the initial deployment without some kind of public policy help. Once you have established that and figured out what kind of subsidy you are trying to provide—and we like to say ‘stimulus’ but in reality it is also subsidy—you try to provide a minimum but still adequate subsidy. The way this is usually done in World Bank practice is through some kind of what is called reverse auction. Essentially you want to offer it to the lowest bidder. That is about as far as the published literature goes.



Two of the poster children for this approach are Chile and Peru. These are written up in World Bank papers associated with a very fine consultant named Bjorn Wellenius. As it happens, I am doing a project in Peru right now on interconnection based on internet protocol, and I actually see some of the issues with this. I think one has to watch out in a bid process for a couple of risks. One is what I might call a ‘bid to win’ strategy, which is when a firm submits a bid that is low but unrealistically low. The question then is: what happens? Does one increase their subsidy after they are already well into the build? What does the government do at that late date? How do you correct that? It is not an easy problem.

The other question is really: how does one adjust these levels of subsidy as market circumstances change? Some of the places that I see in Peru were served for voice communications with VSATs at some expense. At this point, mobile service is beginning to become available to some of the same areas. The question of how one adjusts the framework over time is not something that is really established, to the best of my knowledge, anywhere in the literature and certainly needs to be thought about.

**CHAIR**—You talked about building a ladder. Would that work in Australia where we are talking about potentially an entirely new operator? I think your scenario was building ladders where you have got an existing provider in part?

**Mr Marcus**—That is a good question. The ladder actually might turn out to be more relevant for your existing services than for the future ones. For the future ones I think the notion of having a service provider offering the NBN on a non-discriminatory basis and only wholesale, for example, in other words, following principles drawn more from the functional separation world, may be the better solution for the NBN itself. And then a ladder for what you already have.

**Mr Forman**—Can I firstly clarify the relationship of the CCC with Mr Marcus. We have paid for him to come to town. He happened to be in New Zealand, but he is not actually consulting to us. We are notorious cheapskates and we are not paying him anything apart from his travel and accommodation.

I wanted to touch on another matter while I was here that arose yesterday in the newspapers and I think was discussed at some length. My understanding was that there was some discussion yesterday of some changes to the Deakin Telstra exchange and its impact on two of my member companies and that Telstra explained, seemingly to their own satisfaction, that this was a circumstance where a lease had run out on the exchange and therefore it was not their fault. I just wanted to suggest that that example of that conduct in the marketplace illustrates perfectly two things that we have been suggesting for some time.

Firstly, the unsustainability of present competition arrangements and associated with that the contemptuous way that Telstra treats those customers who are also its competitors. The second is the failure of the operational separation regime that we have in place today to cause Telstra to emulate the kind of conduct that would be accepted if we had a structurally separated industry. Perhaps to explain those points to you I would ask you to imagine what the conduct would have been on Telstra’s part in those circumstances were it only a provider of wholesale services as opposed to a retailer of services in the same area.

I would suggest to you that the level and type of communication between Telstra and those retail customers, who are my members, would have been markedly different in those circumstances, because the incentive on Telstra would have been to tell those retailers as soon as possible and in as much detail as possible what was about to happen in that exchange, whether it was within Telstra's control or not. It would have wanted to let those people know what changes were occurring and to bring them along with those changes such as to minimise the disruption both to their businesses and to the end users who are connected to those businesses. Whereas what we see in the conduct of Telstra in relation to this matter is that they have given minimal information and a minimal timeframe for people to respond and regarded complaints by my members as an irritation or as a conflict situation. I would suggest that that is entirely the form of conduct that this country cannot afford to take forward into an NBN world.

**Senator LUNDY**—In closing, just for completion, as I did at the beginning of this inquiry, I make sure it is clear that Mr Forman is in fact my husband.

**CHAIR**—Thank you very much.

[2.36 pm]

**BROCKMAN, Mr David Jonathan, Manager, Planning and Stakeholder Engagement, Telecommunications Industry Ombudsman**

**O'DONNELL, Ms Deirdre, Ombudsman, Telecommunications Industry Ombudsman**

**CHAIR**—As you would be aware, the proceedings of the committee are public. If you wish to be off the record at any stage, please make your request known to the committee and we will consider it. It is of course potentially unlawful and in contempt of the Senate to provide the committee with evidence that is in any way false or misleading, as it is potentially for another party to attempt to influence or interfere with evidence that might otherwise be given to the committee. Would you care to make an opening statement?

**Ms O'Donnell**—With your agreement, I thought I would begin by clarifying the role of the TIO in the telecommunications regime as a consumer protection mechanism and then I have been given an indication of some areas that may be of interest to the committee so I thought I might just name those and then answer your questions. The TIO is a free and independent alternative dispute resolution service and we exist for small business and residential consumers in Australia for people who have a complaint about their mobile, internet or landline phone, and our aim as an alternative dispute resolution service is to settle disputes speedily and in a non-bureaucratic way. In resolving disputes we have regard to the law, good industry practice and what is fair and reasonable in all the circumstances.

The TIO is an office of last resort. What that means is that the consumer who has a grievance with their service provider must first give the service provider a chance to resolve that issue. If that does not work, the TIO is there to help. When we investigate complaints, because of our independence we have regard to the positions of both parties and where possible we attempt to conciliate or mediate an outcome. In 93 per cent of the cases or the complaints that come to us we are able to do that within 10 working days. Our independence is an important thing that I make clear. We are an industry funded scheme, but we are independent of the carriers and the service providers. We are independent of government and consumer groups, but we see one of our key roles as providing information from our complaints to assist the regulatory regime.

Broadly, the complaints we record are captured in terms of the service types, internet, mobile and landline, always though from the consumer's perspective. It will be how the consumer perceives the service and the issues the consumer raises that we look into. I have been asked to think about what would be the impact of an NBN world for the TIO. From our perspective, we are right at the very end of the line in terms of the transactions and the experience between the service provider and the customer. If I make a very high-level statement I expect that the issues will be the same. The issues that are on our books now that have been on our books since we began in 1993 and that continue are very common and predictable. The most common category traditionally for the TIO and other industry ombudsmen, such as energy ombudsman, is billing. Traditionally when a customer has a transaction with a service provider and they get their bill and they look at their bill and they have a question, 'Did I get that service? Did I make that call? Am I being fairly charged?', that is the point at which they will traditionally call on the

ombudsman. But in the last two years the other issue that I have put strong emphasis on has been the area of customer service and complaint handling. That is an issue for the industry and that is an issue for the people who come to the TIO. Then we have probably nine or 10 very common categories around people complaining about provisioning of service, faults, the sales transaction itself, contracts, point of sale advice, understanding, transfers and then matters related to that transaction between the service provider and the customer.

I thought I would give you that high-level overview of our world and where we fit in and then the particular issues that we thought could be relevant in a post-NBN world for the TIO are, as I said, I expect that we will still get billing, payment, contracts—money related complaints—because that is our bread and butter. Customer service and complaint handling—I would like to say I do not expect that to be an issue, but I expect that it will be an issue. In the current regime we have the customer service guarantee, which is a really important consumer protection mechanism, and we get complaints relating to the application of the CSG. A question I would have in the new regime would be: would that exist? Would that raise issues for us?

Provisioning, repairs, faults, delays, and access to service have always been an issue. I expect in a world where the service is seen as something really valuable and central to the life of the consumer those issues will be even more important than they are today. We ourselves in thinking what would the world look like were wondering about any sort of migration issues that go from old platforms or old technologies to new, because in the past we have seen problems with those sorts of processes. How do you get from one technology to another or one world to another? We have a role in land access complaints. Where the installation of infrastructure occurs we have a specific role in legislation to investigate and deal with land access complaints.

The area of the relationship between wholesale and retail providers is one that may arise for us, because there are tensions there and sometimes conflicts that particularly will manifest in delays in transferring under mobile number portability, switching services from an internet world. The other two areas that we identified included the Australian Broadband Guarantee. We have some complaints under that now. If that is a feature of the new world, maybe that is an impact on us. The USO—we have put that at the bottom of our list because we do not get a lot of complaints about that. By far the bulk are in the first two or three issues that I talked about, but that is potentially an area that we may get complaints about in a new world. I hope that helps as an introductory comment. I am happy to answer any questions or provide clarification.

**Senator LUDLAM**—It sounds as though your main work is with the retail customers. Do you deal with many business customers as well?

**Ms O'Donnell**—We do not. Predominantly by far the bulk of our customers are residential consumers. We are there for small business consumers. The ombudsman can make binding determinations up to \$10,000 and recommendations up to \$50,000. That does not constrain outcomes. We can negotiate, but sometimes for small businesses that might be a barrier to them coming to us or potentially they could reach a more commercial resolution more promptly. By far our biggest customer is residential consumers.

**Senator LUDLAM**—Are you aware whether there is a particular breakdown between metro and regional customers? Is there any obvious split in the work that you do?

**Ms O'Donnell**—One of the issues for the TIO is how great is awareness of the TIO in the regional and rural areas. It is probably worth saying at this point that I think we are Australia's busiest ombudsman by orders of magnitude and our business continues to grow. Traditionally, without being scientific about it, we see the drivers of complaints to the TIO as being around industry activity—so, what is happening in the marketplace and how dynamic is the marketplace—and consumer awareness. There are issues for us around how many regional, rural and remote consumers know about us. But then it is also a question of what are the issues for them. In the complaints that we do receive they tend to be around the landline faults, provision and repairs delay, rather than those transaction based ones that I talked about earlier. Proportionally I suppose we get a fair coverage, but we would like to do better.

**Senator LUDLAM**—Are you able to tell us what proportion of your work relates to internet or broadband services as opposed to fixed line and mobile?

**Ms O'Donnell**—We talk about it in that broad sense of internet rather than broadband because the customer will characterise it that way. If I talk about last year's annual report, our biggest category of complaint is mobile. When you add mobile and mobile premium services, it is a separate scheme, landline and internet. We have statistics for the months from July 2008 to January 2009 and it seems to be not quite a third, a third, a third but in terms of across-the-board our internet is lower—that is interesting—for the eight months from July 2008 to January 2009. We had 43,000-ish complaints about landline, 43,000-ish complaints about mobile and 27,000 to 28,000 complaints about internet.

**Senator LUDLAM**—Roughly 27,000?

**Ms O'Donnell**—Yes, 27,912; close to 28,000. There were 10,000 about mobile premium services.

**Senator LUDLAM**—How many staff do you have? That is a lot of phone calls and emails?

**Ms O'Donnell**—It is. It is a lot of calls and emails. At the moment we are not far under 200 staff.

**CHAIR**—As to those many thousands—are many of them simply a telephone call to you querying? Is it just for phone advice or how do you then track them? Do they transpire into some sort of formal complaint and how many of them then track to a binding decision from your organisation up to 10,000 versus recommendation up to 50, was it?

**Ms O'Donnell**—Yes, that is correct. Almost all of the contacts—probably about 88 per cent; I will get David to correct me—would be by telephone. We have had an increasing number of complaints through the web by email. Of those, perhaps 10 per cent to 15 per cent are inquiries and the rest are what we call level one complaints. That is a significant volume—

**CHAIR**—A level one complaint requires action from you to investigate, does it, in your vocabulary?

**Ms O'Donnell**—It does. If a customer, a consumer, calls us and they have not been to their service provider we would categorise that as an inquiry and we would refer them back to the

customer service area of their service provider, because that is the way we work—an office of last resort. That is a small 10 per cent to 15 per cent. If a customer has had a go at resolving the issue with their service provider or they come to us and say, 'We have a complaint', our practice is to refer them to an escalated complaints area within the service provider. We give them the TIO reference number. We record the details in our system, which allows us then to report on these sorts of statistics to you. In 93 per cent of those cases those matters are resolved within 10 business days. That is by far the bulk of our last year 150,000-odd complaints. The ones that actually get to a binding determination are in the tens, I think, possibly 20 all up. Almost all of them are conciliated—93 per cent. Almost all of them are resolved within the 10 business days. Then a smaller group are conciliated, a smaller group are investigated and a very small group may result in very challenging legal issues or land access issues get to that level four. We have four levels of complaint. Almost all of them are able to be done consistent with the principles of alternative dispute resolution.

**Senator LUDLAM**—It sounds like it is working pretty well, although I do not know quite how to gauge it. It looks like an awful lot of phone calls and an awful lot of complaints coming through the office.

**Ms O'Donnell**—Yes, it is.

**Senator LUDLAM**—Who is looking structurally at how to reduce the volume? Are there specific categories? Because this is the broadband inquiry, can you give us within the internet side of things—there are roughly 28,000 calls there—a broad outline of what people are most upset about?

**Ms O'Donnell**—The big category, 13,000 of those—so just under half—are around billing and payments matters. The next biggest group, 11,000, nearly 12,000, are around customer service. I must say as ombudsman it is fascinating how predictable the categories are and how they repeat themselves year after year. This is exactly the classic dispersal of complaints. The next issue for the internet complaints is faults. Then we get into contracts, complaint handling and a small 3,000 on credit management; provisioning, 2,000; transfer, privacy and a bit of land access. I can table this graph, if the committee would find that of assistance.

**Senator LUDLAM**—Can you just tell me again what the second category was?

**Ms O'Donnell**—The second category is customer service.

**Senator LUDLAM**—I am probably going to mangle the acronym, but the government has established a new consumer body/network, ACCAN.

**Ms O'Donnell**—Yes.

**Senator LUDLAM**—Do you have a seat at that table? Are you part of that network?

**Ms O'Donnell**—No. That is for the consumer advocates, the consumer representatives. They are a key stakeholder for us. Mr Brockman obviously has an important role in communicating. They will call on our data. They look at the sorts of patterns of complaints that we identify. Then as a group I understand they will be doing some research, for example, into some of the issues

we have named. They will look at the broader consumer experience. All I can tell you is what goes wrong. That is a broader group that can talk about what goes well or what can go better. But we can only tell you what has gone wrong in the transaction. ACCAN will be a very important stakeholder for us in the future and I am sure they will use our data to inform the sort of work that they do in their contribution.

**Senator LUDLAM**—Can you let us know about your interactions with that group to date, with particular reference to the establishment of the new NBN and the process that is under way?

**Ms O'Donnell**—We have really had none.

**Senator LUDLAM**—That will be nice and quick. Maybe then you can tell us a bit more broadly about your interactions with ACCAN.

**Ms O'Donnell**—I think they come into operation on 1 July. We have been advised through the department of the establishment of the group. We have seen the media releases, as everyone else has, about who the board members are. We are looking at it from arm's length, but we will engage with them when they are formally constituted and we will be meeting with them. It is probably worth knowing that the TIO has a council comprised equally of industry and consumer representatives and some of the consumer representatives are common to ACCAN. In that way we have been hearing about it through our consumer council representatives, but there is no formal engagement as yet.

**Senator LUDLAM**—I am a little surprised to hear that there is no formal linkage. I would have thought you would be a fairly obvious first port of call on consumer issues, because you are on the front line.

**Ms O'Donnell**—I would imagine that they already know. They already have a seat at our council. For example, the Consumers Telecommunications Network is on the TIO council. We have a range of five consumer representatives, at least one of which is on the board, possibly more. We already have a comprehensive engagement with the various consumer groups who will be combining to become ACCAN, so in that sense our dialogue is really important.

**Senator LUDLAM**—We have heard a lot both through this committee but also through media speculation and so on. Competition issues have really dominated the debate so far on the National Broadband Network rollout. User issues and what people will actually do with the internet have been sidelined somewhat. Was your office asked to have any input at all into the RFP that is afoot at the moment? Was there any—

**Ms O'Donnell**—No. As I said, I would not have expected to. I suppose by virtue of the fact that we are independent and that our data is public data, it is—

**Senator LUDLAM**—It is public.

**Ms O'Donnell**—Yes. One of our objectives is to provide high-quality data that can then inform the policy development processes and to respond if people have questions, but our focus is on resolving complaints and on assisting our members, the members of the telecommunications industry, to do a better job. They are probably our biggest customers.

**CHAIR**—Is your organisation happy with the powers that you have?

**Ms O'Donnell**—We are not a regulatory agency. We are dispute resolution body.

**CHAIR**—I understand.

**Ms O'Donnell**—Sometimes people expect us to take enforcement action. We are a traditional ombudsman and there are, what, 19 of us in Australia and New Zealand all of whom have very similar jurisdictions and powers, and so on. Personally I have been in the ombudsman business for around a decade. I think it is a terrific model. I am very biased. I like it because the focus is on speedy resolution without bureaucratic intervention and because it is an informal process that allows the agency which is the ombudsman to engage with the member and the consumer to try to get a resolution promptly.

One of the great things about the TIO's role is that carriers and service providers under legislation must be a member of the TIO. That is seen as a significant protection. Some ombudsman schemes have voluntary membership, but the fact that eligible carriers and carriage service providers in Australia must be members of the TIO and must comply with the scheme is a really powerful protection for consumers and it gives us significant authority. The other thing that we have and that is typical of industry ombudsmen and that is important is our power to make a binding determination, which we alluded to before. This is different from a parliamentary ombudsman, the Commonwealth ombudsman or a state ombudsman, where they can only recommend. That is power that an industry ombudsman has by agreement with the industry in which it operates. That is also a very good power.

**CHAIR**—You mentioned before that the binding rulings you make for up to \$10,000 are in the tens. Have you had any of those with which the parties have not complied?

**Ms O'Donnell**—To the best of my knowledge, since the scheme began in 1993, no, there has never been—

**CHAIR**—What about the recommended declaratory—

**Ms O'Donnell**—Yes, the recommendations up to 50,000. Again, to the best of my knowledge in the life of the scheme none has been rejected. It also might be worth knowing that, because we are an industry funded scheme, the industry members who receive complaints pay, and that is an escalated rate of fees. A level one complaint, which does not take a lot of time and can be quickly resolved, does not cost a lot of money to a member. A level two costs commensurately more. A level four costs a lot. The rationale behind that structured fee arrangement is as an incentive to reach a resolution sooner rather than later, and that is another of those. We are free to a consumer but the member—

**CHAIR**—Yes. If a consumer contact with your organisation does not result in level one or anything higher, so maybe you have adjudged it spurious, is that the subject of a fee to a member or do you have some sort of retainer?

**Ms O'Donnell**—No.



**CHAIR**—If you have a few rogues out there who want to make a provider pay up, they would just ring you guys a few times?

**Ms O'Donnell**—That is the theory. In my experience, it is not borne out by the facts or the statistics, but it is a theory, yes.

**CHAIR**—Is it one that is postulated, is it?

**Ms O'Donnell**—It is always a concern. I see my role as ombudsman to demonstrate through the transparency of my operations and the rigour of my statistics and the training that our staff go through that we are able to discriminate, be objective and fair and evidence based.

**CHAIR**—Looking at the mobile phone sector of your work, there is clearly competition in the mobile carrying sector, yet you have a significant number of complaints about the service in that sector. Is competition working from your perspective in the mobile phone industry?

**Ms O'Donnell**—We look at the very issues that we have highlighted. What are the transactions at point of sale? I mentioned earlier that one of the drivers of ombudsman business is market activity. There is a lot of market activity. We constantly remind our mobile members of the importance of good, clear, simple communications. There is a plethora of contracts and plans out there. People say to us that it is hard to compare and contrast. It is hard to understand exactly what they have bought. So, good, clear information, accurate information at point of sale, and then when something goes wrong—again, this is very basic and I apologise that it is so basic, but it is bread and butter to us—prompt, reasonable and helpful advice to sort out a problem with your handset, changing your plan or querying a call charge. I would not say competition is not working, but I would say there is an enormous amount of activity going on in that sector. My statistics show areas where the players could improve their business practices.

**Senator LUNDY**—There were a number discussions at yesterday's hearing and a bit again today about the accuracy of the information systems within particularly the incumbent provider, Telstra. It also raises the question about the quality of information that is available within all telecommunication service providers. I have certainly had personal experience representing constituents where the front of house, if you like, has just not had access to accurate information about the services being provided to that customer. Do you have any insight into this problem given that quite often it thwarts quick resolution of disputes because the telecommunications company itself cannot access its own accurate information?

**Ms O'Donnell**—It is a very common experience. Every day our inquiry officers will get calls of that nature. When I have asked my members why there is this disconnect between what is promised in the marketing package and what is actually followed through at the front end one explanation is that the rush to be first to market, the rush to take advantage of the new technology or the opportunities means the focus is on that front end, and the back office processes are slow in catching up.

Senator Ludlam alluded to this before. We launched a campaign in November last year where we were asking our members to focus on those back office processes, because increasingly we are finding that the people who call us are frustrated by that disconnect. They believe they have acquired something, they believe they have heard something, they believe they are making a

purchase on the basis of something, and there is a disconnect and it goes wrong and they are not getting answers or they are not being put through. In a media release I have used the term, 'They are getting the run-around.' They are just not finding an answer when they need it and that is frustrating them and it is frustrating us. It is something that we focused on through a campaign that we launched we have called 'connect resolve'. This is a name that came from our staff when I said to our staff, 'What would you really like to see the carriers do better so that we stop getting these sorts of complaints?' They said, 'Connect with their customer and resolve their complaint.' We put that together and that is our call to action. We are monitoring industry performance in relation to customer service and complaint handling, giving feedback and telling the regulators what we are seeing, because this is a problem that we just do not think customers should have to experience. I am sorry; I got a bit evangelical there.

**Senator LUNDY**—No, that is fine, because it really goes to the heart of the problem. Another common issue that gets reported to me from constituents not just here in Canberra but from right around the country through my pair gain victims website is that customers work out for themselves that the best way to get on the limited number of ADSL services emanating from some exchanges or RIMs is to sign up with BigPond first and then change their ISP. This is because they have no hope of getting on to an ADSL service if they do not go through BigPond because of the structure of the network. Have you received any complaints about or do you have any insight into how that occurs? I had better be clear about this, because Telstra cannot force that; that is outside of the competition rules. I have heard cases that they have and we have made complaints to the ACCC, but it is really customers getting the twig on it themselves and working out for themselves that that is the quickest way to go about it. It is not even like there has to be some formal breach of competition rules by Telstra to allow it to occur. Do you have any advice for customers who find themselves channelled into a certain path because of that?

**Ms O'Donnell**—I will ask Mr Brockman to comment as well. We would hear about it if that went wrong. If a customer could not get what was promised, I would hear about it if that process did not work. Personally, that is not something I know about as ombudsman.

**Senator LUNDY**—Because the customers kind of work it out for themselves?

**Ms O'Donnell**—If there is a solution found, it is not likely that the ombudsman's attention would be drawn to it, but Mr Brockman knows the front of the business better than I.

**Mr Brockman**—There may well be examples of that that we have seen. It is probably worth mentioning that it is an issue I think the ACCC considered two or three years ago. They have had complaints through from consumers who, when they had applied to providers other than Telstra, were told that the quality of cabling to their premises was not sufficient; that they were not going to be able to get ADSL services. Lo and behold they would then approach BigPond and were able to get those services connected.

Following the commission's work a process was actually put in place whereby if consumers found themselves in that position, if they were told by a competitor that essentially the quality of cabling to the premises was not sufficient to get a high speed connection and BigPond could subsequently provide one, provided they made that known within 30 days they could actually be moved over to their preferred provider without any kind of contractual obligation to BigPond. I believe that is actually detailed on the commission's website, so it may be worth having a look

on there. But for consumers in that particular position there is that process there. I think it was in recognition of the fact that sometimes consumers, when going to alternative providers, were not getting the same information as they were when they went to the incumbent.

**Senator LUNDY**—Thank you for that. It relates back in some cases to the accuracy of information that an incumbent has of its own networks, and other times it might just relate to how much effort they put into testing the signal on the copper as to whether or not it is worth while hooking that person up. The other issue I want to discuss with you is the concept of the waiting list. Again, both in exchanges and subexchanges such as RIMs with a limited number of ADSL ports it is often reported to me that there is a waiting list for customers to go on to that limited number of ports. It essentially means someone has to cancel their subscription to free up a port. What oversight, if any, is the TIO able to provide to the fair management of those waiting lists, not just in the context of competition policy but one neighbour pitted against another neighbour and they are all lining up to get a coveted service?

**Ms O'Donnell**—In terms of oversight per se, that is not our jurisdiction. That is not within our power. Again, I will get Mr Brockman to add to this, but I would imagine if we received a complaint about inequitable treatment we would have the opportunity to investigate and seek information from the carrier and form a view about whether the resolution proposed was fair and reasonable in all the circumstances. I know those issues of access to infrastructure can be particularly vexed and problematic for those very reasons that you name, perceptions of equitable treatment and the pressure between desiring to have access and being frustrated. They are just some introductory comments. Mr Brockman used to be our manager of systemic investigations and so he also has a good insight into what we saw as patterns of problems in the industry.

**Mr Brockman**—In summary, we certainly have seen examples of those types of dispute come through. Since the ADSL register consumers are actually advised to refer their details and wait for a port to be freed up on an exchange. Presumably it is something that you have seen through some of your constituents as well. There might be an allegation they have had their name down before somebody else on the register and there has not been that level of parity in terms of the distribution of the service at the end of the day. We can investigate those types of complaints, and we do. As Ms O'Donnell mentioned a moment ago, in terms of the information we can actually request from the service providers, there are very few limitations on that for us. We can ask for a great deal of information from the service providers, but unless that documentation or evidence we ask for features details of a third party that has not consented to disclosure we can generally get hold of that.

In my experience those types of complaints are generally resolved. Sometimes if we do get evidence back from whether it be an incumbent or another internet service provider showing that those person's details are on the register, that they are queued, the advice that might be given back to that consumer is simply, 'Keep ringing every 30 days and just enforce the fact that your details are actually on the ADSL register and it really is a matter of waiting your turn.' I guess the difficulty sometimes we have as the ombudsman's office is that we do not really have visibility over the whole register. I do not actually know if there is an agency that does. In that respect there may be some concerns about how that is operating, but for those consumers who come to us and say they are in a position of detriment we can just follow up with the service

provider to make sure that there is a record of those customers having requested a service, and clarification of their details are on the register.

**CHAIR**—The Australian Broadband Guarantee and your interface with that, that must give us some insight into broadband based complaints?

**Ms O'Donnell**—I wanted to scope that for you. In the last year we had 913 complaints, so out of 150,000 that is not a lot. In the new year we have had 789. We have a relationship with the Department of Broadband, Communications and the Digital Economy and on most occasions those complaints are resolved with the assistance of the department. That has been our experience. Usually the sorts of complaints that consumers have are that they are not receiving adequate speeds or service levels from their service provider or where there have been delays in the connection of their service. We liaise with the department to resolve those.

**CHAIR**—Thank you very much.

**Proceedings suspended from 3.13 pm to 3.39 pm**

**COX, Mr Dermot, Marketing Director, C-COR Broadband Australia Pty Ltd**

**CHAIR**—Welcome, Mr Cox. The proceedings of the committee are public. If at any stage you wish to give evidence in private please say so and indicate the basis upon which you are requesting to do so. It is unlawful and potentially in contempt of the Senate for a party to attempt to interfere with or otherwise influence evidence to be given to this committee, as it is to give false and misleading evidence to this committee. Would you like to advise the capacity in which you are appearing before the committee today?

**Mr Cox**—Yes. I am an employee of an Australian company called C-COR Broadband Australia Pty Ltd. I am here because I would like to be the single voice to talk about the cable broadband networks that we have in Australia.

**CHAIR**—Would you like to make an opening statement?

**Mr Cox**—Yes, I would.

**CHAIR**—Thank you.

**Mr Cox**—In addition to the original submission to the Senate select committee I have created an abridged version of that, which I would like to talk to.

**CHAIR**—Thank you. Do you have copies?

**Mr Cox**—I have copies if you want to read that as we go through it.

**CHAIR**—That would be good. How long will it be?

**Mr Cox**—I will keep it to about four minutes.

**CHAIR**—Please circulate that.

**Mr Cox**—My colleagues and I are pleased to have this opportunity to raise the profile of cable broadband in the Australian context. The purpose of the further submission was to highlight the as yet untapped potential for Australia's existing cable networks to deliver the lowest cost broadband infrastructure to major cities and towns around Australia using cable broadband technology, and in doing so to communicate the latent competitive advantages of cable DOCSIS when implemented over HFC and the fast emerging RFoG solution architecture. RFoG is Radio Frequency over Glass. It is putting the same capabilities across a fibre infrastructure.

The next wave of cable broadband technology development has been driven by the world's leading cable operators. I am not talking about vendors, I am talking about the cable operators. The cable industry is driven by the mandates of the cable operators. They drive the cable industry and the standards, and that is where the cable standard comes from. It is owned by the operators. It is to meet customers' increasing demand for more bandwidth and video-centric

applications such as IPTV, interactive video, distance education and video telephony. Please note the emphasis is on video as the emerging choice of user interface. When you go through and talk to dispassionate engineers, they all recognise the cable infrastructure is ideally suited to the delivery of video, whether it is one way or it is interactive video.

Cable broadband networks can deliver open access where the operators are prepared to open their networks. Cable networks use internet networking standard products such as modems, and I have a cable modem here; they do exist. They comply with all standards of interfaces such as your PC, and it will plug straight into that. There is nothing tricky in it other than it uses a protocol called DOCSIS, which is a way of delivering the bits and bytes back into the network. From the customer's interface perspective, it is exactly the same as an ADSL modem or the like. There are no tricks. Because it uses standard products such as modems in the customer's home or office, the operators could quickly launch new wholesale products and services for sale via independent retailers, creating diversity and energy in the retailing of broadband. I mention that because we do not have that in Australia. There is no diversity in the reselling of cable broadband.

Beyond Australia cable broadband is an established, highly competitive alternative for super fast internet and video rich media, preferred by many experienced carriers as their broadband technology of choice. In the Australian context, the owners of existing cable broadband networks can invest and modernise with confidence knowing that they can meet the market's latent demand for rich multimedia experience, choice of connectivity and innovations and services.

In Australia we have four cable broadband network operators. These networks are fibre-to-the-node. That is a great buzz word and everyone loves that so I had to throw it into here. It is fibre-to-the-node in the context that fibre is in the access network and on the other side of the particular point, which is the node, it uses coaxial cable to touch customers. It actually has fibre in the network, hence the expression HFC, which is hybrid fibre coax. It is hybrid of fibre and coax. My estimate is that these networks service about seven million Australians today. Operators talk in terms of their touching 2.2 million or passing 2.2 million homes. That is so rude. They should talk about 'Australians' rather than an innate objects or a house.

At the centre of the NBN discussions is the requirement for download speeds of 12 megabits per second. This begs the question, in my mind, is this a peak download or a minimum download speed? Is it QOS, or quality of service, enabled? Just like wireless broadband, the ADSL technology performance suffers when a lot of customers use the network simultaneously. It is a common occurrence that there is not enough bandwidth capacity to ensure or guarantee these peak downloads.

In the submission I asked: what is the NBN's expectation for uplink speed? Uplink bandwidth requirements are rarely discussed because, to date, they have not been a critical performance factor in measuring residential high speed data networks. However, residential and small business users' behaviours are rapidly changing, and uplink bandwidth is becoming a driver in determining adequate network performance. Just to tease that out, if you look at things like Facebook and those social networking tools, they are driving the exchange of video content. In the past we would turn on the internet and we would look at content and there would be a one-way communication, but now we are using cameras and other sorts of appliances at home or in a workplace to put video back into the network.

The capital cost to modernise the existing Australian cable networks is by far the lowest cost option available to the government. I also suggest in the submission that these cable broadband networks deliver the lowest cost of bandwidth today. They are highly reliable and robust. The technicians to maintain and service them are in place. I put it to the Senate committee that this modernisation of one or all of the cable networks is a much more compelling proposition. It is low risk. It means more NBN funds can be channelled into building new networks for those more disadvantaged than our fellow Australians with access to existing cable broadband networks.

I considered some industry white papers on the relative performance differences between fixed broadband platforms. Some simple findings from that research are residential users are projected to need downstream access speeds of between 26 megabytes per second for an average user and 44 megabytes for a power user in the next few years, based on the adoption of IPTV with multiple high definition TVs in the home, interactive video, file transfer and of course the much loved VoIP. User bandwidth requirements are increasing at a significant rate—for guidance, between 20 per cent to 30 per cent compound per annum. Today GPON, which is a fibre technology, delivers 2.4 gigabytes in the forward path. That is that much bandwidth to the customers going into their homes. Keeping it simple, that equates to 75 megs for 32 concurrent customers, so 2.4 divided by 32 is 72-odd megs. To be mischievous, if we redesign the existing Australian HFC networks to 32 users per node, where at the moment they are around about 500, just like GPON, then the comparable speed would be 135 megs per second per user downstream. Finally, the much loved VDSL2, the fibre-to-the-node technology of choice, does not meet the projected bandwidth consumption for an average user in just a few years. You can forget the power user.

These simple findings suggest that building a broadband network on VDSL exposes us to a policy outcome that would need to be reviewed in just a few years. So, we would be back here in three years' time. We would need to anticipate implications for VDSL2, VDSL3, VDSL4 and VDSL5, which are projected areas of this DSL technology branch. Will the 30,000-odd street cabinets that are anticipated under the digital vendor scenarios have to be uplifted and moved closer to the users to get the better performance promised through these variants of VDSL2 and so on?

In the submission I stated that the Australian cable networks could be rapidly modernised and ready to deliver the very best broadband experiences for residential and small and medium businesses substantively by Christmas of this year. Of course, those existing networks could also be expanded, dare I say it, and new cable networks built in regional towns and townships of Australia by a broadband challenger, but this will take a little longer.

Let us be clear, Australia does not have IPTV capability or other innovations in the major networks today because they choose not to deploy this technology, and because of the issues surrounding media ownership and such, which is a completely different realm from what we are talking about today. Subject only to investment, Australian cable broadband networks are ready for IPTV technology.

The submission asked the question: does the government understand how simple and cost effective it would be to make the existing cable broadband networks deliver super-fast speeds such as 40, 60, 80 or 100 megabytes downstream to a significant number of small and medium

businesses and residential customers, of which I made reference to seven million, and where is the discussion about uplink speeds? This is important. The traditional carriers already acknowledge their customers are increasingly seeking services with faster and better quality of service attributes to support their increasing appetite for videocentric applications and emerging applications with high demand on interactivity. Has the government evaluated the cost-benefit of modernising these cable broadband networks to solve the broadband issues immediately with no fuss or risk? Has the government obtained advice on specific techniques for modernising the existing HFC cable broadband networks in Australia? These techniques are well established and well known by cable operators in other markets.

Why have cable operators not made investments across their cable broadband networks? Why have they underinvested in the HFC networks? Does the government understand why the leading Australian cable operators, Optus and Telstra, choose not to drop a new physical connection to business and residential customers? The lack of investment in a \$200 cable connection provides a barrier to entry to real network based competition and means no choice for business and residential customers. At \$14-odd per unbundled local loop service, under the band 2 scenario of the ACCC, it is a no-brainer for those that do not have a passion to build alternative competitive fixed infrastructure.

The delivery of fast internet, telephony and video is increasingly being delivered over fragmented fixed networks in Australia—lifeline voice on copper, internet on ADSL2+ and video via satellite on the roof. Of course, mobility is best delivered by the wireless networks. Is it not a paradox to the government that the operators are overbuilding their own fixed broadband networks? For example, operators are deploying less attractive ADSL2+ electronics in Telstra exchanges where cable networks already exist. Three of the world's 10 largest ISPs are cable operators. I emphasise that these networks are growing.

The objective of the submission to the Senate select committee was to communicate two key insights. How do you utilise DOCSIS 3.0, which is a technology standard, as a means of delivering high bit rate data services to residential and small and medium business customers while leveraging the cable operators' extensive HFC networks, and the implications of an emerging technology called RF over Glass an all fibre-to-the-premise solution architecture that lends itself to new access network builds. Traditional telecommunications carriers have chosen to evolve their wired networks to either VDSL or fibre using either GPON or GePON in the belief that these technologies deliver superior access economics to cable technologies. In the submission I set out to challenge this myth and in the process debunk other myths.

In conclusion, the submission suggested that the current policy mix seems to have caused a dire lack of investment in cable broadband over too many years. Cable broadband is a real alternative fixed broadband asset that can deliver super fast broadband outcomes simply and economically. It deserves a change in attitude and it warrants an investment kick-start. The money saved can be used to build new GPON or RF over Glass fibre networks in regional Australia. Cable should be part of the policy mix.

**CHAIR**—Thank you. Senator Ludlam has some questions for you.



**Senator LUDLAM**—Thank you for your submission. It is an interesting viewpoint and one that we have not really heard anything about to date. I might have missed it, so can you explain for the cable illiterate why this is not already happening in Australia? What is the barrier?

**Mr Cox**—There are a couple of things. I also put in that submission to you a bit of a schematic so you can get a conceptual idea of what a HFC network looks like. There are a couple of little gaps in there, more for simplicity.

I am not close to the executive within the cable operators in Australia. I am not privy to their strategic business planning or competitive planning. I have no visibility of that. A simple example is that a principal of the business, a guy called Keith, lived in a street in Melbourne and he bought a block of land three or four doors down the street. He had cable broadband in his house. He moved to the new house three or four doors down the street, moved his furniture and the whole shooting match and then rang the service provider and asked for the service to be swung across, and they denied it. They said that it was not available in his area. What I am talking about is trying to challenge your thinking that most of the discussion has been perhaps around some of the strategic concepts, but if you look at the behaviours and thinking in terms of structure driving behaviour, which drive events, you will see that some of these behaviours are systemically not right.

**Senator LUDLAM**—I was thinking more at a business-case end. If you are saying that there is already fibre infrastructure going to seven million Australians that is not carrying IP at the moment, not carrying broadband services and it could be, that is more my question: why is that not happening yet?

**Mr Cox**—The operators seem to prefer to use their copper networks and use the unbundled local loop as a way of getting connectivity to a new customer. If you talk to an accountant they will say, ‘Choice of spending \$200 to connect you today to the network or I spend \$14 with these guys over here and I sign you up on a 12-month contract.’ The simple maths would suggest that I would take somewhere between 11, 12, 13 months to break even on the \$200 investment, so why do it?

**Senator LUDLAM**—Why are the companies not offering it? It seems to me that what you have outlined is a fairly substantial opportunity that is not being taken up in Australia. Your submission points out that it is starting to be taken up in the United States and in other markets where cable culture is perhaps a bit stronger than it is here. I am not sure what it is you are suggesting that we are missing here.

**Mr Cox**—The model of competition is a little bit different in Australia. Here we have operators who have a plethora of technologies and they are competing on equal terms. If you look at the American model, they have a history where cable operators were given access to geographic markets and that was approved. The model of competition that was invented by the FCC and the like is quite a different one to Australia. Here it is more of an open pitch, whereas in North America you seek permission to engage into a geographic market, and so you have a history of new entrants which were the cable operators. They got permission to enter into a new market so they invested and developed a discrete point of difference about their offer. There is a different historical context.

**Senator LUDLAM**—If I was the Minister for Communications and I had \$4.5 billion to spend to roll broadband out to the vast majority of the population, what would be your advice to us about how the cable infrastructure should be incorporated in that thinking or that spending?

**Mr Cox**—The marginal cost of upgrading the existing capital broadband networks is much better than doing a clean build. It is very simple. Modernise those networks and save the effort and investment dollars for the people who are underserved—the much referred to underserved and the ones who do not have any real choice. Put the bucket of money there, as distinct from replacing perfectly good broadband infrastructure.

**Senator LUDLAM**—I am sorry if I missed this in your opening statement, but if you leave the underserved markets out for the time being, what is your estimate of the cost to upgrade metropolitan telecommunications infrastructure?

**Mr Cox**—There are two parts. I have not studied that, but by going on postage stamp calculations, I have seen references to modernisation in North America being around about US\$50 to US\$60 per customer. What we suffer from in Australia is that people do not have a choice of fixed access network. They do not have the second choice. In America it is implicit that they have a second form of physical connectivity. In Australia it is mandated that every house has a copper service as part of the universal service obligation, so every house has a copper network into it. I live in a greenfields estate. I have got broadband to the home, but by law Telstra must deliver a copper service to my house. If you look at the North American model, you will find that people have a choice between the telco operator or the cable operator and they switch between the two, because it is a moving target in terms of the sweeteners that the telecommunications operators or the broadband operators will offer them. That is why you will see the switching and changes in customer buying behaviour.

At the moment I understand that the cable operators are enjoying a bit of an increase in market share because they have been targeting small and medium businesses in North America. In spite of the economic downturn they are switching their offers to the small and medium businesses, which I think in the Australian context has been badly served—underserved.

**Senator LUDLAM**—Your suggestion is that for a relatively small upfront cost plus some regulatory changes we could open up a very large new area of bandwidth that has not really been exploited yet?

**Mr Cox**—Yes. Very simply, if you look at the innovation that happens in Australia, in the inner suburbs of Sydney and Canberra—the arty guys or the guys that work in creative agencies—one of the things that they need is broadband. They typically have an ADSL service, which suffices. Perhaps they need something that gives them a bit more of a robust service, because their market is not necessarily around the corner. It is actually across town, across the country and across the world, because those guys compete. Distance is not the issue for them. It is the availability of quality broadband networks that allows them to compete against other people in other markets with their creative content. They need an access network that supports that.

**Senator LUDLAM**—There is certainly no argument here. We heard some more information from the Australian Industry Group this morning about attitudes in business to the demand for

broadband. That is pretty solid. You have made some sharp comments in your submission on page 7 about the limitations of fibre-to-the-node networks. You have estimated that it is going to leave us with 30,000 boxes on street corners the size of large refrigerators that will need to be air-conditioned—I did not realise that—so each of them needs to be powered. I do not know whether you would be able to tell us of a large market that is equivalent to the size of what is proposed to be rolled out in Australia using that technology?

**Mr Cox**—I am sorry, I did not understand?

**Senator LUDLAM**—Is Australia the first large market to be proposing rolling out that technology on a large scale?

**Mr Cox**—No. There are reference customers for that technology. We are not pioneering here. We are following well established tracks.

**Senator LUDLAM**—Are you concerned in building this out on such an enormous scale that in three or four years time these refrigerator sized things will become obsolete and will need to be carted away again? Are we buying something that is future proof?

**Mr Cox**—From a purist's perspective, as someone who is passionate about the industry, I would suggest that the endgame is fibre-to-the-premise or fibre-to-the-home. For a telecommunications carrier that has a mindset around copper networks, and what has evolved from that, the naturals have been to go to ADSL, ADSL2 and then the next jump is to run a bit of fibre out to the famous pillar, which looks quite unobtrusive and we all skip over the top of them. Those sorts of things would need to be replaced with a VDSL cabinet. I am just highlighting the practical issues around those VDSL cabinets. Most people have it in their mind that they are going to change out these little pillars or do something with the pillars. These pillars are actually going to be physically removed and replaced with a large cabinet, which is going to require power and cooling. I think some people will take an offence at the impact on their streetscape.

**Senator LUDLAM**—Your comments here on consultation with communities and local government is spot on.

**Mr Cox**—It has been completely overlooked.

**Senator LUDLAM**—We have not heard too much about that so far. I have no other questions. Thank you for your evidence.

**CHAIR**—You talked about the connection costs of cable. Are there dual costs? Are there connection costs both for the supplier and the customer?

**Mr Cox**—When I spoke of the \$200-odd to connect a new house, the drop cable goes from the post or from under the street. I think, because of Telstra, many of the cable networks are actually underground. It is when you are talking about the last 50 metres, to go and get a contractor, to pull a cable and connect it inside the house or the premise. That is a real cost. That is a cost borne by the operators to get a contractor to come in, pull some cable, connect it and test that it works. That is the real cost. I discriminate between that cost of building that

infrastructure and the cost of connecting the customer, which is either borne by the broadband customer or amortised over a fixed term contract, which is fairly normal practice because, dare I say it, the copper network is an amortised cost. It is already a sunk cost. The notional connection fee for an ADSL service is, in many cases, a cost associated with keystrokes, turning the service up from a computer terminal. Do you understand that? One is for the cost of building a discrete network, physically doing some new work, as distinct from keystrokes, which is enabling the provisioning service and the like.

**CHAIR**—Thank you. FROG is not to be confused with RFoG. Can you explain that a little more? Is it fibre-to-the-node or fibre-to-the-premises?

**Mr Cox**—The promise of RF over Glass is fibre-to-the-premise. The existing cable networks today have fibre to a node. The nodes exist in the ground or up a pole, depending on the carrier. Some go on aerial infrastructure and others go underground, but the node and the cable network is typically not the same place as the Telstra exchange. It is closer to the home and closer into the community. On the carrier's side of that node is fibre and on the other side of that node it is the coaxial cable.

The proposition with RF over Glass as an evolution of the access network is that the coaxial cable piece will be replaced with fibre. The reason for that comes back to the cable operators who are members of CableLabs. They see their competitors, the telecommunications carriers, starting to build out fibre-to-the-home, and the case in point from the Australian context is that Verizon is being put up as a reference model and they are building fibre-to-the-home. Because of those sorts of dynamics around what they are doing in the marketplace the cable operators are saying, 'We don't want this to happen because we will lose customers.' They are telling their standards committee and they are telling the vendors to develop products that will counter that competitive push. What you see here is that the technologies are battling each other and the cable industry per se is coming back with an alternative. It is the law of the jungle, Mother Nature at work.

**CHAIR**—On that note, thank you very much.

**Mr Cox**—Thank you.

[4.10 pm]

**BRYANT, Mr Simon, Acting First Assistant Secretary, Broadband Division, Department of Broadband, Communications and the Digital Economy**

**KING, Ms Marianne, First Assistant Secretary, National Broadband Network Taskforce, Department of Broadband, Communications and the Digital Economy**

**LYONS, Mr Colin, Deputy Secretary, National Broadband Network Taskforce, Department of Broadband, Communications and the Digital Economy**

**MASON, Mr Philip, Assistant Secretary, National Broadband Network Taskforce, Department of Broadband, Communications and the Digital Economy**

**CHAIR**—As you are aware, the proceedings of this committee are public. If you wish to give evidence in camera, please make that request. As you would also be aware, it is potentially in contempt of the Senate and unlawful for a party to interfere with evidence to be given by a witness and, likewise, to provide the committee with false or misleading evidence. Would you care to make an opening statement?

**Mr Lyons**—I have a very brief statement. As you are aware, the department has not provided a written submission, but we have previously responded to requests to written questions and we have previously appeared before the committee. You will be aware that the panel of experts has now completed its evaluation proposals that met the minimum requirements and conditions for participation. The minister has received the panel's report and the government is considering it.

I am sure that you would appreciate that until a decision is made and announced by the government the process remains live and the department's responses to questions will therefore need to be appropriately constrained by probity and confidentiality requirements of the request for proposals process. Within those constraints we would like to help answer questions as best we can, but questions relating to the content of proposals, the details of how the evaluation processes were conducted, or speculation on the possible outcomes in the process or the government's decisions are matters that we would find difficult to answer. We certainly appreciated the committee's understanding of those constraints when we last appeared.

**CHAIR**—It might be simpler to ask what you think you can tell us in terms of recent developments. That might be a good starting point.

**Mr Lyons**—The panel reported on 21 January. The panel made recommendations to the minister and the panel's report is being considered by the government. It is very difficult for us to go much beyond that in terms of the proposals, what was in the proposals or how they are being evaluated because, firstly, the proposals were submitted on a confidential basis and, secondly, we need to preserve the integrity of the process. I am happy to try to respond to questions that you have in mind, but we are significantly limited by probity and confidentiality constraints.

**CHAIR**—Is the department aware of potential constitutional issues in respect of access?

**Mr Lyons**—The department has received legal advice in relation to the process, but I would not like to comment upon the legal advice or the contents of the legal advice that we have received. Proponents were asked to put forward regulatory proposals. Those proposals have been considered by the panel and will continue to be considered by the government, including all legal issues relating to those proposals.

**CHAIR**—Without disclosing the legal advice, is it possible to indicate the nature of the question at issue?

**Mr Lyons**—I would prefer to take that question on notice to see the extent to which I could provide you with an answer that did not affect the process.

**CHAIR**—Thank you. The committee received evidence yesterday from a witness suggesting there should be some sort of mediation service to resolve disputes. I do not know if the department is familiar with the suggestion. What might be some policy options for the government?

**Mr Lyons**—I am not aware of the particular comments made in evidence before the committee. Was that a question relating to this particular process or was it a question relating to the current regulations?

**CHAIR**—It was the transition. The government makes a decision as to how to proceed, so then in the process from pressing go to implementing, and then a second stage once the NBN is up and operational. The disputes might be about pricing or access. You might have a view about the extent to which the ACCC already—

**Mr Lyons**—The difficulty I have with that question is that you are asking me to speculate on the outcome of the process and the decisions that the government would take going forward. They are matters for the government to decide and I am really not in a position to speculate on what policy positions the government might take in moving this process forward.

**CHAIR**—Could you map the policy options? Surely the policy options are the policy options, irrespective of where we are at in the process and who is the government of the day?

**Mr Lyons**—To map the policy options, in response to your question, could easily be taken by particular proponents to mean that I was inferring particular outcomes and I would prefer not to do that.

**CHAIR**—I will think about that.

**Senator LUDLAM**—The bids have come in and the ACCC has also provided a report, which has been considered by the panel of experts. It is with the minister's office now. Can you tell us what role, if any, the department is actually playing in the NBN process as it stands?

**Mr Lyons**—Broadly, the department has played the role of providing advice to the panel and supporting the panel in its operations, along with our expert advisers in preparing an evaluation

methodology and then assisting the panel in the assessment of proposals. Now the panel's report is being considered by the government, again it is very difficult for me to run through with you what the department's role might be, other than that the department's role has now turned into a role of providing advice to government.

**Senator LUDLAM**—You are advising the minister's office now rather than the panel?

**Mr Lyons**—Yes, the minister and government to be specific.

**Senator LUDLAM**—Has the panel disbanded or does it still have a formal role?

**Mr Lyons**—The panel has no continuing role.

**Senator LUDLAM**—This might be a little bit lateral, but I am going to ask it, anyway. The previous witness spoke about the physical architecture of the thousand-odd nodes scattered around the landscape, all of them requiring power and refrigeration. Has your department or anybody else, to your knowledge, modelled the electricity demand of that rollout?

**Mr Mason**—There have been independent studies in relation to power consumption of FTTN networks.

**Senator LUDLAM**—Are you aware of some of that work?

**Mr Mason**—Yes, we are aware of such research.

**Senator LUDLAM**—Is there any particular paper or piece of research that you rely on? Is that something that figures in your thinking at all?

**Mr Lyons**—We would not like to be speculating on what particular information is publicly available that is factoring into our thinking in terms of the assessment of proposals, because we have to be careful about what we say publicly about assessing proposals. We could provide you with information about publicly available reports about that issue.

**Senator LUDLAM**—That might be helpful. So, nothing that is of strategic importance for your purposes, but just some baselines would be helpful. I am struggling to think of anything I can ask you that you can actually tell us.

**CHAIR**—The department advised the government as to the policy environment leading into the National Broadband Network announcement, correct?

**Mr Lyons**—Yes.

**CHAIR**—Since then there has been an escalation of the global financial situation. Has the department reappraised its earlier advice to the government in light of the escalation of the global financial situation?

**Mr Lyons**—I do not think I am in a position to provide a comment to the committee on policy advice that might have been provided to the government after the receipt of proposals.

**CHAIR**—After what—

**Mr Lyons**—We explained that once the panel has reported to government it is now assessing the panel's report, and I do not think I am in a position to comment on what advice the department may or may not have provided to the government.

**CHAIR**—I am not asking about the content of the advice. I am asking whether or not, as a matter of fact, your earlier advice was reassessed in light of the global financial situation?

**Mr Lyons**—I would prefer not to comment on issues relating to advice provided to the government in relation to the assessment of proposals.

**CHAIR**—Assuming there may be more than one successful bidder, what if one or all of them goes bust 12 or 18 months after having commenced operations?

**Mr Lyons**—The difficulty for me is that you are asking me to speculate on what might happen if something happens to proponents and what might happen if there are particular outcomes from this process. That is very difficult for me to do.

**CHAIR**—I hope the government is contemplating these scenarios, given their own predictions in terms of the financial situation. I might have thought they would be getting some advice from your department in that respect. I would be reassured if they were.

**Mr Lyons**—Certainly, the RFP asked the proponents to demonstrate their capacity to roll out the network, upgrade the network and to continue operation. I can tell you that those issues are assessed as part of the assessment of proposals, but particular issues are very difficult for me to comment on.

**CHAIR**—They may need reassessment given the recent times, given that since the tender process commenced the external financial situation was not so apparent as it now seems to be.

**Mr Lyons**—That goes to the government's consideration of the panel's report and that is why I am not in a position to comment on that.

**CHAIR**—Thank you very much for your short appearance before us today. The committee has completed its hearing for today.

**Committee adjourned at 4.22 pm**