



COMMONWEALTH OF AUSTRALIA

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## SENATE

SELECT COMMITTEE ON THE NATIONAL BROADBAND  
NETWORK

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

THURSDAY, 6 NOVEMBER 2008

PERTH

BY AUTHORITY OF THE SENATE



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

**Thursday, 6 November 2008**

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

**Senators in attendance:** Senators Birmingham, Fisher, Lundy, Ian Macdonald, Minchin

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

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

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**Committee met at 9.18 am**

**CHENG, Mr Anson, Manager, Broadband Infrastructure, Western Australian Department of Industry and Resources**

**de JONG, Mrs Julie, Director for Innovative Industries, Western Australian Department of Industry and Resources**

**GROCOTT, Mr Stephen, General Manager, ICT, Biotechnology and Trade Services, Western Australian Department of Industry and Resources**

**CHAIR**—I declare open this further public hearing of the Senate Select Committee on the National Broadband Network. I welcome our first witnesses for what is our fourth day of public hearings. Welcome Mr Grocott, Ms de Jong and Mr Cheng from the Western Australian Department of Industry and Resources. Thank you for your time today.

I will run through a couple of routine procedural things and then we will kick into hearing the most important thing, which is from you. Evidence given before these committees is public but the committee is able to receive evidence in private or in camera. If you wish at any stage for that to occur, you may make a request and the committee will consider it. Evidence given is also privileged in a parliamentary sense, and it is an offence and potentially in contempt of the Senate for anyone to attempt to interfere with or otherwise influence evidence given before this committee, as it is to give false or misleading evidence to the committee.

Finally, witnesses are able to object to answering any of the questions asked by my good colleagues or myself. If you wish to do so, you should outline the grounds upon which you object to answering a question and the committee will consider that. In that context, the committee could also determine to take evidence in camera. We have received your submission. Does the department wish to amend or vary the submission?

**Mrs de Jong**—No.

**Mr Grocott**—No.

**CHAIR**—In that case, I invite you to make a brief opening statement, whereafter we will ask you some questions.

**Mrs de Jong**—Thank you very much. Good morning, and thank you for the invitation to put forward some comments on the national broadband network. Our submission went in during June, I understand, which was during our caretaker period. It does not reflect the full terms of reference, as we now have a new government. We have no policy statements from this new government and therefore we are constrained about what we can say, because we have not been given a lead on what their position is on this.

However, we are interested in the national broadband issues. We are concerned from WA's point of view, however, about the focus on the cities, bearing in mind that the remote and regional areas of Western Australia would be a big focus for us. I would like it noted that that would be one of our main concerns on this subject.

**CHAIR**—Do either of your colleagues have anything to add?

**Mr Grocott**—One of the issues for us in Western Australia is what happens to the remainder of Western Australia that is outside the potential coverage of the national broadband network. I will hand over to Mr Cheng in a moment. We have a substantial submission in front of the Commonwealth government in relation to this issue and, I believe, a potential solution to the question of how will people outside of Perth and perhaps, based on the OPEL solution, parts of the south-west receive broadband services of an equal quality and cost to those within the network.

Having said that, I will ask Mr Cheng to outline what we put forward in our submission to the Commonwealth government as a potential solution to this very important issue.

**CHAIR**—Mr Cheng.

**Mr Cheng**—Thank you, ladies and gentlemen, for this opportunity to be able to talk to everyone and present our case in WA. I am responsible for all the delivery of WA infrastructure projects for telecommunications. Recently I have been tasked with dealing with all issues in relation to telecommunication that have an impact on WA.

Based on the previous program, the Broadband Connect program, funding was approved by the Commonwealth and subsequently withdrawn from the OPEL consortium of Optus and Elders. Our perspective on the OPEL solution is that it may or may not provide a competing broadband service to major population centres in Perth and major south-west locations. It is only serving areas where there is potential for high revenues and it does not address telecommunications deficiency in under-serviced areas of WA, which in this case is in the north-west of WA where the bulk of the wealth of this nation is generated, through the mining and minerals industries.

In the current NBN our impression is that there is no clear definition of 'NBN'. The NBN has a target of 98 per cent of the Australian population, of which WA consists of approximately 10 per cent, at around 2.1 million people living in one-third of the geographical area of Australia. Our perception of the NBN is that it covers only areas where there is high potential for revenue and where there are existing broadband services already. WA's under-serviced area risks becoming the two per cent casualty of NBN.

Going back a little bit in history, in 2002 the Australian government commissioned the TAPRIC report—the Telecommunications Action Plan for Remote Indigenous Communities. There were some relevant points that we were looking at. One of the points that came out of that study was the importance of integrating government service delivery infrastructure with telecommunications solutions. The report identified telecommunications as an enabling tool for a community's social and economic development. It also identified public online access centres as a preferred model for remote communities. There is a need for effective coordination between communities, government and industry to ensure that efficient and effective sustainable service delivery mechanisms are established. There is also a need for a high level of commitment and coordination across all levels of government. Those were the key findings from the previous study. Subsequent to that, there have been three or four studies and their conclusions seem to be



roughly the same. The question we have is: why aren't we following the recommendation? Why are we doing something else?

While providing essential government and non-government services in remote areas may be desirable, in many cases it is not practical for government or private agencies to provide a permanent service presence in every rural or remote community. Factors include high cost, budgetary constraints, staff shortages and staff willingness to work in remote locations. The only practical way to deliver vital services is by working smarter and utilising technology to provide online access and service delivery to target communities. In this case it is broadband telecommunications.

We did a study recently through our independent consultant ACIL Tasman. It has identified that, because of poor communication services, WA is missing out on quite a lot of things. In terms of dollar value in the region of the Pilbara and the Kimberley, we are missing out on around \$235 million. In the Gascoyne and the Goldfields, we are missing out on around \$162 million. In the wheat belt and Great Southern, it is around \$166.9 million. and in the south-west and the Peel regions, it is around \$73 million.

**Senator IAN MACDONALD**—How are you missing out on those moneys?

**Mr Cheng**—In terms of the impact of poor communications in WA.

**Senator IAN MACDONALD**—You are saying your assessment shows that that is the dollar figure of loss of productivity or something?

**Mr Cheng**—Yes. This was quantified by an independent consultant. The total dollar value, in terms of WA as a whole, is around \$644 million, which equates to around 4,877 direct and indirect employment opportunities for WA people. This was the report recently given to us by an independent consultant.

**CHAIR**—Have you got anything else to say by way of an opening statement, Mr Cheng? This is all useful information and we will want to drill down into more of the detail. Do you have anything more by way of overview that you or your colleagues wish to present at this stage?

**Mr Cheng**—That is the key statement. We have a lot more detail coming when you are ready.

**Senator MINCHIN**—On your figures, just give us a better picture of the problem in Western Australia. Is it that there are significant areas where there is simply no broadband service whatsoever, either by satellite or wireless?

**Mr Cheng**—Yes.

**Senator MINCHIN**—Or that the service is there if you can afford to pay for it, but it is unaffordable for most people?

**Mr Cheng**—It is a combination of many problems. When you talk about terrestrial broadband, that is mainly concentrated in Perth and towards the south-west region of WA. Anything about north-west, you have spot coverage of broadband; very limited. In general, there

is no broadband coverage except if you use satellite. The problem with satellite is that you have the latency problem, the speed problem. But not only that: there are some locations within WA where satellite does not work. It is a combination of many technical problems.

**Senator MINCHIN**—What is your assessment of the effectiveness and impact of the Australian government's Australian Broadband Guarantee program, which is specifically designed to ensure that people in rural and regional areas can get a metro equivalent broadband service. Has that had no impact in Western Australia or is it impossible?

**Mr Cheng**—There is a bit of impact, but if you examine this carefully, up in the north-west region there are around 200 to 300 Indigenous communities. These are people who are very poor and cannot even afford to pay for their basic living. How can they afford broadband in this case? That is why, if we go back to the original study of TAPRIC, it identifies that the public online access centre is an affordable means to provide that service to those communities, through shared access. That has been identified for years. Many times it has been identified and still we are rolling out broadband on the premise that everyone can pay for it. This is where it started not identifying the problems that we are facing here in WA.

**Senator MINCHIN**—One of the issues for us has been, 'Where is the two per cent that Labor's NBN won't cover?' I think you are right: a lot of it is going to be over here. You said you had a solution that you had put to the government. Is that in the public submission?

**Mr Cheng**—We put it to the Regional Telecommunications Independent Review Committee. We put in a formal submission. It is known as the smart network WA. I can show you a copy of that.

**Senator MINCHIN**—Can you, in two minutes, summarise exactly what this is, the elements of that solution?

**Mr Cheng**—The solution is designed to address mobile and broadband communications problems in WA. It is focusing on the north-west region, or all areas where there is no broadband or mobile phone coverage. It also tried to converge technology. Mobile coverage is part of broadband and we just could not avoid this convergence of technology. It also provides a backhaul transmission for the north-west where there is no backhaul except Telstra's backhaul. It is trying to aggregate everything towards that part—to aggregate the mining companies, to aggregate all the communities together—to make a viable business case for a carrier to roll out broadband or mobile phone coverage. It is designed as an innovative solution to provide innovative technology, not using whatever technology is available. It is using several technology platforms to be able to deliver a cost-effective solution.

**Senator MINCHIN**—What sort of federal government subsidy were you suggesting would be required?

**Mr Cheng**—We were looking at around \$130 million for that. We are also looking at improving government service delivery along the way. Based on the TAPRIC report it clearly identifies that, if you improve broadband without improving government service delivery, your chance of success is minimal. If you will allow me, I could cite an example of what we have done recently for the Ngaanyatjarra people. I can show you a map.

This is one of the examples where there was an effective collaboration between federal, state, local and the community and industry working together towards rolling out broadband. Under the Commonwealth Coordinated Infrastructure Funding or CCIF program, where the Commonwealth government provided \$2 million, the state government provided \$2 million and we also got some contribution from the local council, we rolled out broadband to the six communities of Ngaanyatjarra, over here. It is right on the border of WA, NT and SA. It is in a region where there are around 2,800 people with 12 communities. It is one of the most underprivileged groups of people in WA. They have had hardly any improvement in infrastructure for a few decades. One of the reasons why we picked this site is that this is one of the most difficult ones to roll out infrastructure. It is around 1,800 kilometres from Perth, of which 600 kilometres is sealed road, from Perth to Kalgoorlie. The rest of the roads are unsealed. It is almost inaccessible. The only way you can get there quickly is via chartered flight. It is costly to get there.

One of the things that we looked at during that time is the people there. Most of the Indigenous people have all sorts of problems, but in this particular community the people are well organised. The Indigenous people are susceptible to technology. They are willing to accept the technology. That is why, when we had a look at this project, we were more than willing to pump in a lot of effort to get it off the ground. We experienced a lot of problems in rolling out this infrastructure, but what made it successful was that we had cooperation within Commonwealth government, state government, local government and the community and with industry. We were able to roll out an infrastructure there, despite that we did not have enough money. We made the project successful. We have anecdotal evidence of the outcome of this, and I can show you some photos.

**Senator IAN MACDONALD**—Just while you are doing that, is this near Warburton?

**Mr Cheng**—Yes.

**Senator MINCHIN**—Is it wireless?

**Mr Cheng**—No, it is ADSL. We managed to get it at a good price. It took 10 months of negotiations. I will just show you some photos. This was a photo taken last year, then this year. In 2004, with the Sue Gordon inquiry, there was an inquiry into the deaths in custody amongst Aboriginal people. Aboriginal people somehow tend to hang themselves if they are put behind bars, so what has been done during that time is the building of this multifunction police centre. You can see that there is a lock-up which is made of bulletproof glass. There are no bars. During that time, when they were building that MFP, we were building broadband in parallel to support it.

What has happened is that we went back to have another look at this. Last year we took those photos and this year we took some more. You can see what is happening there. The message there is that the lock-up has been empty, but if you have a look at the media broadcasting centre, all the kids, the mums and dads, are using broadband. It kept them busy and they were able to put their stories on the internet. You can see from the website that they have started selling their art through the website, through internet that we provided to them. It is a question of where society wants the people to be: in the lock-up or in a telecentre of some kind, to be able to access

internet and improve their social and economic welfare. That is the message that we learnt from there.

The other thing that we learnt out of this project is that Aboriginal people do not learn things like us. We learn through words, through books. They learn through images, visions, and this is how the internet is helping them quite a lot. If you want more anecdotal evidence, we have more. We are doing a lot of measurements on this, to discern what has actually happened.

One of the things that we have identified is that we rolled out broadband to these communities, but we did not offer them a means to access the broadband. What we have done in WA is collected all government surplus computers and donated them to the lands and helped them in setting up all these media centres. With a little bit of help and money, we were able to come up with this outcome.

**Senator MINCHIN**—Well done.

**Mr Cheng**—I am only citing this as an example. We learnt from this model. We studied the TAPRIC model. We also studied all the subsequent inquiries. That is how we came up with this solution called smart network WA. This is meant to address all the problems we face in WA. There could be some synergy within other states, but we designed this to rationalise all the infrastructure we have, to save some money for the government, and also to provide essential services to the community in WA.

**CHAIR**—Thank you, Mr Cheng.

**Senator IAN MACDONALD**—Mr Cheng, following up on Senator Minchin's questions, there is some sort of a landline out to Warburton. Is it to Warburton?

**Mr Cheng**—Yes. The six communities of Warburton—Wanarn, Warburton, Warakurna, Wingellina, Blackstone and Jameson—are wired up to optical fibre. It is coming from Alice Springs, Northern Territory.

**Senator IAN MACDONALD**—Okay.

**Mr Cheng**—We could not afford to wire it up back to WA because the cost was too high. One of the solutions we came up with was to wire it up from the other states. From there it is the provision of ADSL through copper cable distribution.

**Senator IAN MACDONALD**—Incidentally, there is a good road from Laverton through to Queensland called the Outback Highway—

**Mr Cheng**—It is part of the Gunbarrel Highway.

**Senator IAN MACDONALD**—which we are working on. By the time I am 150, we will have it bituminised. When I drove through Warburton, they had a glass-baking exercise where I got a beautiful glass plate, but that is beside the point. In the rest of the north of Western Australia, particularly, are you able to do the same thing? Is there some sort of a fixed line into places from which you can hum out—

**Mr Cheng**—Yes, we can. But what I am saying is that, instead of putting a blanket broadband coverage throughout the state, or this whole country, we should apply a targeted approach where it is required, not duplicating the infrastructure. It is just a waste of money.

**Senator MINCHIN**—Hear, hear!

**Mr Cheng**—We should go back to the previous study that was done by the TAPRIC report. It talks about a targeted approach to save money.

**Senator IAN MACDONALD**—Which report?

**Mr Cheng**—The TAPRIC report—Telecommunications Action Plan for Remote Indigenous Communities. There were three more reports after that, and they all talked about the same thing. I was surprised that no-one ever bothered to read this.

**Senator IAN MACDONALD**—You said that, with \$130 million, you could fix up those targeted areas.

**Mr Cheng**—What I am saying is that, with \$130 million, we can fix up the bulk of WA. It is not going to be the whole of WA. One of the problems that we face here in WA is a lack of manpower, a lack of machinery.

**Senator IAN MACDONALD**—Yes.

**Mr Cheng**—That is why this is the first stage. What we normally do is roll out the project, review the performance of the project, and modify our next stage of rolling out infrastructure. We do not do a blanket coverage. It is just a waste of time.

**Senator IAN MACDONALD**—From any of your reports or assessments, if you were able to do that targeted approach to where you have identified, what percentage of Western Australians—or preferably Australians, if you had it—would not get that and would have to then, I assume, rely on satellite?

**Mr Cheng**—From my estimation, we are going to cover around 70 to 80 remote communities with a different solution. As far as the broadband is concerned—terrestrial broadband—we can cover up to the wheat belt, Pilbara, Gascoyne, very close to South Hedland and near the outskirts of Broome. That is as far as we can go with the amount of money we have. Beyond that, we will have to do this in the next stage. Based on the practicality of this, we do not have the resource capability to—

**Senator IAN MACDONALD**—What is the next stage then?

**Mr Cheng**—The next stage is to cover the Kimberley region. The reason why we did not focus anything on the south-west is because there is already broadband there.

**Senator IAN MACDONALD**—Yes, okay. But Kununurra would already have some sort of broadband.

**Mr Cheng**—Broadband.

**Senator IAN MACDONALD**—So you are talking about the more remote parts of the Kimberley.

**Mr Cheng**—More remote parts of the Kimberley. As an example, the Kimberley has—

**Senator IAN MACDONALD**—That will do. You mentioned, if I heard you correctly, that satellite does not work in some parts. Did you say that?

**Mr Cheng**—Yes. There are some black spots. We are experimenting on some new technology—a new satellite service which is being used by the US Army. We have rolled that out in around 10 communities up in the Kimberley, and we are doing a trial right now under the Kimberley Broadband Solutions Project. If that proves to be very effective, we will look at it more seriously and be able to roll out cost-effective solutions in more remote communities.

**Senator IAN MACDONALD**—I have zero technical knowledge, but I was wondering why there are some parts of the world where the satellite does not—

**Mr Cheng**—I think it depends on which company you are dealing with. For example, IPSTAR claim that they have country-wide coverage, but in actual fact it is spot coverage.

**Senator IAN MACDONALD**—Thanks for that. I am aware that the Western Australian government looks after Christmas and Cocos islands for the Commonwealth. Have your studies included Christmas and Cocos islands? Can you tell me what sort of broadband they have there at the moment.

**Mr Cheng**—Currently there is no real broadband. They only have satellite services. I am currently in discussions with the federal Attorney-General's Department, and we are looking at this a bit more seriously. But to roll out optical fibre is very difficult because it is 2,000 kilometres offshore from WA. With the smart network, we might be able to do that, because there is a cable coming in from Indonesia and Malaysia around five kilometres from Christmas Island, going in towards Australia through Geraldton and Perth, and that is why under smart network we are going to tie everything together, including the CSIRO Square Kilometre Array—tie those communication services all together to save costs.

**Senator IAN MACDONALD**—It is only about half an hour flying time from Jakarta, isn't it, to Christmas Island?

**Mr Cheng**—Yes. If we can get the money, we can put a junction from the cable five kilometres offshore from Christmas Island and we can link up Christmas Island. Cocos Island is different. Cocos Island is very far, and it is going to cost a lot.

**Senator IAN MACDONALD**—Yes.

**Mr Cheng**—But if we are able to get some more funding, we can wire up Christmas Island.

**Senator IAN MACDONALD**—Do you anticipate that satellites will ever be good enough to give, for example, Cocos Island a reliable high-speed service?

**Mr Cheng**—It depends on how you define ‘high-speed broadband’.

**Senator IAN MACDONALD**—Say 10 megabits a second.

**Mr Cheng**—It is able to do it, but there are problems with cost. To get 10 megabits, you are talking about a lot of money. Just to get two megabits is costing us around 130 grand a year for government agencies, let alone start talking about 10 megabits. There is no way in this world that anyone can afford it.

**Senator IAN MACDONALD**—Well, 130 grand a year is not much when you are thinking of \$4.7 billion.

**Mr Cheng**—We are talking about a dedicated two-megabit pipe. That is the amount of money we are paying now.

**Senator IAN MACDONALD**—Thank you very much for that.

**Senator LUNDY**—To follow on from Senator Macdonald’s questions about the possibility for a spur line of the fibre-optic cable running past Christmas Island, have discussions started around the possibility of doing that? How realistic a prospect is it?

**Mr Cheng**—We had some initial discussions with the federal Attorney-General’s Department, but it is impinging on us getting the smart network. It is all tied together, and if we could not get the smart network, we could not get anything from the federal Attorney-General’s Department.

**Senator LUNDY**—Right.

**Mr Cheng**—That is why we put a lot of effort into coming up with a submission and forwarding it to Canberra in June this year. We were hoping that it would have at least been reviewed, and hopefully we will get an approval shortly.

**Senator LUNDY**—Who would manage that infrastructure and who would effectively be the licensed carrier if you were able to achieve that with a smart network for Christmas Island?

**Mr Cheng**—The initial rollout of the project would be managed by our department. The ownership would go to the individual carriers, who would own that infrastructure, with an obligation to us that they would supply those services continuously for the term of the contract or the life cycle of the equipment. That is how it is going to be panned out.

**Senator LUNDY**—If you are successful with your smart network submission, can you speculate on the likely time frame of the availability of that fibre-optic cable for Christmas Island?

**Mr Cheng**—I would say, based on the current timing, probably in around two years time. I am not talking about mobile and broadband; just to lay the fibres, because it is a long way, coming from offshore.

**Senator LUNDY**—Okay. That is good.

**Mr Cheng**—This would have to be synchronised with the timing for the Square Kilometre Array project, because we need a link from Geraldton back to Perth. Everything has to be tied together.

**Senator LUNDY**—For that Christmas Island initiative to be successful, you would also need the Geraldton to Perth link?

**Mr Cheng**—Yes, to be able to link back. There are a lot of legs on this fibre project.

**Senator LUNDY**—Yes, I understand. With respect to Cocos Island, I can certainly see, as you say, that the satellite connection has been really the only viable way of connecting those islands to the internet. What exploration has been done, from your department's perspective, about access through other satellites other than their current arrangement?

**Mr Cheng**—As far as satellite services—

**Senator LUNDY**—Testing the market, if you like.

**Mr Cheng**—Yes. It depends on who the customers will be or who will be the end user. For government services like education, we normally require at least two megabits for satellite services, but we could not afford a full dedicated two-megabit link. We have to get a contention based two-megabit link, which costs around a quarter of the price.

This is where service quality becomes an issue. A lot of the new contents for education are very bandwidth intensive, and we are unable to fully provide those new contents via the satellite services. It is very slow and it gets frustrating for the end user. That was one of the problems that we were looking at.

**Senator LUNDY**—Do you have an arrangement with the current commercial ADSL service provider that has the 1.5-megabit download arrangement with the German satellite?

**Mr Cheng**—We do not have any arrangement with the current ADSL provider but, based on the Ngaanyatjarra experience, we found out that, before the rollout of the project, people were paying \$120 a month on satellite services. Just prior to the signing of the contract with the provider, the price at that time was \$29.95 for ADSL. This year we had another assessment of this, and the price has come down to \$14.95.

One thing which probably needs to be noted here is that Ngaanyatjarra is a very thin market. There is no competitor, and no competitor in their right mind would be rolling out ADSL in the middle of nowhere just to get \$29.95. It is just not viable. Without using regulation or having to do much, we have been able to lower the price from \$29.95 to \$14.95.



**Senator LUNDY**—But on Cocos Island it is more than \$29.95.

**Mr Cheng**—It is going to be very expensive because of the location. If the Commonwealth is willing to fund the entire project, it can be done. There are a lot of ways of doing it, but at the end of the day who is going to pay for it? That is the question. We can get it down to a metro-comparable price, but there will be a huge capital investment to worry about.

**Senator IAN MACDONALD**—Like what? Do you have a guesstimate?

**Mr Cheng**—We have not had a look at Cocos Island. All we looked at was Christmas Island, because when we had a discussion with the federal Attorney-General's Department, their first concern was Christmas Island.

**Senator IAN MACDONALD**—You are saying the federal department—

**Mr Cheng**—Federal Attorney-General's Department.

**Senator IAN MACDONALD**—Okay.

**Mr Cheng**—I am meeting up with them again next week. I will be in Canberra next week to have a meeting with them to discuss it further.

**Senator IAN MACDONALD**—Sorry, Territories is now with A-G.

**Mr Cheng**—Yes. But a lot of this is impinging on the smart network WA project, if we can get it funded through the government. The other thing that I need to highlight is that smart network WA is designed to be a stand-alone project and it is also designed to complement the outcome of the NBN. It is designed to provide a backhaul to extend the capabilities of the NBN. So it is a very flexible solution.

**Senator LUNDY**—Going back to your point about negotiating down a lower cost for ADSL, what can you point to as being your main leverage to achieve that, because it is quite a significant achievement, halving the price of an ADSL service in an Indigenous community?

**Mr Cheng**—Our main leverage is that we will have this carrot called 'funding grant' to pay for the initial investment of that infrastructure. We might be able to pay for some part of the ongoing costs through government contributions. For example, in Ngaanyatjarra what we have done with all the government agencies who require some presence there is put their ongoing costs on a 10-year contract aggregated together, and that made the business case very viable for the carrier to roll out infrastructure there. That is how we did it. This comes back to the TAPRIC report. Government agencies need to work together. You cannot go alone.

**Senator LUNDY**—Thank you for that. I think it is a really important point, because to be able to consolidate that demand and use the government services for bandwidth requirements to extend a community service is very useful.

**Mr Cheng**—It is a very difficult process. That is why the best approach to this is a targeted approach.

**Senator LUNDY**—Yes. Thank you very much.

**Senator BIRMINGHAM**—The Glasson review has of course been handed down. What response did they give to the smart network proposal?

**Mr Cheng**—This is where I am a bit disappointed. They did not even mention it. I do not even know whether they have read it. I made sure that they received those copies, because I personally posted them. I also made sure that I got a receipt. Based on that 500-page report—I browsed through every single page—I see no reference to it, so I am not sure what they have done with it.

**Senator BIRMINGHAM**—Was there reference to similar types of proposals if not to the actual—

**Mr Cheng**—There was no mention of it. Maybe I am going blind on this, but I have read through just about every single page and I see no reference to it.

**Senator BIRMINGHAM**—Sure.

**Mr Cheng**—That is why this is probably an opportunity for me to highlight that there is a solution there that we could use to complement the NBN, or at least provide broadband services to underserved areas of WA.

**Senator BIRMINGHAM**—Do you have estimates of coverage both within the Perth metropolitan area and into different regions in terms of what proportion of households and businesses may currently be covered?

**Mr Cheng**—I think we would have to base this back on population. The bulk of the Western Australian population is in Perth, and that is around 1.6 to 1.8 million, of which there are around 400,000 in the rural areas, including remote communities. If you divide this further, there are around 200,000 to 300,000 people up in the north-west area. You also need to take note that the bulk of the wealth of this nation is generated by these 200,000 to 300,000 people up in the north-west, and they are not getting infrastructure.

**Senator BIRMINGHAM**—Sure. I understand you have targeted them as a particularly disadvantaged group. In terms of the rest of WA, are there still significant black spots in broadband coverage or do you believe that particularly Perth and the metropolitan area are well covered?

**Mr Cheng**—Perth is well covered but there are quite a few black spots. Most of these black spots are up in the hills and towards the Mandurah area.

**Senator BIRMINGHAM**—What do you propose would be the best way to address those black spots?

**Mr Cheng**—This is where it comes back to a targeted approach. We need to identify those black spots and provide a certain amount of funding, rather than a blanket coverage again, to address those issues. ABG was supposedly the solution to that, but it is not helping. It is mainly

concentrating on certain providers who provide satellite services, and that is where the problem is.

**Senator BIRMINGHAM**—Is that because, rather than dealing with a region or a spot that is a problem, it really is a contractor-to-household—

**Mr Cheng**—I think it is a problem with the copper distribution cable. The copper distribution cable cannot go beyond four to five kilometres for ADSL. Perth is big, all the communities are big, all the suburbs are big, and most of the exchanges were built 50 years ago. It was based on a much smaller population. Now the population in the suburbs has increased, and the copper cable is not meant or designed for that, and that is why you will find there are a lot of new suburbs which do not have broadband coverage. You will also find in older suburbs, with people living in the same street, that one side of the street will not have broadband but the other side of the street will have broadband, because it has already exceeded the range of the copper distribution. It will work, but it will be very slow—similar to a dial-up speed.

**Senator BIRMINGHAM**—Just in that suburban Perth area, do you have an estimate for what proportion falls into those black spot zones or how many households that would be?

**Mr Cheng**—We do not have an estimate on that. What we did a couple of years ago was to have a register, and that register has not been updated. We rely on Telstra now to give us information on where they have rolled out ADSL and we also rely on people to tell us where there is no broadband coverage. That is all we can do right now. It is very difficult to identify the exact location.

**Senator BIRMINGHAM**—Thank you, Mr Cheng.

**Senator MINCHIN**—Mrs de Jong, your government has separately, as I understand it, submitted a list of infrastructure priorities for which it seeks funding from the Building Australia Fund. As you know, the \$4.7 billion which the government is talking about for the NBNs is to come out of that Building Australia Fund. We saw from MYEFO yesterday that this Building Australia Fund is going to be a lot smaller. Does your government, or your department, have a view about the priority that the Commonwealth should attach to this NBN in terms of government infrastructure issues, particularly in this state, given that this NBN could be nearly half what is now a much smaller Building Australia Fund? Where do you think this sits in the list of priorities for Western Australian infrastructure?

**Mrs de Jong**—I am reluctant to comment on that, only because the new government has not really given us a position to answer that by. I would probably err on the side of saying no at this point.

However, whilst I have the opportunity, can I comment further on your questions regarding the regional areas. We have been getting a lot of interest from the big companies in the resource sector—and Anson mentioned that in the Pilbara and in the Kimberley there is a lot of resource development going on, as you would be aware—to put their own optic fibre cabling in, to have this access. We have not done much to go down there, but one of my concerns is that some of these big companies have a lot of money to be able to do that and, if we do not manage it, we will end up having optic fibre cabling running all over the Pilbara and the mid-west. That is just

for noting and possibly further to your discussions with other people coming in throughout your hearing.

**CHAIR**—I have one final question, and it probably leads off your observation, Mr Cheng, about the currently underserviced areas in Western Australian falling as part of the two per cent that will be left out from the 98 per cent promise. Do you have a clear view of who is in the 98 per cent? That is a comment essentially on the two per cent, but have you been able to form a clear view on who is in the 98 per cent?

**Mr Cheng**—We tried to ask that question of people in Canberra and no-one could give us an exact answer. The way we look at this is: WA as a whole could become the two per cent. That is the way we look at it now, based on what we have seen in the media. I think we risk becoming the two per cent casualty of NBN.

**CHAIR**—Thank you very much, lady and gentlemen. Thank you to the Western Australian department for your submission and your time today.

**Mrs de Jong**—Thank you.

**Mr Cheng**—Thank you.

**Senator IAN MACDONALD**—Sorry, as you are leaving—and I appreciate this is a difficult question for public servants—has the government given you any idea of when they may have determined an approach to—

**Mr Grocott**—The new government?

**Senator IAN MACDONALD**—Yes.

**Mr Grocott**—We are in the process of providing the Premier with a detailed briefing paper on all the issues around this topic and also where we may go with our own purchasing power in relation to a concept called the state broadband network, which had some currency over the previous government.

**Senator IAN MACDONALD**—I was really asking if you have any idea when the minister might formulate a publicly available opinion.

**Mr Grocott**—We are hoping before the end of the year.

**Senator IAN MACDONALD**—You are hoping?

**Mr Grocott**—Yes.

**Senator MINCHIN**—Who is the minister for industry and resources?

**Mrs de Jong**—Ours?

**Senator MINCHIN**—Yes, your minister.

**Mrs de Jong**—We have three.

**Senator MINCHIN**—You have three ministers?

**Mrs de Jong**—However, at this point in time my area responds to the Treasurer, Troy Buswell, and his parliamentary secretary assisting him is Barry House.

**Senator IAN MACDONALD**—Who are the other ministers?

**Mrs de Jong**—The Premier and—

**Mr Grocott**—Who is the Minister for State Development.

**Mrs de Jong**—Norman Moore, Minister for Mines. By the end of the year, our department will be broken down into three different departments.

**Senator IAN MACDONALD**—And you are going with the Treasurer?

**Mrs de Jong**—The Treasurer, yes, Troy Buswell. We will be going into what will be called the department of commerce.

**Senator IAN MACDONALD**—So the communications area will be under the Treasurer?

**Mrs de Jong**—Yes, at this point in time.

**Senator IAN MACDONALD**—Yes. Sorry about that, Madam Chair.

**CHAIR**—Thank you, Senator Macdonald. Thank you again.

[10.06 am]

**BUCKINGHAM, Mr David, Chief Financial Officer, iiNet Ltd**

**DALBY, Mr Stephen, Chief Regulatory Officer, iiNet Ltd**

**MALONE, Mr Michael, Managing Director, iiNet Ltd**

**CHAIR**—The committee welcomes iiNet. Welcome, Mr Dalby, Mr Malone and Mr Buckingham. I will do a quick run-through of the committee formalities, given that you were not here when I did so earlier. Firstly, thank you for your time, for your submission and for coming here today. The evidence that you are about to give is public. If at any stage you wish to give evidence in private, there are facilities to take evidence in camera. You may make that request and the committee will consider it.

It is an offence and potentially in contempt of the Senate for any party to attempt to influence or otherwise inappropriately pressure witnesses in respect of their evidence being provided to the committee. If you wish to object at any stage to any of the questions that I or my good colleagues might ask of you, you are welcome to state the ground upon which you would be so objecting and the committee will then consider the appropriate course of action thereafter.

Today is the fourth day of public hearings by the Senate Select Committee on the National Broadband Network. We value the input that you have had thus far and are about to give us in person. At this stage do you want to add to or vary your submission in any way?

**Mr Dalby**—No, we are quite happy.

**CHAIR**—In that case, I invite you to make a brief opening statement, whereafter we will ask you some questions.

**Mr Malone**—We invited David along mainly because he has never seen the Australian parliamentary process at work before.

**CHAIR**—It is splendid, isn't it?

**Mr Malone**—To give you a bit of background, my name is Michael Malone. I set up iiNet back in 1993, and I will go into that in a little bit more detail. That is my first and only exposure to telco, but I have been here 15 years now. Steve has worked in the industry for more than 40 years, 32 years of that with Telstra. He is our head of regulatory now. He used to be head of Telstra's southern division wholesale. David Buckingham joined us in January from the UK. He was with Virgin Media, so he has grown up quite similar to ourselves. Virgin Media is the largest cable company in the UK—I think the largest in Europe. It is about a £12 billion business today and it is quite substantial, offering the sort of triple play that you would be familiar with already. So between us we have been in the industry from a few different angles for some time.

**Senator IAN MACDONALD**—David, I know the house where you live.

**Mr Buckingham**—Mother does not let many people in!

**Mr Malone**—If you would bear with me, I do not want to advertise for the company but I am acutely aware that this is going on *Hansard*, so I would like to tell you a bit about iiNet. The business was set up in 1993. The reason I set up iiNet, and one of the reasons why we are here, was because I did not have any internet access after leaving university. The thought of being left without internet access was very distressing. Most of my friends were online and I needed to be able to keep in contact with them. So I looked at the cost of doing it, and it was about \$25,000 per year for me to get a 14-kilobit link to the US.

**Senator IAN MACDONALD**—This was in Perth?

**Mr Malone**—This was in Perth. As a fresh graduate teacher in mathematics, that was way beyond what the state government was going to pay me. Instead, I moved home, to my mum's house. She is back here as well. It is the only residential home I am aware of in Australia that has 350 phone lines still coming to the house.

But we operated out of there for about another three years and then moved into the city. We have gone national since then. One of the things that I am very proud of particularly over the early years is that we took internet access into a lot of places that did not have it before. We were the first ISP to do it here in Perth, obviously, but we also went out to a lot of regional towns. Working in places like Gingin was a phenomenal experience, where they had simply no access whatsoever and we were able to bring it in there—and Bunbury, Albany, Geraldton, Kalgoorlie and Esperance. Moving over to South Australia, we opened there in 1996. Again, we were one of the first in there, but we lagged a bit there. We were the first, though, to go into the Gawler area and service the Barossa and to open it in Whyalla as well.

Part of our history has been the reason we do this, and it is not just about making money, although I like making money. Our major reason for doing this is to go back to those principles that we started with. It is a passion for this stuff because it works and it changes lives. It genuinely changes lives when people have access to the internet at high speeds and at equitable prices.

It is also about innovation. We are still techs, we are still geeks and we are rather proud of that. So we are out there trying to do new things all the time. It is also about customer service. We believe our sector, despite being called the communications industry, is the worst industry in the world at communicating.

One of the things we take pride in is that we hire all of our staff from hospitality and tourism, rather than from technical backgrounds, and we invest a lot of money in training inside the business to give them the technical skills. We work on the view that it is easier to take people with good communication skills and teach them the technical than it is to take geeks like me and teach them how to speak. It has been a successful formula for us.

I will mention some of the things we have been able to introduce over the last few decades. We did open up our own dial network very early on. We became a registered carrier in 1999 called Chime Communications. But we were able then to be able to take our dial network nationally. On the back of that dial network we were able to install our own DSLAM equipment.

I assume you are all familiar with that by now. Since then, as well, we have added in voice over IP and in December last year we launched naked DSL.

So we continue to try and push the edges of what is possible. Part of what allows us to do that is our access to the technology itself. We do not see ourselves as a techie company. Despite the fact that we like the technology, we know the point of this is to enable people to get access to the internet and what it can deliver. The customer does not care how we deliver that and a mix of technologies in the right place at the right time has proven to be the right formula to address that.

We are neither a Telstra apologist nor a Telstra basher. Some of the solutions that we have come up with over this period have been in partnership with Telstra, often when Steve was on the other side of the table, such as the national dial network, which combined iiNet's infrastructure with Telstra's infrastructure to get a national solution for customers on one phone number.

In metropolitan areas we worked with Telstra to deliver TWE—Telstra Wholesale Ethernet—for backhaul in metropolitan areas. More recently, and oddly enough, we are the third carrier to sign with Telstra with ADSL2+ resale. The odd thing there is that they are selling it to Westnet, which is a pure whole-of-business player and 100 per cent owned by iiNet, but are not yet selling it to iiNet because we compete in infrastructure. So our wholly owned subsidiary is a beneficiary now and can sell ADSL2+ in all the same exchanges as BigPond and that has been fantastic. We can answer some key questions as we go through. We have had many regulatory stoushes with Telstra.

**CHAIR**—Sorry, you have or have not?

**Mr Malone**—Have. Many.

**Mr Dalby**—We have nine actions currently under way and we are considering a 10th at the moment, not because we like to pay lawyers, but because we are prevented from delivering on our business plans. If we cannot deliver on our business plans to serve the customers, then we have to have a look at ways of resolving that. At the moment, Telstra has a starting point of, 'No, we don't want to negotiate. You do what you have to do,' which is a line that they use with us, in terms of going to arbitration and signing up the lawyers.

**Mr Malone**—Hopefully, this will be a theme that comes through. Our major concern with the NBN—and it has been for the last four years, since it was first mooted—is: how does this benefit customers? What is the specific problem that is trying to be addressed with this \$10 billion, \$15 billion, \$25 billion—the moving feast—and how is it going to benefit customers when it gets delivered?

The first of our three main concerns, which we tried to bring through in our submission and we will try to bring through today, is that we are really focused on trying to get the outside-in build. My concern remains that if you start in metropolitan areas and build that out, as Telstra has suggested, in five years, then why would you go further? I know what will happen is that there will be some operational, some technical, some financial reason—whatever it is going to be—and in five years the build will either stop or it will slow down and underserved areas will never be done at all. So if we want to say, 'Let's deal with the underserved areas and build a



single national network,' then it must start in the areas that presently do not have access. Therefore, whoever the winner is incentivised to get it as fast as possible back to the areas that are highly lucrative.

The second point is that we need access to the infrastructure in a way that allows us to continue to innovate. We do not want to become a pure reseller again. That is not just what iiNet is about. I hope we have demonstrated over our history that when we do get access in there we can come up with clever ideas and we will do things that other people might not want to do or might not want to risk doing; we are willing to have a go and play with it.

The third point is fundamental: that everything that gets done here must be done with the customer in mind. Our DSLAM network presently reaches about 4½ million households nationally. We resell Telstra in other areas. We are the second-largest satellite provider in Australia now via Westnet. So we do offer an internet solution all the way out. But the more we are confined to being a reseller, the less we think that will be possible.

As a pure reseller, our belief is that if you expend \$15 billion on this the prices are going to go up for customers. The 50th percentile speed for our customers is 12.8 megabits. We have done a lot of research on this. We have released it publicly. Steve has written a couple of papers. One was around the myth of fibre, where Telstra was arguing that the only way for customers to get more than six megabits was if they went with the fibre-to-the-node network. We pointed out that 92 per cent of our customers were getting over six megabits already. This was three years ago.

More recently, we did price fibre, which asked the real question: 'If you go and build this, what does the customer get and how much extra cost does it add?' Presently, for those more than 50 per cent of customers that are getting 12 megabits or higher in metropolitan areas, they would see their speeds go down and the prices go up under an NBN. I do not see how this benefits the customer or the country in any way. If the problem is to address black spots, we should focus our attention on addressing the black spots.

**CHAIR**—I expect that is a convenient point for me to invite my colleagues to start asking questions, Mr Maloney, if that keeps iiNet happy.

**Mr Maloney**—Yes, okay.

**Senator LUNDY**—You just said 92 per cent of your customers can get six megabits.

**Mr Maloney**—Yes. We have a couple of published papers. They are readily available. They have certainly been quoted in the media, but they are on our website as well. I think we included them in our submission.

**Senator LUNDY**—Yes, I have got a copy of *The myth of fibre*.

**Mr Maloney**—Six megabits is our 92nd percentile, using all of iiNet's customers and all of Internode's customers and combining them together.

**Mr Dalby**—Yes, that was in the attachments. What we do is measure the performance of each and every service. It is not a graph on which we plot and measure customer distance. We know

the latitude and longitude of every customer we have. We know their specific location and we can measure the distance if we want to. But we can gather the data out of our electronics, showing what synchronisation speeds that service is enjoying. So these are measured rather than estimated or calculated.

**Mr Malone**—What we were trying to do is get over this hump. You have all seen the pretty graphs about the fall-off of speed in theory. We wanted to get over that. So here is field data. We have now been operating with the ADSL2+ network since 2003. How does it work in the field? It is not just to do with distance; it is also to do with the grade of copper and other things.

**Senator LUNDY**—That is what I wanted to ask you about: your understanding of the physical copper network. There have been a number of Senate inquiries, which you probably appeared at, about the state of the network. One of the arguments for the need for a fibre-to-the-node network is the degraded state of the copper network and some of the blockages. A couple of examples are the quality of copper emanating from exchanges and attenuation issues. So I am interested in what density of services you are able to provide from the exchanges where you achieve 92 per cent getting those high-bandwidth levels, but I am also interested in your experiences in accessing customers through RIMs.

**Mr Malone**—My honest opinion, having seen many other countries around the world, is that Telstra operates probably one of the best fixed-line networks in the world. It is very easy to bag them. It is very easy to knock them. In many other countries the copper networks have been built in disjointed areas and then pulled together somehow at the end. In this case we have a single national network that has been built and maintained by a very competent carrier and we have never had any issues with Telstra at an operational network level.

Putting that to one side, the network is, in my opinion, appropriate for the time and place. We are presently only running ADSL2+. That is world's best for suburban anywhere. There is a total of only 10 million houses in the entire world that are on fibre to the home and none of them look like suburban Australia. You have got very limited rollouts, obviously, in places like Hong Kong and Japan, but in places like Milan or Paris as well, it is always into high-density, high-rise buildings.

The copper network here is quite sufficient to do ADSL2+ and we should be deploying our first VDSL2 connections within the next three months, as well, into suburban parts of Perth. That will deliver speed of up to 100 megabits if we can get to VDSL2. The major point with the quality of speed you can get is the loss of signal over distance, which is exacerbated by poor-quality copper.

That said, if you cannot hear what I am saying right now, the way I can fix that is by yelling at you louder. You just lift the volume. One of the problems with the copper network has been that if you do that, you get cross-talk or the potential for cross-talk, which can interfere with the analog lines. With iiNet's naked DSL product we do not have that issue because we do not offer the analog line at all. In real terms, you do not have a voice line. It is naked DSL, so there is no dial tone, there is no analog signal. The advantage of that is that we can yell really loudly down that copper line and you are not interfering with anything.

**Senator LUNDY**—Do you couple that with a VoIP product?

**Mr Malone**—Correct. Once a customer has a DSL connection up, you can put VoIP over the top. We include a free VoIP for free national and local calls in there. We are now getting six megabits out to more than seven kilometres. Traditionally, the maximum speed that was regarded in Australia as possible with ADSL2+ was 4.5 kilometres, and that delivered a speed somewhere around three or four megabits. We have shown with naked that we are now able to connect that four or five per cent of the community that failed due to a poor-quality line or too long a line. I know that Internode is doing the same thing. Lab tests with Internode have shown them getting over eight kilometres. I have not seen that in the field yet.

**Senator LUNDY**—Are you able to give the committee some insight into the percentage proportion of customers emanating from an exchange that you are able to provide, for example, your DSL, whether it is naked DSL or ADSL2+ or just ADSL2? One of the concerns that I have is that, for all the data that we have seen over the years, there is a perception that if an exchange is connected, then everyone on the exchange can get that service, and that is just not true.

**Mr Malone**—It depends on the nature of the exchange.

**Senator LUNDY**—Can you tell the committee a little more about how that works in terms of installing your own DSLAMs into exchanges and what options you have and what proportion or percentage of customers you can realistically reach as a competitor in that market space?

**Mr Malone**—If we compare metropolitan exchanges with regional, the issue in regional exchanges is long loops.

**Senator LUNDY**—So it is a distance issue?

**Mr Malone**—It is simply that customers are sitting five, six, seven, eight kilometres away from an exchange and they are still being serviced on copper. In the metropolitan area, the issue is rather technology choices made by Telstra during the eighties. They were very smart technology choices for the time. A lot of people blame Telstra for inserting CMUXs and RIMs.

**Senator LUNDY**—And all you needed was 2.4 kilobits and a fax line.

**Mr Malone**—Correct, but these things delivered what was required then, so the thing you end up with in Perth terms is CMUXs, subexchanges and RIMs—all effectively the same thing, just boxed differently. In all cases, the typical way it will go historically is that you have an old suburb, it is fully populated, and then someone opens a new estate just outside the old one. Telstra looks at this and goes, ‘Are we going to run copper all the way out to that new estate? No, we’ll run a piece of fibre out to that new estate and put a mini-exchange out there,’ then they service everyone on that mini-exchange with copper, which is perfectly good for analog services and voice services.

Unfortunately, it was done a lot in some of the northern corridor suburbs in Perth and in large parts of Western Sydney and Melbourne, so you end up with these RIMs. In a typical exchange in Perth, for instance, or Sydney, we are hitting well over 96 per cent of the households. In some areas such as Trigg—and I am sure Senator Bishop would be acutely aware of this—and Hamersley, Perth suburbs that grew fast on the fringes, you have places where as high as 30 or 40 per cent of households cannot get ADSL.

The response to this by the previous government, which has been continued by the current government, has been the metropolitan black spot program. You go into those mini-exchanges and you stick in a DSLAM. A mini-exchange has all the same attributes as a real exchange: there is copper-to-copper finishing there, so you just go and put your DSLAM there and, voila, those people become live. So places like Trigg and Hamersley in Perth have been treated by that over the last three years.

**Senator LUNDY**—I want to drill down a bit there, Mike, for the committee's benefit. My understanding is that the physical nature of a RIM precludes large installations. For example, if there were 100 per cent demand for ADSL in that estate or in that new suburb, there is no physical way you can install that many DSLAMs. Some of these RIMs service up to 1,200 customers.

**Mr Dalby**—We are talking about four per cent of the total population in Perth unable to get—

**Senator LUNDY**—Sure, but they are the four per cent that email me.

**Mr Dalby**—That is right.

**Senator LUNDY**—So I am keen to understand how you experience it as a carrier competing with Telstra. Telstra owns these RIMs. Have you ever installed a DSLAM into a RIM?

**Mr Malone**—We have jointly done an access dispute with Internode in South Australia. They are looking for what you would call subloop unbundling, which means going into one of those RIMs and putting an access dispute in there.

**Senator LUNDY**—Have you achieved that?

**Mr Malone**—No. It has been two years now that that has been running. We as yet do not have a result on it.

**Senator LUNDY**—So you do not have a DSLAM in a RIM in the country?

**Mr Malone**—No. We are a reseller.

**Senator LUNDY**—You resell?

**Mr Malone**—Using my own family, my two brothers are on RIMs. They are being resold services. If I could find an excuse to put a DSLAM into a mini-exchange in Hocking, I would. Note that the reason here is not—

**Senator LUNDY**—I suspect 'permission' is the word you are looking for.

**Senator MINCHIN**—The question is: is it physically possible?

**Mr Malone**—I was going to say, with respect, that there is no technical or physical reason that this cannot be done. There are two blockers to it. The first and obvious one is financial constraints and Telstra not letting us in. The other one is the simple question: how do you get

them out there physically? How is the council going to feel about seven competitive carriers all having cabinets next to each other at a RIM in the suburbs? The cabinets are about half the size of this table. You can do them underground, but it increases the cost threefold, and increases operational expense as well. So in real terms, if you are on a RIM, unless it is a large RIM—and they do exist, where you have thousands of homes sitting on the end of a subexchange, but typically they are only a few hundred homes—it is not commercial for more than one party to go there.

**Mr Dalby**—We know there are some exchanges with 20 or more RIMs in that one exchange area, in the metropolitan area.

**Senator LUNDY**—That is true. You may be able to help me here. My understanding of it is that there are constraints currently in the number of DSLAMs Telstra install in a RIM. For example, even if you wanted to resell through a DSLAM-enabled RIM, it is difficult, because if Telstra are not already selling those through their own retail products, my experience from constituents is that Telstra use a waiting list to place customers on, effectively precluding competitors from reselling via a RIM. Can you tell us a bit about iiNet's experience in reselling through a DSLAM that is installed in a RIM?

**Mr Malone**—What you are describing there is no different from capped exchanges themselves. We have certain exchanges in Australia—there are about 20 now; oddly enough nearly half of them are in Perth—that are capped exchanges. There is simply no space to be able to put any more equipment in there.

**Senator LUNDY**—It is a physical constraint?

**Mr Malone**—It is literally full. Our experience has been that the Telstra network people are very good. Half our networks team used to work in Telstra, so we do have those relationships. They are not lying. It is not a game. The reality is, the exchange is full.

**Mr Dalby**—At the same time, they are not particularly creative about finding a solution to the problem,

**Senator LUNDY**—That is a very polite way of putting it.

**Mr Malone**—The way you can fix it is to build more space. You can build onto the exchange. There is no issue with that. The way the regime works is that if we want to extend an exchange like Ballajura, then we pay for the entire extension. I am not talking about a little box. We literally knock down walls, put in a new wall and seal it all up. Then Telstra treats the amount of money we spent on that as a credit and we earn it back as ourselves or other parties get access to that new space. It is quite a fair regime in terms of who is taking the capital risk.

**Senator LUNDY**—We have heard evidence previously—and I am conscious that I am taking a lot of time here—that other carriers have found that, where Telstra have said there is no room or there is some kind of physical constraint, that in fact was not the case, and they think that some of those push-backs from Telstra, whilst not breaking any law or the Trade Practices Act, are not genuine and have acted as a constraint on their business. Can you comment on that?

**Mr Malone**—I will go back to what I said before. I do not see any malicious intent by Telstra here. Our experience there has been that for the network guys, like everyone else, the principal requirement is to protect the integrity of their copper. If you walk into an exchange—and it is really worth a visit in there—there is nothing like seeing 20,000 copper lines lying in trays, then remembering that every one of them has to be patched to the right line, the right carrier, everything like that. These guys are fanatical about it.

About half the exchanges that were capped were removed from the cap list earlier this year. We worked with the Telstra engineers to achieve that, and largely it came down to physical inspections of the exchanges, identifying equipment that had been deprecated, such as the old ISDN equipment and the old OnRamps.

**Senator LUNDY**—So they pulled out old equipment and that freed up space.

**Mr Malone**—Correct. Again, I do not see any lying or deceit by Telstra. The exchange was full. As Steve said, perhaps they could have been more creative about how to remove it. The ACCC has said that they ought to be the one in the future who decides whether an exchange is full or not. While we had no problems working in partnership with Telstra, I suppose that is an appropriate hurdle before an exchange can be closed. The same applies to your subexchange or RIM. If a RIM gets full, the answer is to build another box right next to it. It is literally a little exchange, so all the copper is coming in there and then there is fibre going out the back. You can build another little box next to it and get access to the same pieces of copper.

**Senator LUNDY**—Can you get access to the bandwidth available on the piece of fibre, though? Aren't there access issues in relation to that?

**Mr Malone**—There are. We are probably more interested in this than anyone. Perth is the only state where anyone other than Telstra has significant market share to be able to justify a build at the RIMs. iiNet has about 35 per cent of the households in Perth on our network. It is also the only state where Telstra is not No. 1, and we are very proud of that. In other states Optus would be the highest, and their penetration would be a range between 12 and 14 per cent. That is subcommercial. We are very interested in this question because we look at a fibre-to-the-node build and—

**Senator LUNDY**—So is there an access dispute at the moment over the fibre between the RIM and the exchange?

**Mr Malone**—Fibre has been declared for five years now, where it is—

**Senator LUNDY**—To the subexchange?

**Mr Malone**—There have been no successful disputes on the fibre anywhere as yet. They have just never been a priority for the commission. Is that fair?

**Mr Dalby**—We lodged an access dispute in 2005, and it went nowhere. I withdrew it, because there was no expectation that it would ever progress anywhere.

**Senator LUNDY**—I have one more question about transposition in relation to small pair gain systems. What is your experience in requesting transpositions from Telstra and what conditions do they impose on that activity to get someone onto ADSL?

**Mr Malone**—From a customer point of view, it is literally throwing darts at a dartboard. The way we have handled this—and unfortunately it is the process—is to simply keep on resubmitting a request every month. Sometimes it can happen in the first month and sometimes it can be years later. It is very hit and miss. Again, pair gains were a smart solution at the time.

**Senator LUNDY**—Yes, we have had the full history on pair gains. But it is a very practical problem for people on a small pair gain system.

**Mr Malone**—Yes.

**Senator LUNDY**—They want to be your customer but, unless Telstra makes that change to the way their copper is configured, they cannot become your customer, can they?

**Mr Malone**—As you have pointed out—and I think you are intimating this in there as well—one of the techniques we have used is to sign the customer up with BigPond and then, when the contract is over, switch them back to iiNet. Oddly, that tends to get a faster result for the customer.

**Senator LUNDY**—It is a serious breach of the Trade Practices Act by Telstra to do that.

**Mr Malone**—Again, it is not literally anyone in there maliciously making this happen. The simple reality is that the people in BigPond have better relationships with the people in the technical areas. So they can call up their mate John down there and ask him, ‘Hey, is there something you can do?’

**Senator LUNDY**—Can’t you get John’s phone number?

**Mr Dalby**—John would not talk to us.

**Senator LUNDY**—No. Thank you very much. That was very interesting.

**Senator BIRMINGHAM**—Gentlemen, thanks very much for your evidence today. It has been very informative. To start with, I have a very basic question, quite critical to the need for an NBN. If you were setting the framework yourselves, would one actually be built?

**Mr Malone**—Can I give you two answers? The first one is, no, I do not believe that the proposed NBN is the right solution for Australia. That is my honest opinion. Without wanting to sound partisan on this, I kind of liked the OPEL solution. I must admit, Senator Birmingham, I am not sure which side of politics you are from, but I thought that—

**Senator BIRMINGHAM**—The good side!

**Senator IAN MACDONALD**—We’re all the good side, except for Senator Lundy, and she’s not too bad!

**Mr Malone**—My point was that, in relation to OPEL—forget about whether or not it should have been awarded to Optus or how that should have been done—what it was suggesting was that you use the appropriate technology to address each problem, and in my opinion that was the right thing. You use fibre to the node for the cities and the very large regional centres, ADSL2+ with increased capacity for people that are just outside those areas and then something like a WiMAX or a wireless or a 3G, or whatever it is you want, for the infill to get you up to 96 per cent. Unfortunately for those people that are outside the power grid, satellite is usually the only option. Again, we kind of like that.

As I said, I am a geek. I like the idea of everyone in this country having 100 megabits to their home. From iiNet's point of view, we do not really care that much. Two years out from now, we are dealing with a fully commoditised, ubiquitous, high-speed network. Whether it is ours, Telstra's or the NBN, it does not matter. In two years from now the fact that we have our own infrastructure and we can do ADSL2+ is not going to matter. So can everyone else. If this is going to be built, though, I would rather that the rules were determined by the government before you called for teams to come to the field. At the moment that is what we feel has happened. The reason there are so many arguments is because, in an international context, we have put the cart before the horse. There are four other jurisdictions in the world that I think are leading the way in this, and they have all gone by way of setting policy first and then calling for bids.

**Mr Dalby**—We are talking about the Netherlands and the UK, and even New Zealand now, and Singapore. There is an attitude difference between the carriers that are involved in the process. If you take the Netherlands, for example, they are actively talking to the rest of the industry and saying, 'We'd like to close exchanges down but you've got your DSLAMs in. How are we going to handle this? How are we going to migrate your customers? What will be the infrastructure? How will it work? Where will we put it? What's the cost-sharing methodology going to be? What are the technologies we're going to deploy?'

**Mr Malone**—It is correct incentivisation as well. In the Netherlands case, the fixed-line owner was being destroyed by the cable operators. Rather than keep on losing market share, they went off to all their carriers like us—the ones who operated out of their exchange—and said, 'What are we going to do, boys?' and pulled together a new plan. This was done completely without government intervention. In the UK the regulator wielded a very big bat to ensure that there was true operational separation. In New Zealand and Singapore the government took the lead and said, 'This is a national interest issue. This is how it's going to be.'

**Mr Dalby**—But it would not have happened in the UK without the management embracing it and saying, 'Right, okay, we've had 20 years of fighting with the regulator.' A change in the upper management said, 'That's been value-destroying. There has to be a better way. How do we embrace this?' and they did a deal. Sure, there was a big stick being wielded, but it would not have progressed to where it is today otherwise. Again, it is more of a cooperative industry without that management change.

That is very interesting. I think that is a key to the whole process. It is very evident that there is no hidden agenda on Telstra's part. They are very clear; they are very open. It is 'shareholders, shareholders, shareholders'. They are focused on profits. They are not focused on staff, as we have seen with recent disputes with their staff. They are not interested in their customers—they



have talked about wanting to increase prices and charge premium prices. They are certainly not interested in the industry—they have made that very clear repeatedly. They are not interested in the bureaucracy and the regulatory regime—they have made that very clear. And they are not interested in public policy. They have put the challenge straight back to the government: ‘We do it our way or we’re not playing. We’re not going to bid.’

So it needs an attitude change, it needs a behavioural change, if the current regime is to move forward. The current regime does not work satisfactorily, otherwise we would not have the 30 or 40 access disputes that are in place today. They did not exist five years ago—there were none on the books.

For me, the analogy that I have been wrestling with is: if this was something else, how would it have been dealt with? If this was education—if we said, ‘There are a lot of people out there that don’t have access to good-quality education, that don’t have access to schools or libraries’—would we say, ‘Let’s put a tender out. Let’s get rid of all of the education networks. Let’s get rid of all the schools that we’ve got today. Let’s pump billions of dollars into it and give everybody a brand-new school and, in the process, destroy all the private schools as well as the public schools’? No. We would say, ‘Where are they missing out? Who’s missing out? Where is it? Where do we need to pump the money in?’, and that is our approach.

This is what we talk about when we talk about roll-in. Let’s identify where it is missing. Let’s have a look at the RIMs and the black spots in the metropolitan areas and come up with a solution that addresses the problem—not, ‘Okay, everyone should get a new one, regardless of what you’re getting today.’ The approach that is being taken does not make sense to me. In the absence of any clear policy from government, and leadership there, as to how it has to work, it is like throwing it out there—‘Let’s open the stable doors and hope some of those horses get to Flemington and one of them races and wins. Let’s cross our fingers and hope something good happens.’

**Mr Malone**—It is notable that the fibre-to-the-node network in New Zealand was bipartisan, and the solution was argued for some years. The regulator did a lot of investigation; it was sometimes frustratingly slow. We were operating in that market then. But eventually, when the solution was decided upon, it had full bipartisan support, so the possible change of government in the next month is not going to change that policy. We have agreed on what the rules are. We have canvassed the whole community and worked out what needs to be done, and then we are out there doing it. That, to me, makes sense. Telstra could then make a commercial decision, if the government said, ‘Here’s how it ought to be. Here’s how we’re going to deal with this problem. This is the solution, the way it’s going to be structured. After seeking lots of input from industry and looking at global issues, this is how it’s going to be done.’ Once Telstra knows the rules, it can decide if it wants to play or not. But at the moment we are arguing about rules, not about who is going to implement them.

**Senator BIRMINGHAM**—Mr Malone, you indicated that, in a horses for courses type approach of mixed technology solutions, fibre to the node could or probably is the best or most likely solution for metropolitan and built-up areas. Is that achievable in a competitive environment or does that have to be a natural monopoly that therefore requires regulation?

**Mr Malone**—From a physical point of view, it is not actually required to be a monopoly. There are certain components of it that need to be, but again I will use Perth as an example. It is technically and commercially possible for there to be two fibre-to-the-node networks in Perth, simply because there are two parties here that have sufficient market share to be able to do it.

We do not speak for TERRiA. We are a member of TERRiA but we do not speak for TERRiA. But we note that one of the things TERRiA is calling for is overbuild protection. The reason they need that is because otherwise the commercial case does not stack up. I will take that back a step and say that the commercial case does not stack up unless you force everyone to use it.

We have drawn parallels with the cross-city tunnel in Sydney. This has been a great infrastructure, which is really fabulous for Sydney, but no-one wants to pay for it today. This is very much the same thing here. If you put out two fibre-to-the-node networks, even in Perth, you will end up with a dramatic increase of cost, in the short term at least. If we were going to do a fibre-to-the-home network across Australia and you guys wanted to pay for that, that is a near natural monopoly, in that it costs about \$3,000 for each house passed with fibre and about \$3,500 for each house penetrated with fibre. They are additive. So the higher penetration you get, the lower the cost per household.

That is the sort of thing. You cannot duplicate that. The payback on it is too long anyway. But if that happened, then you would want to make sure that there was a very clear open access regime so that people could compete with different products across the same infrastructure.

**Senator BIRMINGHAM**—Left to market devices, in a sense, if government were only stepping in to assist in the underserved areas and generate industry solutions, you would see a world where there would continue to be exchange based services in some instances, in other areas fibre to the node with one carrier, in others where it is stacked up you would see multiple carriers move in, and that this would evolve.

**Mr Malone**—We have been quite open about this: our belief is that government should bugger off and let industry get on with doing what it does best. There is a social requirement here. There is a social obligation that people that cannot get access should be assisted to get access where it is not commercial, and we fully accept that. We are only a small carrier. We do \$400 million a year. We have got 500,000 customers nationally, but we have about seven per cent market share. Even so now—we are very excited—we have run out fibre into the suburbs in every one of the capital cities around Australia. Every step, every year, we are getting closer to the customer.

We could prove conclusively to you—and I know Senator Lundy would remember this—that the fastest speed you could possibly get off the copper network in 1998 was 64 kilobits and Shannon's law demonstrated it was impossible to go higher than that. Two years later we were delivering up to eight megabits on ADSL. It changed all the rules: 12 megabits by 2002; up to 24 megabits in 2005 onwards. VDSL2 is now in the labs. We are going to have people getting 100 megabits in suburban parts of Australia within the next few months and we are starting to use naked DSL to blast higher speeds out further.

I guarantee to you that the industry will deliver the speeds required for the technology that is coming. If you want e-health, if you want e-medicine, if you want set-top boxes and TV, that is coming within months.

**Senator IAN MACDONALD**—Mr Malone, why are Telstra going to spend \$15 billion—\$5 billion of it ours, or whatever they are going to spend—to do what you say you are already doing in the major consumer areas?

**Mr Malone**—One of the problems with this whole thing is nobody wants to build this.

**Senator IAN MACDONALD**—Yes.

**Mr Malone**—The only thing that the industry agrees upon is that it is a total waste of money. It is the only thing we all agree on.

**Senator LUNDY**—But isn't it the case that you would not be able to achieve ubiquity on the existing network? What you are saying is quite true and you can get reasonable percentages, but you cannot get 100 per cent on what you are describing.

**Mr Malone**—We can get 100 per cent technically and physically. The issue is, 'Is it commercial?' There are those places where there are only a few houses, or a few dozen houses, and you simply cannot get to them.

**Senator IAN MACDONALD**—That is in the metropolitan area?

**Mr Malone**—Even in metropolitan areas. Once you get outside the regional centres in town, the truth is that no-one is going to pay for fibre to the node to a single household that is seven or eight kilometres away from the nearest town site. Not with all the best—

**Senator IAN MACDONALD**—But Telstra are a pretty sharp company.

**Mr Malone**—Yes.

**Senator IAN MACDONALD**—They are a very profitable company. Why are they doing it, if you are saying they do not need to?

**Mr Malone**—Because they do not want us to do it. This is the whole point. The only reason we are a part of the TERRiA bid is because, if Telstra win this, it would be a complete disaster for us and for the country. They are going to increase wholesale prices dramatically.

**Senator IAN MACDONALD**—You say Telstra are going to spend \$15 billion of their own money—

**CHAIR**—To keep you out?

**Senator IAN MACDONALD**—to keep you out?

**Mr Malone**—It is very easy to get a commercial case: \$15 billion does not get an 18 per cent return. Citibank, Macquarie and others have shown this. On the other hand, if you compare it with the scenario where TERRiA won and took away all of Telstra's access and they only started getting a regulated return on that, then it is very easy to get an 18 per cent return against that case. So Telstra is looking at this now and saying, 'Is this the best place for them to spend \$10 billion of their own money?' No, that's crazy. Look at the returns they are now getting on their own cable network, which is unregulated, and on Next G, which is in a competitive infrastructure, and they are doing fabulously well. Even in fixed line, completely against global trends, they are getting north of 50 per cent market share on new sales and they are increasing fixed-line revenues. Nowhere else in the world is that occurring. So Telstra is doing really well. Why would they go and drop \$10 billion into this market?

**Senator IAN MACDONALD**—Why? Just to get rid of you?

**Senator MINCHIN**—That is what he is saying.

**Mr Malone**—They do not want to do it.

**Senator MINCHIN**—They do not want to either, but the bid is out there.

**Mr Malone**—No-one wants to do it. The reason they have to do it is because there is a bid process out there and there is a government saying, 'This is going to be built.' If you are in that situation, you do not want the other guy to come in there and take it over. Why is iiNet supporting the TERRiA bid even though we clearly think the whole process is a farce? Because if we do not, Telstra gets a single run at this and gets to charge whatever they want.

This comes back to my earlier point. I will guarantee to you that, if Telstra wins this, unless there are some ridiculously hard regulatory requirements, they will not go beyond metropolitan Australia, because there is no commercial case for them to do so. Rollout in commercial Australia, you take 50 per cent of the copper lines that are no longer with Telstra and you move them back to Telstra.

**Senator IAN MACDONALD**—But the government should surely be saying, 'The \$5 billion is to start out in the busy and work in.'

**Mr Malone**—If you could put that one requirement in—remember, there are no rules yet. None.

**Senator IAN MACDONALD**—Yes.

**Mr Malone**—But if you put that single requirement in, you would find people in the industry like ourselves saying, 'That's great,' and you would also find Telstra refusing to bid because, as soon as you put that requirement in there, it becomes non-commercial.

**Senator IAN MACDONALD**—Would TERRiA bid?

**Mr Malone**—For TERRiA, we start off with zero. So for TERRiA all new revenue is a plus in there. The issue on TERRiA's side is: is it a good investment of SingTel's cash? Quite possibly

not. Can we get access to the debt that we need in this market? That is questionable. There are real issues about whether or not TERRiA can get up a successful bid. I think the case is there if we thought of this as an infrastructure fund with a 12 to 14 per cent return. But even there, by the way—and the gag order does not apply when I am talking to you guys, does it? Is that right?

**CHAIR**—You need to consider that.

**Senator MINCHIN**—I was going to ask you about what your legal advice is on the gag order. We appreciate your honesty in all of this.

**Mr Malone**—Our legal advice on this has generally been, ‘If Telstra does it, we can too,’ because the government is not kicking Telstra out of the process. The only person in the entire country that appears to be bound by the gag order is Senator Conroy, as far as I can see.

**Senator BIRMINGHAM**—Only when he is answering questions from us.

**Mr Malone**—So our understanding is that we can talk as much as we want about the policy framework but we cannot talk about our bid specifically, hence why I asked the question: ‘Am I allowed to?’

**CHAIR**—Yes. To clarify that, in respect of the evidence that you are providing before the committee, whilst it attracts parliamentary privilege, that is totally independent of the gag order or not. So we are not able to say to you that that can relieve you of any obligations you may have under the gag order. So you need to consider that in your own—

**Senator IAN MACDONALD**—We are not able to say the opposite either.

**CHAIR**—No, that is right.

**Senator IAN MACDONALD**—You take your own legal advice.

**Mr Malone**—The point I will make is that, for any random party that was going to go in there and spend \$10 billion plus on building this, it is impossible for prices to come down for consumers ultimately. Unless there is a donation by government to reduce the cost of capital, the capital has to be paid back with interest. Therefore prices go up for punters. Let’s say for a random party that was wanting to get a 12 per cent return on their investment, that party might be increasing customer prices by \$20 to \$30 a month. For someone who was seeking to get 24 per cent pre-tax, then your prices might be going up more like \$40 to \$50 a month.

This would be much more severe for customers of ours, for instance, that are on naked DSL. Remember, they are your middle suburban voters that are out there now. We are signing up more than 1,000 a week onto this product. They are going to see their costs nearly double. Again, we come back to the customer lens as the one that should be focused on this.

**Senator LUNDY**—Can I ask you a question about the issues you have with access to the network, because you are advocating maintaining the current network; being allowed to proliferate as a company and innovating and providing new services on effectively the existing network. What specific changes would you make to the access regime and the regulatory regime

to offset what are the obvious constraints you have described on your business case under the current regulatory regime?

**Mr Dalby**—One of the shortcomings of the existing access regime is that there is no price setting power within the regulator. The ACCC cannot say, ‘We think it should be this.’ We have to have a dispute with Telstra first which means we have to, in good faith, at least attempt to negotiate a commercial resolution, and then we have to present evidence that those negotiations have failed. So before you can even get to an arbitrator, you have to go through some time-consuming processes.

It is fortunate that at the moment Telstra says, ‘We’re not interested. Do what you have to do.’ That cuts that fairly short. We then present to the ACCC the evidence that we have a dispute. They will go through a two-year process, which is fast-track, to come to an arbitrated result, which they call a final decision that in fact only lasts for about six months. We can argue that Telstra wants to charge us X; we think it is ridiculous. The ACCC will examine the evidence. They will get specialists, experts, economists, engineers, all the rest of it and say, ‘No, it should be half X.’ And that is a determination.

That can then be tested in the Federal Court or through the Australian Competition Tribunal. It can then be tested before the full bench of the Federal Court, and Telstra is doing that. So even though a determination is given that is said to be a final determination, it is not final. When was the \$17 million decision?

**Mr Malone**—We lodged our dispute for LSS—line-sharing services—in late 2005.

**Mr Dalby**—Here we are at the end of 2008 and we have just had the confidence that Telstra’s appeal has finally been rejected and that decision is now made.

**Senator LUNDY**—In the Federal Court.

**Mr Dalby**—But the determination really is a retrospective determination, so it looks back at the period that you have been charged for these services. The decision in that case was a \$17 million decision in our favour that said, ‘You have been overcharged for that period.’ Then, even though it is a final determination, it expired six months later, so the process starts again. There is no certainty for our investors that we have a fixed rate for the access to those declared services. That is just a never-ending process. We are still in dispute over that, even though it has already been through the Federal Court, the full bench, and Telstra has also tested certain questions in the High Court and been rejected by the full bench of the High Court. We are still in a process of dispute.

For me to answer the question—sorry, that was a bit of background—that process is dysfunctional. It is consuming a huge amount of time and cost and creating a huge amount of uncertainty in the industry. The ACCC ought to have a price setting power so that, when they make that determination, that applies to the whole industry, because I can get a determination and Michael thinks it is great and the board thinks it is great, but that does not apply to Internode or Optus or AAPT or anybody else that is acquiring that access. That is a private determination and may not even be published.

What it needs instead is that, if you go through that two-year or three-year process, at the end of it, that is it. It has been tested through the legal system and there is a determination made and that is applicable to the whole industry. That is just one aspect of the whole process that is dysfunctional today and could do with repair.

**Mr Malone**—If we look at Steve’s point there, the impact on investment is a really important one. Certainly our share price is in the toilet and, as a large shareholder, that worries me. But most of this has been the case since late 2005 because there has simply been this whole cloud of uncertainty across the industry. The reality is that, any of the scenarios going forward, we are pretty happy with, but shareholders will not return to this until they have the confidence to invest back in the sector.

That, again, comes down to the government coming forward—and I mean all of you; both sides—and saying, ‘Here is the rule book, guys.’ Even if the news is bad for us, at least our investors can make informed choices then. I think that will see money returning to the sector. Telstra often holds up this idea that regulation has failed, that it is scaring investment away, blah, blah. I do not believe that. The real reason investment is being chased away right now is because of this uncertainty, which is largely initiated by Telstra continually challenging every decision.

**CHAIR**—Mr Malone, are you suggesting that delivering certainty through some sort of bipartisan approach should be attempted at the expense of progressing the process? Are you saying that it would be acceptable to have a delay to try and get a certain regulatory environment, for example?

**Mr Malone**—I would rather a deferred solution than a stupid one. At the moment, you are delivering me a stupid one.

**Senator BIRMINGHAM**—You said, I think in the opening statement, that under the NBN, assuming that it is built, assuming say by Telstra, you would still want access to the infrastructure; you would not want to just become a wholesale seller again. Why? What do you envisage you will be able to do with the infrastructure under a fibre-to-the-node network?

**Mr Malone**—I do not know yet, and that is really important because the solution that is being rolled out now is technology dependent. Again, the rules may change all this. The infrastructure itself, we are quite happy with. It is a sensible solution for the city at the moment, but imagine a situation in a few years from now where a wireless local loop becomes seriously real. I want to be able to get access to the nodes then. I have got the commercial requirements to be able to do so. We have enough households in Perth that means we can do it. That means we could put our fibre all the way out to the node, get access to the copper there, and deliver some really innovative services over that.

If we are all pushed back to the city and become resellers where we have to collect in the city itself, that is the worst possible outcome. It is more likely that, at the very least, we would be able to collect at the exchanges, which preserves all of our suburban fibre networks. At the moment, if I wanted to go out further with fibre, if I wanted to push closer to the home, that is becoming a dangerous investment. If I were looking to go from the exchange out to estates, that may be stuff where in a year I will not have access to any of those nodes. It will be taken away.

**Mr Dalby**—Can I add to that? One of the important aspects of that, the difference between being a reseller and an access seeker and a product developer in your own right, is the matter of innovation. If we are all reselling Telstra's wholesale product, then it is just a different brand on the same product. Under resale, our customers would never have had access to naked DSL. Under resell, our customers would never have had access to full-speed DSL. So what we have seen is that the market has followed the innovations. We are proud to have been part of that innovation, but there are others doing great jobs too.

We would not see Telstra selling ADSL2+ today if it were not for others developing that first, so they are a follower, and they are slow. When they get this up to speed, they are great. They do a great job in the market, in the retail sense. Some of our customers actually get 24 megabits per second. We would not be seeing customers getting that speed today—from us, from Telstra or Internode, or anybody else—if it were just purely resale. There would not have been a resale. The original digital compact offered a resale product at 1.5 megabits. That was the way to the future. That was their vision for the future: wholesale services, this is what they call open access, 1.5 megabits per second.

We do not want that. We want to develop our own products, work out what our customers would benefit from, package it up and sell it. We cannot do that with resale.

**Mr Malone**—We mentioned before that we want to be able to offer IPTV and other solutions like that next year. Being able to control the end-to-end user experience is required for that, so you have to have quality service. I cannot have a situation where you are watching Discovery on your set-top box and your daughter starts downloading a file and it stops your TV channel from working. We need to manage the priorities across that network. As a reseller, that is not possible.

Voice over IP has a bad rep in Australia. Again, that is largely because there is no QOS running across the wholesale network with Telstra. I am not blaming them for it. It was never designed for that solution. On iiNet's network, we can prioritise voice over IP calls ahead of everything else, so you will never have a situation where your VoIP call is anything less than CD quality. Again, I am not pumping our own products. I am just saying that, when you have got access to the infrastructure, when you can play directly down there, you can do clever stuff. Some of it will not work, and we fail far more often than we succeed with a lot of these things that we are trying out there; but that is a necessary part of innovation. You have to get out there and try all these things. We will not have the ability to do that if we are all just pure resellers of a bitstream service.

**Mr Dalby**—Interestingly in the market for naked, even we thought of it as a niche product. We thought we would sell a few thousand. Now it is our mainstream product. We have been pleasantly taken by surprise.

**Senator LUNDY**—So there is the demand for the service.

**Mr Dalby**—Yes.

**Mr Malone**—It also shows that a lot of this is price sensitive as well. One of my real worries here, particularly in Australia in a softening economy—we all know about that—we are now



moving into a process where the government is suggesting that they are going to increase prices for no benefit. This will decrease participation in the broadband community. That is a bad thing.

**Senator MINCHIN**—I have some particular questions, given your role with TERRiA. You indicated that you thought in the current climate TERRiA might have difficulty funding a bid. Is it iiNet's intention to contribute to the funding? What is the basis of your participation?

**Mr Malone**—iiNet has certainly, without going into the specifics of the bid—

**Senator MINCHIN**—No, I do not want to get you into trouble.

**Mr Malone**—I think that any big process, whether it is the government or TERRiA or Telstra, ought to take into account the value of the existing infrastructure and in some way compensate or assume that infrastructure. Certainly if iiNet were contributing to any bid, a part of our contribution would be to be vending in our own equipment as appropriate. As Senator Lundy said, space in the exchange is valuable in itself. We have long-term contracts and we own that space. I know it is rented space, but they cannot get rid of us. So that space itself is intensely valuable for any bidder.

**Senator MINCHIN**—And expertise as well.

**Mr Malone**—In terms of cash, we are a small business. Our market cap is less than \$200 million. Our capacity to build a \$5 billion network or contribute meaningfully is pretty slim.

**Senator MINCHIN**—On the issue of how the government contributes to this in the end, again, as you have properly pointed out, the whole thing is very vague, and one of the things that is also very vague is the government's participation. Before the election, they indicated that this would be 'a 50 per cent joint venture equity model, with them getting a commercial rate of return'. Now that seems to be up in the air. What do you think? Again, I do not want you to get into what your exact TERRiA bid is but, speaking as iiNet and looking at the whole thing, is it the case that this can only work, from your perspective and a customer perspective, if it is in fact a direct subsidy—that is, a grant of \$4.7 billion—because the alternative is that if it is equity, then again you come back to this problem of pricing to the customer? Am I drawing the right conclusion from what you are saying?

**Mr Malone**—Again, in very simple terms, you are spending a heap of money to address a problem, again remembering that the current government has continued the Broadband Guarantee in regional areas and is continuing the metropolitan black spot program. Those are donations, they are direct subsidies, so it is not money being loaned and then having to be paid back with a commercial rate of interest, hence why we were excited by the OPEL idea. Even though we were not a participant, we put letters of support in for it on the basis that this was the right solution. You are looking at a bunch of areas which have got a problem and it is not commercial to fix the problem, so the way the government addressed it is by supporting it. I do not see this as being a party issue, because the current government has continued the programs of direct subsidy to areas that are otherwise uncommercial.

The problem with the \$4.7 billion dollar whatever it is—loan or equity or quasi-equity—is that it has to be paid back with commercial interest, and David Murray has an obligation to make

sure it is paid back with a good interest. If you put that in place and then all you have to do is add on top of that what your required return is on it, someone is paying for that, and this is an opaque cross-subsidy of people that are otherwise non-commercial when what we should have here is, I think, transparent subsidy of the areas which require broadband for social reasons.

**Mr Dalby**—Some of the previous schemes, the HiBIS scheme and others, we did not even register for because they did not seem to contribute towards a long-term solution. The blocker for us has never been putting a DSLAM in the exchange. The blocker for us, once you get outside the metropolitan area, is bridging the gap between wherever you are going and wherever our network is, so the backhaul issue, which I am sure you are all familiar with. In many places in Australia, regardless of where you want to go, there is really only one provider of backhaul.

It is a chicken and egg routine. If you go down to, say, the south coast here in Western Australia, to Albany, we have had quotes from the only carrier that has got backhaul to Albany of something like \$300 per customer per month. Somebody might call it commercial, but we do not think it is commercial. We do not think it is cost based. It is just based on an opportunity to either keep us out of the Albany market, for some resale, or to walk away.

The HiBIS scheme in the past has not addressed those backhaul issues. What we have seen those previous schemes focusing on is really the capital cost, and it is not the capital cost that is the issue. It is the ongoing costs, the operating costs of those regional and remote locations, that really kill the business case off. So, if there is to be a \$4.7 billion donation or subsidy, then we would like to make sure that it is focused on dealing with that issue, not necessarily just purely increasing penetration of broadband, which is a laudable end, but it is designed more to increase penetration and competition, which will deliver lower prices and better products.

**Senator LUNDY**—It comes back to the bottleneck of that backhaul network. What you are saying is that, unless that is addressed, you can throw lots of money around and the fundamental problems of the communications market are not going to change in this country.

**Mr Malone**—Correct. There are lots of regional centres in Australia—notably in Western Australia, but I think the south-west problem will be fixed in this side of the country. We have got fibre down to Peel now and we intend to push it further. There is sufficient growth, there are a sufficient number of people down there, and that will get fixed. Going north, no chance. Victoria is a good example for us. We have got probably three towns there—Shepparton and Mildura, at least—where we have sufficient capacity, a sufficient number of customers, to justify a build if it was in the metropolitan areas. But, as Steve says, we are seeing prices that are 30 to 100 times more where there is only a single carrier.

**Senator LUNDY**—Did you say fibre down to Peel?

**Mr Malone**—Yes. Sorry, it is Rockingham.

**Senator LUNDY**—Yes, okay.

**Mr Malone**—I think over time the fibre will push down to Bunbury and there is enough growth in our south-west that it will get fixed. It is like the coastal RIM on the east coast. But, once you go north out of here, unfortunately once you get to Geraldton there is nothing,

everything is hundreds of kilometres apart, yet this is a fruit basket for the country that is delivering immense results, so getting fibre to the north-west would be fantastic for customers.

**Senator MINCHIN**—When you say you are rolling out fibre, what exactly does that mean? Does that mean you are taking fibre from Telstra exchanges? What exactly are you doing?

**Mr Malone**—We take the fibre out to exchanges. Once we get into an exchange there is copper there already, so you have the metallic path to the home. The problem is to get from that exchange back to the CBD in each state. To get from Mildura to Melbourne is close to 100 times more expensive than getting from suburbia to Melbourne. Interestingly, where you have a similar size town, such as Gosford, and it is serviced by more than one carrier, the price is pretty similar to metro. It is when there is only one carrier in there that it becomes prohibitively expensive.

**CHAIR**—Thank you very much, gentlemen from iiNet, for our submission, and in particular your time here today. It has been very informative.

**Mr Malone**—Could we just sum up, though, very quickly?

**CHAIR**—Yes, please.

**Mr Malone**—There are three things we beg the Senate to require in the bid if it is going ahead: an outside-in build; transparent regulation—however it is going to be, just transparent regulation; and please put the customer at the centre of every decision you make. I know that we can survive if you make those decisions.

**CHAIR**—Thank you for your passion, Mr Malone—

**Mr Malone**—Thank you.

**CHAIR**—and gentlemen. Thank you very much.

**Proceedings suspended from 11.07 am to 11.33 am**

**BAIN, Mr Martin, Member and Representative, Chamber of Commerce and Industry Western Australia**

**DIGNARD, Mrs Sharon Anne, Senior Adviser Industry Policy, Chamber of Commerce and Industry Western Australia**

**HILL, Mr Christopher Richard, Member and Representative, Chamber of Commerce and Industry Western Australia**

**CHAIR**—I welcome the WA Chamber of Commerce and Industry to the fourth day of public hearings of the Senate Select Committee on the National Broadband Network. The evidence that you provide to the committee is public. If you wish at any stage to provide evidence in private, you may make that request and the committee will consider it. The evidence that you provide is also protected by parliamentary privilege, and it is an offence—indeed, potentially contempt of the Senate—for any other party to attempt to interfere with or otherwise influence you in respect of the evidence that you might provide to this committee.

You are able to object to answering any questions that I or my learned colleagues may put to you. If you wish to do so, you should say the grounds upon which you are so objecting and the committee will consider your request.

We have your submission, thank you very much. Do you wish to amend or vary your submission?

**Mrs Dignard**—No, we do not.

**CHAIR**—Then I invite you to make a brief opening statement, whereafter we will ask you some questions.

**Mrs Dignard**—Thank you. I will start by introducing my organisation and the representatives I have here today from the Chamber of Commerce and Industry and then provide a short summary of the salient points that we raised in our submission. The Chamber of Commerce and Industry of Western Australia is the leading business association in Western Australia. I will refer to it as CCI or the chamber. We have a membership of approximately 5,500 organisations in all sectors of industry throughout the state. Therefore, CCI's submission really reflects the broad views, and is a broad voice for, the membership of the chamber.

I would like to disclose up-front the roles of the two representatives I bring with me today, who are members of the chamber. Chris Hill, to my right, is the managing director of Australian operations for ITC Global (Australia) and Martin Bain is an account manager for WA sales at SingTel Optus Pty Ltd. Both are involved in CCI's advisory group for the ITC sector and today will assist in representing CCI's broad views from the chamber.

CCI is dedicated to the pursuit of responsible free enterprise, and with this come our policy positions which are based on the fundamental principles about the need for effective regulation of market failure and the encouragement of competition. The three points that I wish to reiterate

during this time from our submission include CCI's support for the development of broadband infrastructure in Western Australia, the importance of an appropriate regulatory model, and the need for WA businesses to have access to that infrastructure.

In terms of the first point, CCI recognises the importance of high-speed broadband access to the continued economic growth of Western Australia, including its ability to increase productivity, influence social and economic development, and ensure WA's and Australia's international competitiveness. In terms of our second point, we strongly support the Commonwealth's proposal to ensure the network is open access and for the Commonwealth to consider adjustments to the regulatory regime to ensure competition is maintained.

CCI has long held the position that poor regulation can result in avoidance behaviours, inefficiencies, reduced innovation, lower productivity and higher costs. Therefore, the chamber recommends that the Commonwealth ensure that a regulatory impact statement is completed for the proposed changes to the regulatory environment. CCI understands this is supported by the Council of Australian Governments agreement to reform the regulatory environment in Australia. A regulatory impact statement would include the cost that the regulation would impose on government, industry and the community, including financial and non-financial costs associated with the government and industry administering the regulations now and into the future.

We recognise that this is the largest reform since the deregulation of the telecommunications industry. Therefore, it needs to be managed correctly. Specifically, CCI recognises that the national broadband network will significantly change the structure of the fixed-line and terrestrial broadband telecommunications industry, specifically creating a new infrastructure bottleneck in the backhaul or wholesale market. CCI understands that in Western Australia the successful proponent of the NBN is likely to control the infrastructure bottleneck, which will provide the proponent with significant market power in the fixed-line and terrestrial broadband market. CCI believes the Commonwealth must ensure industry has competitive access to this infrastructure. CCI believes that this could best be achieved through structural separation of the successful proponent of the NBN or possibly by carefully formulated operational separation arrangements.

Given the NBN will be a new network, CCI believes that it is vital to ensure that the proponent will not have an ingrained conflict of interest in providing services directly to the retail market. Therefore, the NBN operator needs to be a direct wholesale operator excluded from retail activities. CCI also believes that the Commonwealth should minimise the need for long-term government regulation.

In terms of our third point in relation to access for WA, CCI is concerned that the NBN will have limited coverage of Western Australia, based on the Commonwealth population-centric model which will cover 98 per cent of Australian homes and small businesses. Therefore, it is important to ensure that the construction timing first focuses on remote areas, then regional areas and then metropolitan areas, especially as the areas currently under-serviced today cannot wait for the final construction date of 2013, and that is not subject to project slippages.

WA's large land mass and sparse population suggests that broadband services are unlikely to be delivered to areas where critical industries and businesses are located. CCI believes WA has

firmly cemented its position as a driving force behind Australia's recent economic success by contributing around \$130 billion to the national economy and 13 per cent of gross domestic product.

WA also had an above average annual growth rate of 4.7 per cent over the past 15 years, ending 2006-07, based on the latest data. Western Australia's economic expansion has largely been attributed to the dominance of key regional industries, such as mining and resources, in regions such as the Pilbara, Goldfields, Esperance, Peel and the south-west. CCI believes a purely population-centric model may fail to secure appropriate high-speed broadband access to critical industries in Western Australia and will stifle their innovation and economic development.

CCI contends that it is reasonable for the government to direct this funding to underserved locations in metropolitan and regional areas and ensure that the business community in Western Australia will benefit from this development. To sum up the three points which I wanted to highlight, CCI supports the development of the NBN. However, it believes it is important to ensure that an appropriate regulatory model is established, given that this is one of the largest changes to the regulatory environment for the telecommunications industry for many years, and to ensure that WA businesses have access to appropriate broadband infrastructure. Thank you.

**CHAIR**—Thank you.

**Senator LUNDY**—Thank you very much. I am interested in the chamber's assessment of the lack of growth that has been experienced because of the unavailability of high-speed broadband networks at an affordable cost in a ubiquitous way across the state. To what degree have you done those sorts of economic assessments about the impact or loss of economic growth as a result of the constraints on broadband availability?

**Mrs Dignard**—We have only done broad measures in terms of what we were looking at. However, we can provide further analysis to you after this hearing's evidence.

**Senator LUNDY**—Thank you. What about feedback from the small businesses you represent, both in metropolitan Perth and in regional areas that are experiencing some growth, like the mining towns? Can you describe to the committee the sorts of issues that those small businesses have in relation to broadband technology and connectivity?

**Mrs Dignard**—Our understanding is that obtaining appropriate broadband access at a suitable cost to them—although we do not have estimates of what that cost would be—is critical for the development of their businesses. We have heard not only of the need for businesses themselves to obtain access but also of the importance of their customers and clients to obtain access, in terms of general community access, because they know they have the ability to use a lot of the benefits in terms of videoconferencing, and some of those aspects, for their business, but their customers and clients do not necessarily have that ability to work with them on that process as well. But I can provide further information should you require it.

**Senator LUNDY**—Yes, I am interested. I get a lot of feedback from small businesses. You are right, it is the supply side for them and their e-commerce relationships with business partners that is a substantive issue and, depending on the type of business, their relationship with their

customers as well. I get a fair bit of feedback about the frustrations experienced by small businesses in not just being unable to get a high-speed network but also about the reliability of those networks and not getting faults rectified and things like that. I would be interested, if the chamber has any documentation or can tap into its own records of member feedback, in the issues that they are experiencing with their communications networks.

**Mr Hill**—The anecdotal evidence we have is from operations in those regions that have had the greatest growth in the last three or four years, because most of that development is happening in areas where there is previously no terrestrial infrastructure at all, so these are not old towns that are being rejuvenated with the latest mining boom; rather, these are new settlements or new establishments on what were previously green fields.

The only options they have are to either take a satellite based service or for the primary contractor in that area to make a direct capital contribution to the incumbent carrier, who will then put a cellular base station in, at the cost of many hundreds of thousands of dollars. Having paid for the cost of that infrastructure, the people in that region are then entitled to buy or lease services on an ongoing basis from that carrier. That is the only way that people are achieving any sort of data throughput. I am not sure you could actually term it ‘broadband’. So at night you will see people actually coming out of their rooms because the signal does not work inside the metal-clad enclosures that they live in.

**Senator LUNDY**—Satellite signal, yes.

**Mr Hill**—They will be sitting outside with their laptops and trying to access some sort of broadband service so that they can fill in their electronic time sheets and do their procurement. These are small operators I am talking about. Unfortunately, that platform, which is the Next G platform, is not actually open for competition, because the cellular market has been declared as being relatively fortunate in the competitive sense.

**Senator LUNDY**—But it is not competitive in these communities, is it?

**Mr Hill**—But out on site there is only one network.

**Senator LUNDY**—Yes.

**Mr Hill**—That network is only there because it has been paid for in capital contribution and that network is struggling to achieve the throughput that is required by a composite of perhaps 200 or 600 people on site. That does not address any of the underlying corporate needs that are there. Those corporate needs are what is required when we move out of the construction phase into the ongoing operational phase and this business tries to establish itself as a long-term viable operation that will be capable of being competitive in the global marketplace.

**Senator LUNDY**—Yes. Excuse the pun, but I want to drill down a little bit here into the nature of that capital investment by the private companies to purchase the base station. Can you give the committee any detail about what kind of private subsidy for that infrastructure is required to establish a base station in these remote places? Is it \$100,000 or—

**Mr Hill**—I need to be careful. It may be commercial-in-confidence as being provided by that carrier.

**Senator LUNDY**—Sure.

**Mr Hill**—But it is hundreds of thousands.

**Senator LUNDY**—Yes.

**Mr Bain**—I can probably comment on that. The larger mining companies predominantly—the resource companies in the north-west which can afford to invest in infrastructure build—will enter into a commercial arrangement. That will either be a direct procurement of the services or a subsidised procurement, whichever model is adopted. But then it is primarily for its own use. So if you talk about Western Australia having social and economic development, it is somewhat restricted by getting access to some private networks. The incumbent provides a corporate network and it is up to the company to then, through its policies, decide whether it is going to allow its employees and the wider community to get access. In a lot of cases, the answer is normally no.

**Senator LUNDY**—Tell me if I have got this conceptually correct. A resources company makes an investment in a greenfield site. The only available communication would be satellite phone, I would imagine, at that initial stage. So to get a bandwidth needed to provide a broadband connection to connect their computers and mobile phones would be the investment in a base station that presumably will pull down a signal from a satellite and then distribute it in the form of mobile and broadband data services.

Those commercial arrangements are governed by whatever agreement covers off the original subsidy and the ongoing connection costs with that single carrier. That really is not about providing a social service, it is about providing a corporate necessity to allow that particular investment to function appropriately.

**Mr Bain**—Yes. The only comment I would make is that it is not restricted to satellite, because there are fibre builds, and it is just a question of the incumbent agreeing to spur off and then provide a fibre solution, as opposed to a radio or a satellite solution.

**Senator LUNDY**—Yes, I understand. Thank you.

**Mr Bain**—So it is not the technology per se. It is more about the cost and whether the cost is prohibitive or not.

**Mr Hill**—There is a remarkable infrastructure across Australia in terms of fibre and also medium- to high-capacity microwave that is really there as a legacy of the Telecom Australia or even PMG days. So it may be in the middle of nowhere and yet it might only be 40 kilometres from the nearest infrastructure point. There might be just one more microwave link or perhaps fibre being trenched in. But the infrastructure does only go on the ground as a basis of a capital contribution.



**Senator LUNDY**—I do not know if you can answer this: is the availability or proximity to an infrastructure point for communications a factor in determining the viability of a potential investment? Is it that big a consideration as far as investment in resources?

**Mr Hill**—It would be a consideration, but I do not think it would be a major consideration for any large investor—for instance, an iron ore operation. It might influence some of the smaller boutique mines run by much smaller companies—for instance, junior miners who are looking at opportunistic gold or other minerals.

**Mr Bain**—Could I just add on that point that I think it is important to note that the larger mining communities can, to a large extent, invest in infrastructure of this nature, whereas the smaller ones cannot, and I think what is starting to unfold is that the larger ones are challenging why they need to invest in infrastructure and then pay for services when they can scale up their workforce and build their own networks.

**Senator LUNDY**—Yes, indeed. I can imagine that that would be a real prospect.

**Mr Bain**—And, whilst that is a good outcome for the organisation, it does not do an awful lot for the greater good of Western Australia.

**Senator LUNDY**—That is a good point. I am interpreting from what you are saying that the proximity of communications infrastructure and affordability of it would be a much greater factor for boutique resource companies than for larger companies, so it would impact on their decision making, arguably, more than on a larger company's.

**Mr Hill**—Yes, that would be the case.

**Mr Bain**—The other thing, though, is that we should be mindful that we should not be focusing on just the resource sector in the north-west. In the north-west there are other industries, like aquaculture et cetera.

**Senator LUNDY**—Yes. That is a fair point.

**Mr Bain**—There are many other industries that would benefit as a consequence; therefore, there lies the economic potential.

**Senator LUNDY**—Yes. That is a point very well made. Thank you, Mr Bain. Thank you, Chair.

**CHAIR**—On my way through to Senator Birmingham, can I ask a question. You talk about rural and regional Western Australia and you have, Mr Bain, raised the resources sector. To what extent does the chamber represent, for example, the wheat belt of Western Australia and, depending upon your answer to that, what do you say about access to these services from that sector of the Western Australian population?

**Mrs Dignard**—CCI certainly represents a broad cross-section of both industries, but also a broad cross-section of businesses in metropolitan and regional areas. Is your question specifically in reference to the wheat belt itself?

**CHAIR**—That is an example. I am trying to extrapolate from Mr Bain correctly saying, ‘Well, the resources sector is very important but let’s not talk about that as the only rural and regional part of Western Australia that is, arguably, underserved and needs attention. There may be other parts of Western Australia that are similarly so.’ I am wanting to explore that with you.

**Mrs Dignard**—Not a problem. We certainly see the need for high-speed broadband, for this particular infrastructure, for the broad cross-section of industries, and our comments have certainly not come through simply from the resource sector’s concerns about being able to access it. It has come through from other sectors, including the agricultural industry, but also from service industries in the regional areas and other industries that are associated with our regions. Does that help answer your question?

**CHAIR**—Perhaps. In pursuing this line of questioning, I should probably indicate that the family farm is still based in Beverley, Western Australia, so I place that on the record. CCI may not have members in other areas, in which case that may be your answer, but if you consider yourself to have membership across rural and regional Western Australia then I am asking whether or not you have a more evidence based assessment on what they are getting currently and what they stand to get, or not, from the government’s NBN plans.

**Mr Hill**—I think it would be fair to say that the chamber has membership of organisations that are headquartered in all of the regions—quite small businesses—and also has members that are operating in all regions of the state. So, even though their head office address may be in the Perth metropolitan area, they have operations throughout every region of Western Australia. The feedback that we have received from people, particularly down in the south-west, is that they are frustrated by the focus on getting data to them, as though they are only capable of being net consumers of traffic.

For instance, the role of the NBN is to get 12 megabits per second to 98 per cent of small businesses and homes in Australia, but what about getting data from them? I think we need to work on the assumption that Australia will increasingly become a net generator or net source of content rather than merely consuming traffic that generates in the US.

Where we have businesses that are trying to generate something that is IP centric or network centric, the frustrations that were expressed to me—and this is going back about two or three years—were that, as soon as they have a business that is successful in the south-west and is IP-centric, the first thing they must do is pack up and move somewhere else because there is inadequate infrastructure at an affordable point where they can continue to live and work in that region. There simply is not the backhaul available to them to service their business needs because the assumption is that they only consume traffic, not generate it, so they need to move their service to Melbourne or Brisbane or Perth, and the jobs that follow with them. This is particularly frustrating, and we continue to see things that focus on just a one-way data flow.

One of the questions in the earlier session was: what is the point of rolling out a fibre based NBN when 12 megabits per second or higher can already be achieved over the existing copper infrastructure? The existing copper infrastructure is not capable of servicing anything more than about one megabit per second coming from the end user. It can do 12 or 20, 24 perhaps—higher speeds—outbound, but on the inbound direction it is really limited to about one megabit per

second. That may be adequate for today, it may be adequate for a large number of end users who simply want to do a bit of internet banking and check emails et cetera, but if we are trying to engender a smart community and an ICT industry that will participate on the world stage rather than just consume what is being generated on the world stage, we are going to need something that is more symmetrical in nature.

**CHAIR**—Indeed.

**Mr Hill**—And, in that case, the NBN fibre based platform would be of some use.

**Senator BIRMINGHAM**—Gentlemen, thanks for your time today. The first of the key principles that you have outlined relevant to the implementation of the NBN in your submission states:

1. government intervention should be minimal and the least preferred option for achieving policy outcomes;

I just wanted to take that statement and, firstly, apply it to the overall notion of an NBN before we get into regulation. You have stated that the chamber supports the development of the NBN. Is it the actual build of an NBN that the chamber supports or is it really the outcome that you are supportive of and, in a sense, does the chamber feel that it has given consideration to the types of options that are required or that are available to achieve those outcomes instead of building an NBN as specified?

**Mrs Dignard**—Thanks for that clarification. What we would say is that we certainly provide in-principle support for the NBN because we believe in the outcome of providing broadband infrastructure to the community and also to the business community.

**Senator BIRMINGHAM**—Have you considered alternatives?

**CHAIR**—I think that is in agreement: that it is outcomes based rather than agreement with the plan per se.

**Senator BIRMINGHAM**—That it is outcomes based, yes. Have you considered whether there are alternative ways that those outcomes could be achieved?

**Mr Hill**—Yes.

**Senator BIRMINGHAM**—And do you consider the current proposal to be the favourable way to achieve the outcome, or not?

**Mr Hill**—The devil is in the detail. If the NBN is implemented correctly, if we have fibre to the node and it is implemented correctly, that will be fantastic. I think it is fair to say that fibre to the node changes everything. Fibre to the node, if implemented incorrectly, has the ability to actually unwind the last 10 to 15 years of deregulation and to reinstate a single monopoly provider, both in fixed-line and terrestrial broadband, and other services that will come from that. But, if implemented correctly, it will be an amazing, enabling force for the telecommunications industry in Australia.

Australia already has some pretty good experience of what fibre to the node can mean and, if it is implemented incorrectly, how limiting that can be. I refer here to the earlier version of fibre to the node known as pair gain systems. If we take a case of the old pair gain systems that were originally designed to only service voice and perhaps fax transmissions at up to 2.4 kilobits per second, the technology such as RIMs and SCADs et cetera actually had fibre to the node. Then from there they broke out on traditional copper to the end point. That was an extremely limiting technological solution that, although it met its original purpose—it was fit for purpose there—stopped competitors from being able to roll out newer technologies.

It was very limiting in terms of the ability of the marketplace to innovate and release new technologies into those homes and businesses being serviced by that technological platform. Therefore, you ended up with islands—basically anything built in the mid-1980s was serviced by pair gain systems: industrial estates, even inside metropolitan areas, new residential developments, high-rise apartments et cetera—who were starved of ADSL for a long time simply because we had fibre to the node. That is a good historic lesson in how not to do it, how not to bundle something up and leave it in that position for a long time.

If fibre to the node were implemented with the necessary technical and administrative processes in place, then industry would be free to innovate and implement whatever comes next. If we can think of what it is right now, then we are not thinking far enough into the future. It needs to be flexible enough so that whatever comes next can be rolled out as soon as it is available, so that the iiNets of the world can continue to innovate and lead the marketplace, because certainly the innovation is not going to come from the largest player in the marketplace. It is going to come from the small, nimble players in the marketplace, and they need to have unfettered access to whatever that access technology and backhaul platform is. Without that we are going to go backwards and we are going to end up with a single monopoly supply across the country.

**Senator BIRMINGHAM**—Because you were timely in arriving and you got here a little early, and we were less than timely and running terribly late, you heard a reasonable amount of iiNet's evidence before. They certainly made a fairly strong case that they did not think that a \$5 billion prescriptive NBN solution as proposed was the right way to go and that there was much greater benefit to be had in targeting underserved areas and allowing the market to develop different types of innovative solutions that we do currently know about in the rest of the areas that are currently serviced and economically feasible. Has the chamber considered whether it would be better to acquire that \$5 billion or whatever sum is required to target specifically those underserved areas or what priority, at least, should be given to them?

**Mrs Dignard**—Certainly in our submission we have identified that, given the considerable amount of government funding contributed to the NBN, it would be reasonable to assume that it gets contributed to underserved areas. Specifically what we would consider suitable would be addressing the remote areas first, then regional areas, and then the metropolitan areas as well, given that many of the metropolitan areas already have infrastructure in place that would support levels—speeds—up to what is anticipated on the national broadband network. Does that answer your question?

**Senator BIRMINGHAM**—Yes, that is okay. Can I turn as well to those metro areas, particularly on pricing and accessibility. As you just indicated in your answer, many of those

areas already have access to comparable speeds at present. There is a concern that not only are you duplicating services but, equally, that you will be forcing people in the end to buy a different service than they currently have that may well be priced at higher levels. How is that a good outcome for business or consumers?

**Mr Hill**—Sorry, could you repeat that? I did not quite follow the end part.

**Senator BIRMINGHAM**—In the end, if you are effectively duplicating services in the metropolitan area, in the built-up area, to roll out a fibre-to-the-node network that will provide speeds that might be the equivalent, might be a bit better, might be worse than are currently available, and then possibly their being set at prices that are more than is currently available, how is that a good outcome for business or consumers?

**Mr Hill**—Certainly, when positioned that way, it does not sound like a good outcome at all. What really matters is that we are really focused there on the last mile. In the work that the chamber has been doing recently, we think that it is not worthwhile focusing on the access networks or the last mile or, realistically, more the last six to 20 kilometres. It is actually more a question of backhaul. In terms of addressing access to customers, the customer access network, there are roughly 100 licensed carriers in Australia that are all willing to try and tap into as much of the market as possible in as efficient a manner as possible using whatever technology comes out, whether it be ADSL or ADSL2 or ADSL2+ or some sort of wireless technology. It does not actually matter what technology is used to do that.

Competition is alive and well, except that they cannot get the data to within 20 kilometres of the customer because the backhaul mechanism has failed. So the national broadband network could be implemented—I cannot give you an exact figure, but I suspect it would be well within the existing budget that is being spoken about—if the focus were on actually addressing the backhaul issue. It does not make sense to duplicate anything. Why don't we just take what we have already built and make it available? We have a fantastic national broadband network, interexchange, but unfortunately it is not available to the end users because it is not available to the people that are able to provide that access to them. It is not available to the ISPs, as you heard in the previous submission.

So when they want to go and service an area, whether it be Geraldton, Albany, Karratha or the middle of nowhere, that is not possible in any manner that makes commercial sense, so therefore that infrastructure sits idle. The infrastructure that is in the ground today sits idle rather than being accessed by nimble players.

**Senator BIRMINGHAM**—If you took that approach, then could not an effective regulatory fix that made that access available achieve quicker results for many of those communities than a national build program of the like of which is currently being proposed?

**Senator LUNDY**—But it is still the backhaul issue, so you are talking about open access to that backhaul network, and then establishing a fair price for access on that backhaul network.

**CHAIR**—Are you? Let's have Senator Birmingham's question—

**Mrs Dignard**—Certainly in terms of using the infrastructure that is already there and whether that is a more appropriate solution to the NBN, whether a regulatory model could be in place to address it more effectively, we certainly see the regulatory environment to be critical in this particular discussion and hence our recommendations in terms of the national broadband network being a structurally separated option or at least evaluating the need for it to be operationally separated to ensure that that wholesale issue is addressed in this new marketplace.

**Mr Hill**—We just need the backhaul network, the interexchange network or, if it is going to be fibre to the node, the internode network, to be dynamically and aggressively sold at a wholesale level to as many people as will take it to achieve the best economic outcome from that infrastructure. At the moment it is being jealously guarded. It is not in the interests of the current owner to have as many people as possible leveraging off that infrastructure.

**Senator BIRMINGHAM**—The opening statement spoke of the need for a regulatory impact statement to be publicly made. I am assuming you would expect that that would be an assessment of the draft regulatory framework before it was finalised, otherwise there would be minimal effect of any type of impact statement if all you are doing is saying, ‘This is the impact of what we’re doing anyway.’ Have you put that proposal to government and, if so, have you had any response to it?

**Mrs Dignard**—No, we have not heard anything back from that.

**CHAIR**—Senator Lundy.

**Senator LUNDY**—I think we had finished that point that Senator Birmingham was asking about, so I do not have any more questions for you. Thank you.

**Senator MINCHIN**—On this issue of funding, you said that you think this should be as it is described: a roll-in rather than a rollout—in other words, underserved areas should be served first, particularly with this significant Commonwealth government commitment. That presumes, from what I hear, that you think this is a straight government subsidy for this NBN? Is that the premise of your comments—that the \$4.7 billion that the Commonwealth is talking about is simply a straight subsidy to whoever does build this thing?

**Mrs Dignard**—No, it is not.

**Senator MINCHIN**—If the government is providing equity, as it said it would—that was its election campaign policy—on a commercial basis, if it wanted a commercial rate of return, how can you impose then an uncommercial rollout of doing it first in underserved areas, and how on earth can you get anything other than a much more expensive product, given that whoever supplies the \$10 billion that is going to be needed from the private sector is going to want a commercial return, and the Commonwealth as a participant with its \$12.7 billion is wanting a commercial return? Won’t this have to be a commercial operation in pricing, where it is rolled out and how it is rolled out?

**Mr Hill**—I see your point. But I think the numbers that have been arrived at at the moment were only based on complete duplication of what is already there: building a parallel network to the one that already exists.

**Senator MINCHIN**—Don't you agree that what is being proposed is simply an upgrade of the existing network? It is essentially, as I understand, taking fibres from the exchange to the node. That is what this is.

**CHAIR**—In fact, that was going to be government's wording.

**Senator MINCHIN**—What we are told is that that is going to cost anything up to \$15 billion. Everybody agrees it is going to cost something like \$15 billion. Now the Commonwealth is saying, 'Oh, well, we'll go to the party on this for a commercial rate of return with \$4.7 billion,' so somebody else has to find another \$10 billion. They will want a rate of return on that, and there is the real issue of whether there will then be the existing service available to anybody. You will have all the stranded assets back in the exchange in order to do this.

**Mr Hill**—It certainly does not make any sense, as a stand-alone broadband network, when expressed in that manner.

**Senator MINCHIN**—When you say you support this, what are you supporting? What do you think this is, and what is it that you say?

**Mr Hill**—We are supporting improved outcomes for our membership and the wider community.

**Senator MINCHIN**—No. You seem to be supporting the government's national broadband network. What is that, from your perspective? You have left me confused.

**Mr Hill**—The national broadband network, as I understand it, aims to achieve 12 megabits per second to 98 per cent of homes and small businesses, and we support that.

**Senator MINCHIN**—No, it is more than that. It is fibre to the node.

**Mr Hill**—As I say, the devil is in the detail, and we do not support fibre to the node if it is going to be implemented in a way that leads to the re-establishment of a single monolithic monopoly provider. But we do support it if it is implemented in a correct manner that opens up access to all of the retail operators and improves the outcomes that will be delivered way beyond the target of at least 12 megabits per second.

**Senator MINCHIN**—I bring you back to my question: if the government is putting in \$4.7 billion on a commercial basis—and we are told that to roll out fibre to the node to 98 per cent of the homes and businesses in Australia will cost \$15 billion at least —(a) won't that cost a hell of a lot more and (b) how could you possibly do that commercially on a roll-in basis?

**Mr Hill**—It is my understanding that those figures have been arrived at not on the basis of trying to achieve just the 12 megabits per second basic broadband service delivery but by ending up with an infrastructure that will allow that network owner to implement the so-called triple play, whereby they have monopoly provision of telephony, broadband and the interactive services including IP, TV, video on demand and other video based services. I know that is not a formal requirement of the NBN. I know that that is not something that is widely distributed, but

that is what would be in place at the end of rolling out, say, \$15 billion worth of infrastructure development.

**Mr Bain**—If I can answer that: I think Chris is saying that the chamber does not build networks. We are basically looking at improved services to our members, how that is achieved, and, as long as it is open, competitive and creates the environment for everyone to succeed, then what that becomes is what that becomes.

**Senator MINCHIN**—I guess that is what we are trying to drill down. It is kind of motherhood to say, ‘Yes, we’d all like better broadband everywhere. Yeah, great. The process is going forward.’ But what Labor has put on the table, and what we understand from your submission that you are specifically supporting, is this particular proposal for 98 per cent of people getting fibre to the node at 12 megabits per second minimum.

**Mr Bain**—And it is a point that we could go around in circles on, but if you look at today, in most parts of Western Australia, very little—if at all—goes to private networks, outside of the incumbent. If you look at what the OPEL contract set out to achieve—picking up on Chris’s previous point—it did not build duplicity where there was existing infrastructure, so it used a large degree of infrastructure, including Next Gen and others, and it proposed to build an additional 15,000 to 18,000, if I have remembered my stats correctly. But, notwithstanding that, it was not about doing anything other than complementing what was already there and reaching out to where there needed to be new build, and I guess the NBN will do that. It will reach out to where there is nothing today. That will help to drive social and economic outcomes.

**CHAIR**—I am not so sure that we would feel so confident as to guess, Mr Bain. That is really part of what this line of questioning is trying to extract from the chamber. You talk about, ‘The government’s promise is to upgrade parts of the existing network.’ Is the chamber saying that you only support the government’s plan if it is upgrading parts of the existing network and, if so, what do you think is meant by that? What is the basis of your support, just on that aspect alone?

**Mr Hill**—That is where the detail is lacking. Our support is contingent upon it being done correctly, so the overall outcomes are actually required. But how much detail can we provide at this point?

**CHAIR**—Our role here is to ask you questions. Do you think the government is providing sufficient detail for you to judge the merit of their policy? Do you think the government is providing the chamber with sufficient detail for you to be able to say, ‘Yes, this will be done correctly,’ in your words?

**Mr Hill**—I think there is inadequate detail at this stage. An example of where detail is important is, for instance, with the existing wholesale ADSL services that are being deployed. One small but key feature has been deliberately left turned off—that is, explicit quality of service support. In other words, the service is now suitable for use by home users to do a bit of occasional web browsing and so on. It is hit and miss as to whether it can be used for critical business related services such as voice over IP, or anything else that requires the timely and reliable delivery of data packets, just because that feature is turned off. It is a trivial change to turn it on. That detail is missing in what is there at the moment. Therefore, where people are



reselling a wholesale product that is being provided by the incumbent, with that feature, missing, it is a limiting factor for the end users of the system. What a pity!

For customers that are using similar or identical technical services, such as ADSL on DSLAMs, where that feature has been turned on, suddenly it becomes a business-grade solution. The problem with turning it on is that it would then cannibalise existing business-grade products that were in place before ADSL came out, hence our emphasis on structural separation and on making sure that the operator of the NBN is focused completely on the wholesale space, not having to actually hold back on what it does at a wholesale level because it is going to impact on some other aspect of their retail business.

**Senator IAN MACDONALD**—Thanks for your submission. This is a political gathering, and you will understand that sometimes questions are in areas that you might not have perhaps considered. I wanted to ask a question that perhaps you may not be prepared to answer, and please say if you are not. Are iiNet and Telstra both members of the chamber?

**Mrs Dignard**—iiNet is not a member of the chamber but Telstra is.

**Senator IAN MACDONALD**—Telstra is the wicked stepmother!

**Senator LUNDY**—I do not know if this is something you can inform the committee on, but do you have members on Cocos (Keeling) Islands or on Christmas Island?

**Mrs Dignard**—Not to my knowledge.

**Senator LUNDY**—Okay. I was going to ask about your knowledge of the connectivity out there, but that is fine. Thank you.

**Senator MINCHIN**—I wanted to ask about your chamber's assessment of this project in terms of national priorities. Everybody in Western Australia seems to have a list as long as their arm of infrastructure projects they think should get Commonwealth support. Presumably you do too. Where do you see this national broadband network fitting into that list of priorities, particularly if this is going to be funded not on a commercial basis but on more a quasi-subsidy basis from the Commonwealth, particularly in the light of what we now know from MYEFO is going to be a much smaller Building Australia Fund than had been contemplated? This \$4.7 billion is nearly half of what is there at the moment. The BAF is only \$12.6 billion at the moment, this is \$4.7 billion, and I am not sure how much more money is available.

From a Western Australian business perspective, where does this really sit in national priorities? Should the government really be reassessing the priority it gives to this in light of what we now see as being very reduced circumstances?

**Mrs Dignard**—Certainly we have identified this as a critical project in terms of Western Australia and have identified that through our Infrastructure Australia submission, which includes other infrastructure projects which we have identified. Certainly the national broadband network is a critical priority within that short list.

**Mr Hill**—I think it would be fair to say that having a vibrant, competitive and efficient telecommunications industry is a vital part of helping Australia differentiate itself in the global marketplace, regardless of whatever end industry it is, whether it be agricultural, mining, services, tourism or anything. Having a telecommunications industry that continues to grow and continues to innovate and stay at least up with the pack, if not ahead of the pack, globally is a key enabler for other businesses to maintain their international competitiveness. So we do see it as being a key part of that wider picture.

**CHAIR**—Thank you, Messrs Hill and Bain and Mrs Dignard. Thank you to the Western Australian Chamber of Commerce and Industry for your time and, in particular, for your evidence here today. Thank you very much.

**Senator IAN MACDONALD**—You might suggest to your membership officer that there is someone they should be looking at!

[12.24 pm]

**GREEN, Professor Walter Battman, Director, Communications Experts Group Pty Ltd**

**CHAIR**—The committee will now hear from Dr Walter Green representing the Communications Experts Group Pty Ltd. Welcome, Dr Green. Thank you for being patient. I am not sure whether you have been in the room when I have indicated that the evidence given to the committee today is public. If you wish at any stage to have the committee consider hearing your evidence in private, you may make that request.

It is unlawful and potentially in contempt of the Senate for a party to attempt to inappropriately influence evidence provided to the committee today in respect of this inquiry. If you wish at any stage to object to any of the well-intended questions that my colleagues may ask, you are able to do so. You should state the grounds upon which you wish to object to answering the question and the committee will then consider how to proceed from there. Do you wish to make an opening statement, Dr Green?

**Prof. Green**—Yes, I do, thank you. In relation to some of the documents and information that I have quoted in my report, I am a fellow of the British Computer Society and a member of the executive leadership in IT group, so I obtained quite a bit of information from there. I am also a fellow of the Institution of Engineers and had an input into the Western Australian Infrastructure Report Card on communications. I was a member of the steering committee for the report *Enabling growth* that looked into the benefits of IT and telecommunications to the Western Australian economy.

In terms of the other issues, a number of other people have made submissions as to what should be involved. There are points I wish to bring in terms of government policy. In the early days, before 1997, when I was a director on the ATUG, particularly on the committee that was looking into the new legislation, ATUG's and my preferred position was that we should structurally separate Telstra at that point because the gaming and the regulatory problems that we observed over the past 11 years would occur.

It was thought, however, that the long-term interests of end users would give the regulatory and legal people sufficient support or backing to adopt the arbitration model that was ultimately put into the legislation. While the long-term interest of end users did in fact do a lot to help the regulators and the legal people, it did not do enough to stop the gaming and the regulatory delays, and—how can I say this?—the incumbent successfully denied, delayed and degraded services. This is why we believe it is time for change.

The other point—and it has been discussed—is affordability. It has been shown by a number of internet service providers, and in fact Telstra itself, that within Australia the price range is ideally between \$40 and \$80 per month for residential. Bear in mind that that price range also affects the services of the small to medium enterprises and the medium enterprises. In other words, it affects about \$15 billion of Telstra's revenue. The top \$5 billion is for the very large corporates who are able to basically negotiate their own terms, pricing and conditions.

In the case of mobile costs, the large corporates are probably paying 8c to 9c per minute, yet the residential customers are paying—and it was recently announced—30c per minute. That shows you that, below \$15 billion, there is no buying power. Telstra dictates the prices. We believe that, whichever way they go, the long-term interest of end users should be a core policy component of whatever happens. It has delivered benefits. There is no doubt about that. It was unfortunate that it could not overcome the regulatory gaming issue.

In terms of the need for structural separation, there are a number of issues coming in there, and I have already indicated that we felt that that was the way to go. My experience as a chief engineer of the Rhodesian telecom, plus talking to my colleagues in Reach, who indicated that the structurally separated model there has been an overwhelming success and that—

**Senator MINCHIN**—Sorry, ‘there’ is where?

**Prof. Green**—Reach, which is the structurally separated component of the British telecom industry, has been an overwhelming success, in that initially they thought they were going to be worried about the revenue and how it was going to work out.

Practice has shown that the increase in traffic and the increase in revenue is now funding their ongoing expansion into the outer areas of the UK. In fact, I interviewed two companies in the north-west of England. They were being offered a free upgrade from two megabits to eight megabits and, if they took it, they would get free calls to Europe. So that was the UK and Europe. This was the incentive to get them to upgrade and pay for the new modem.

So, despite what is being touted by Telstra and what they have stated in the last few days, there is a strong case for structural separation. There is already significant proof that the Telstra network and the fibre we have got in the ground is underutilised. That is the trend, if it is run by marketing people: they do not seem to understand that the more traffic that you handle on a telecom network, ultimately the more profit there is.

This is amply demonstrated in the case with Telstra, who originally used to charge about \$80 or \$90 per month for ADSL connections and then sharply reduced the price down to today’s acceptable levels. If you look at the take-up of broadband at around that time, there is a complete change in rate of take-up that is significant, showing that they came down to it. The other point to note is that, if you look at Telstra’s profit and revenue from the broadband, it actually increased. So reducing the price increased their income and their profitability.

The other issue that needs to be taken care of is structural separation. There is already significant investment by a large number of carriers and, if it is not handled carefully, you could end up stranding a large number of assets. It is critical that, when the structural separation is implemented, other parties should be allowed to build and operate their own telecom access and that the structurally separated infrastructure unit should be virtually mandated to cooperate or work with these providers.

The other point that I would like to make is that there have been considerable studies into the benefits of broadband and how it can deliver benefits to all stages of the community, from residential through to small, medium and large corporations. Very few studies have been conducted about how particularly businesses are going to gain any benefit. The new benefits that

are coming out are—I call them—new streaming services; in other words, voice is one where you are continually sending data from one end to the other—so voice, video, videoconferencing and, in fact, multimedia.

The pattern that is occurring in America and the UK—bear in mind these countries are both about three years ahead of Australia—is that your enterprises are now buying or outsourcing services and this needs, firstly, the additional bandwidth. But a factor that is now influencing the purchasing decision of these services is the support and help that they get from the supplier. If you take Western Australian IT and telecommunication winners, you have got *neal.IT* who operate out of Esperance. Their particular business model was a very efficient use and design to operate on poor bandwidth, but also they had a good commercial model and they now service over 1,000 people throughout Australia.

That model has been replicated many times in the UK and the US. It was interesting to note on Tuesday that Telstra and Microsoft were planning to offer similar services in which they were quoting \$4 a month for managing the firewall. I see two problems with the proposal for Australia: first, there is the lack of bandwidth required; second, we are three years behind. So our small and medium enterprises are being hampered as a result, and also the people going up the chain.

If you take Balconi, they have basically changed the lifestyle for the people working in the north-west, where they can now talk, using the videoconferencing version of Skype, to their families in Perth. This is an example of another streaming service that is taking off; in other words, they are all pointing to the fact that Australia has very poor infrastructure to move forward and we therefore need some kind of new network, with the right mandates and policies behind it, to actually let Australia catch up with the rest of the world.

Coming out of the streaming technology, if you look at the standards that guide it, this is where there is going to be a new bottleneck. We see it as—when I see ‘we’, it is the technical group that I work with—the new ability for the carrier, or whoever wins the tender, to impose demands on users and standards, for the simple reason that the standards for the streaming technologies do not exist. They are still in what I call the research phase. People are looking at, ‘How do we do it?’ You only have to look at the UK and the IEEE journals and you will see significant articles on how to deal with IPTV, how to get video and streaming through in the network.

Typical examples of where the monopoly provider or the infrastructure provider could in fact adversely affect people is doing what I call the AT&T Bell Telecom trick—‘If you want to connect to my network you will have to buy my equipment’—and they can therefore bump up the price and profitability. They can also force standards on companies, causing them to completely rebuild their data networks. This will have more impact on what I call the upper end—the medium end.

Finally, much has been said in terms of pricing. My own experience in building fibre-to-the-node, fibre-to-the-home networks here in Perth is that there is a severe lack of state planning or local government planning in how and where telecom networks should look. We have—and it is happening right now—new residential estates in Perth that are being built. They are not putting in the conduits and the pipes and the infrastructure to have fibre to the home, simply because the

backhaul from that estate does not exist. So the argument is, ‘Why put in something that we can’t connect to?’

State and federal governments should in fact be mandating, for new estates or greenfield estates, that provision for the fibre infrastructure should be made. It is not widely known, but Perth already has about 15,000 homes connected with fibre and it has proved cheaper to put fibre in than it is to put copper. It is about one to two per cent of the cost of a new plot. Bear in mind the plots in Perth are running at about \$150,000, so between \$1,500 and \$2,500 is the cost of fitting fibre to the home and that is put in at the time that the plot is developed.

Another example of where state planning has, in one way, been lucky is in terms of the Perth to Mandurah railway line. I, along with a number of others, proposed or suggested or motivated to get the conduit next to that railway line. Putting the fibre in there is having an impact on broadband, and this is from just outside Perth down to well south of the Peel region in the south-west. For the same reason, we are trying to get conduits put in the Bunbury bypass, because then to go into Bunbury will be fairly straightforward and give Bunbury the competition.

I deal with a number of clients within the south-west and the prices they are paying for their service is slightly horrific. If I can quote one medical network, they are paying nearly \$500,000 a year for their fibre access. If they were to buy the same services in Perth, it would cost them \$60,000. I do acknowledge that we do need an increased price for the regions, but eight to nine times the cost to me is exorbitant. It is these areas that the new network should be addressing. There are significant savings for government by building this network. It is not just, ‘What’s the benefit to the community?’ Those are the key issues I wish to bring up. Thank you.

**CHAIR**—Thank you very much, Dr Green. You have suggested that we do need an increased price for the regions. Depending on what you mean by that assertion, that is potentially at odds with much of the evidence that we have heard from others as part of this inquiry. Indeed, others have indicated that there should be, essentially, equal access. On what basis are you saying that there needs to be an increased price for the regions?

**Prof. Green**—If you look at the cost of providing telecom services, there is a lower cost to providing the infrastructure in the urban or the well-developed areas than in the rural and the remote areas—particularly the backhaul issues. Most of the people I have spoken to are in fact happy to pay \$60 to \$80 for their broadband or internet connection. That same figure you will not find being paid here, and they acknowledge that that is because they are in the regions and they have the benefits of being there. What they are objecting to is having to pay four and five times. We are looking at probably a 60 per cent increase in prices in the regions compared to the high-density areas like your Bunburys, your Geraldtons, your Kalgoorlies and your Perth areas. You need to give the infrastructure provider a return on his investment, and I think it is wishful thinking to say, ‘You are going to get it at the same price,’ unless government actively contributes to that process.

**CHAIR**—To the extent that some might suggest that there is, essentially, subsidisation involved with the government’s proposition, some might say that that subsidy should be directed towards providing equal access for regional users at, for example, the same price as metropolitan users.

**Prof. Green**—I would say equal access to the infrastructure—in other words, the same data rates and everything else. I question the equal pricing, because people realise that if they do go to the rural and remote areas there must be an increase in cost, that you do need to compensate the carrier and that there are increased maintenance costs and everything like that. It is also based on my experience in Rhodesia and from what is coming out of the UK with the guys in Reach that I talk to, and they are saying that, yes, they do have an increase in cost.

What they are finding is that there is a greater demand for internet services the further away they are from the larger centres and, if I can refer you to a Western Australian government report where they investigated the demand and need for telecommunication and TV services, they found the same thing: the further they were away from Perth, the greater the demand and need for broadband, and there was an acceptance to pay a small increase or a reasonable increase in premium. The objection was that if it is more than twice then that is being unreasonable.

**CHAIR**—I hear what you are suggesting. If I understand you correctly, your organisation provides consultancy services to clients, so you are already, I would have thought, representing that group that is prepared to pay something to get over and above. To what extent can you consider your group representative of those who are not wanting to pay above the odds to get equal access?

**Prof. Green**—I am also a director of ATUG, so I get a lot of queries from people as to, firstly, can they get it, and the coverage of Next G in Perth, in the south-west in particular, is appalling, so they are losing out, and Telstra told them as recently as Monday that they will need to go back to dial-up.

I deal with a lot of people. Some have said they want it as cheap as possible and, because everybody is saying ‘equal access’, my advice to them is, ‘That, I don’t think, is going to happen in the long term. If you can get it now, go for it, and if the government will pay for it, that’s great.’ But all of them are saying, ‘We need the internet service and we need it at an adequate bandwidth,’ and the important criterion is that they are fed up with having to dial up, log on, go away and have a meal, let alone a cup of coffee, before they can get it.

I am also going to refer to a study that was done some time ago in America by the Association for Computing Machinery where they found that the tolerance of users for internet access was about 10 seconds. That fact still seems to be the driver today. So the demand for bandwidth is not so much about how much you download, it is about the response time for the user, because if they get frustrated waiting for it and they get a sense of inefficiency then they basically will not get the benefits out of it.

**Senator BIRMINGHAM**—Dr Green, I want to jump across a few issues that you have raised, if I can, quickly—firstly, the proposals you have around local government powers. What is it that would currently prohibit local governments or state governments when releasing parcels of land from requiring that the developers of that land ensure that certain telecommunications infrastructure is installed?

**Prof. Green**—They have been very well trained, educated and browbeaten into believing that telecommunications is not their part of the infrastructure provision, that it is the responsibility of the carriers only. The one problem I have an ongoing battle with in the shires is that I say, ‘No,

you can do it,' but, every time, they get told by the state planning authority, 'No, it's not part of the core planning.' This is where I believe the federal government and certainly the state governments should in fact be putting it out that communications, along with the roads, the electricity, the sewerage, all that the developer has to provide right now, are now part of the infrastructure that needs to be provided with a plot. At the moment, telecommunications is not within the planning act, and that is where the biggest difficulty is. We need to get the state governments to actually put in the planning act that, for any new properties that get developed, the provision of telecommunications infrastructure needs to be in place.

Another problem—and I can sympathise with the shires on this, and I have already mentioned it—is that there are new residential estates being built because there is no backhaul. Each state needs a telecommunications plan which says, 'This is where the major routes or paths are going to be going. If we're building a road, we will put the conduits next to it,' in the same manner as the Perth-Mandurah railway line, and what I am hoping is the Bunbury-Peel bypass. That will give the shires the motivation to say, 'Communication is important. There is a plan. This is how we are going to connect in the future.'

At the moment, that is not happening, and it will not until there is some leadership shown by the federal and state governments. The attitude that telecommunications legislation or telecommunications is only a federal issue needs to be changed, and I think that can come from them: 'You actually plan. You lay out the infrastructure; you lay out the roads; you plan where the new residences are going. That is clearly your responsibility. The federal government is not there to do the local state planning.'

**Senator BIRMINGHAM**—You are talking there, in some ways, of a cultural shift. You are saying that it can be done, of course, legislatively. There is nothing that inherently prevents that.

**Prof. Green**—There is nothing, providing the developer can see the end result and he has got an argument he can put forward. At the moment, the two components are (a) it is not in the legislation, and (b) if he does not see any form of connection, why should he do it? And that is a very difficult argument, because I think you can all understand that if you can put \$1,000 or \$2,000 into a developer's pocket he is going to take the money; he is not going to spend it. So they do need, I believe, some kind of regulatory and legal support in that, and at the moment that is not there.

**Senator BIRMINGHAM**—One of the other recommendations that you have made is that the network—I am talking about the NBN, and I think this is in your submission to the expert panel—be technology neutral. Do you believe that the current proposal is suitably technology neutral?

**Prof. Green**—The answer is no, because there are no standards for the streaming or the voice video, videoconferencing, multimedia or TV. So it needs to be as technology neutral as possible, but I do not think that can be achieved, and it is because it cannot be achieved where we have a RIM—I believe the new bottleneck—that basically the infrastructure provider can determine and, if you do not have a structural separation, it could create a lot of problems for competition. So, while the demand is there, in reality, if you look at technology standards, the answer is, 'No, that is not going to be achieved.'



**Senator BIRMINGHAM**—It is not going to be achieved. I think along the way in your answer there you said it is not possible to be achieved. Is that your position? You do not believe that a technology-neutral solution is possible?

**Prof. Green**—For the web and internet and email services, yes, it is possible to deliver that so that the likes of the different ISPs can deliver different networks. I might add that there is a new concept—and I only picked this up on my recent trip to the UK. The real case is for a national infrastructure provider who provides the links between the different points and the links to the customers. We are already seeing our internet service providers who will buy international access from one provider, who will buy backhaul usually from Telstra, and will then provide their own connections to the customer; and that is just the internet.

We are also seeing medical networks, which now have a much higher security and reliability, and higher bandwidth issue, where they are buying separate switches and devices to connect the various hospitals and medical consultants. The big thing is to get the diagnostic information to the consultants and then get it back to the hospital while the patient is there. These networks have completely different designs and demands, so the technology-neutral component is to allow people to build these specialised networks.

I see them for teaching, internet provision, medical, accounting, defence, and there will be some large government agencies who have had it. If you look at the large mining industry, running a mine from Perth requires a completely different network to the provision of internet services in the regions. The technology-neutral component of the NBN should allow people to deliver or build those networks. The standards for that and the technology are available to do that, and that perhaps qualifies my discussion on technology neutral. The support of those specialised networks must be catered for and included.

What I am expecting to see is that different people will come up with different ways of handling the streaming services and that is simply because of the lack of standards and the immature technology that we have available today.

**Senator BIRMINGHAM**—The last point that I wanted to ask you about was your proposal as to how the 98 per cent coverage should be defined. You suggest that it should be defined as, ‘All towns of more than 100 people should receive the NBN.’ It is an unusual definition. Firstly, is there any science or rationale behind how that comes to be 98 per cent? Secondly, why have you picked that figure of 100 people?

**Prof. Green**—If you take 98 per cent of the people in Western Australia, you will find that they are in communities of more than 100 people. So, if you are defining 98 per cent, it is quite possible to leave out three-quarters of Western Australia and cater for more people in the eastern states, whereas if you put a definition of, ‘Ninety-eight per cent will be achieved by servicing these communities,’ then you will get a more equitable result. At the moment, the 98 per cent is subject to what I call the problem of averages. Yes, somebody can get 98 per cent; but you could completely leave out large areas of various states and still achieve the 98 per cent.

**Senator BIRMINGHAM**—If you are applying your definition to the 98 per cent, do you think that a fibre-to-the-node network is the applicable solution for all of those towns of more than 100 people?

**Prof. Green**—A year ago I would have said yes, but there have been some recent advances in wireless technology that look like there are wireless solutions that can be delivered, so for your rural community the focus should be fibre access to the community.

As I say, there are new technologies that are capable of delivering the required 100 megabit bandwidth to the small business and the 12 megabits to the people in that community. Certainly within the towns, greenfield, fibre to the home, fibre to the premises should be mandated. For existing estates, you need the backhaul to the community and you can then use the wireless.

**Senator LUNDY**—Thank you. I want to acknowledge the points you make in your recommendations about the engagement of local governments in particular into any infrastructure built and ask you, as you were with Senator Birmingham, to develop a little more about how you think local governments ought to be required to engage. I know you are aware, as I am, that several local governments have chosen to mandate certain requirements for developers. How do you see that being progressed through our various decision-making structures—be it COAG, of which ALGA is a member, or indeed through state legislature which governs our local government frameworks—to compel local government to engage more directly in providing for a standard, particularly for greenfields development, be that business or residential?

**Prof. Green**—In terms of that, it should be through the online council.

**Senator LUNDY**—The ministerial council?

**Prof. Green**—Promoting it through there. With the improved federal support, even the few people I have spoken to in the current state government here are thinking, ‘Yes, this is a good idea. We need to get it going.’ The significant point is that the cost of building the national broadband network will be reduced significantly because 80 per cent of the cost of building or putting fibre into the premises or the node or home in fact is the civil infrastructure, the conduits, the pipes under the road and everything else. Through the BCS, there is a broadband study group in the UK, and they came to the same kind of figure. My experience in WA is that 80 to 90 per cent is in fact the infrastructure cost because we are a less dense community than you have in the UK.

This is where I quote some of what I call the forward thinking shires that I have dealt with: whenever they upgrade the pathways at the side of the road, or they are doing a road upgrade, they actually do put in the conduits and set aside land for the new mobile tower and they set aside land for the head end. Those communities are definitely flying. These guys have services that parts of Perth—I am talking metro Perth—would love to have, but that is simply because of the leadership of the particular individuals. We need to drive that with legislation down through to all of them.

I know all the shires are short of cash and everything else, but the cost of putting conduit when you are doing a road upgrade is probably a five per cent increase. To get a carrier to do it? I quoted that it was \$1.5 million to do the conduit next to the Perth to Mandurah railway line. To do it at a later date, it was \$6.6 million. Again, if you have a conduit down to Bunbury, that will reduce the cost of feeding Bunbury on your NBN quite dramatically. The impact is that the federal government actually have a financial interest in getting that kind of leadership and

legislation passed or agreed to by all the states, because it is going to reduce the cost. If you go back to and look at the costings of the NBN, a lot of it is about, 'We don't know what the civil engineering infrastructure costs are going to be.'

**Senator LUNDY**—What about the state governments' role in placing requirements on, say, greenfields residential or industrial developments for a standard for the provision of a broadband service?

**Prof. Green**—I believe they should be doing it, yes. You only have to look at the disaster that Malaga is in, which is just to the north of Perth here, where they are struggling to get adequate broadband, and yet this is a relatively new commercial area.

**Senator LUNDY**—One example that illustrates some of the points you are making comes to mind for me. I think it was the Central Coast of New South Wales where a developer promoted a new estate as fibre to the estate. Certainly the developer was under the impression, but also all of the potential residents in that estate, that there would be some high-bandwidth connection. It turned out what they were promoting was a RIM. So the fibre to the RIM was certainly there, no-one was telling any lies, but there was no broadband connection at that time because the fibre went to a RIM, which prevented any ADSL connections. Do you think there is a place for regulating how developers promote their product with respect to telecommunications?

**Prof. Green**—I would have thought that was misleading conduct in terms of what did they really offer. If they just said 'internet connection', well, dial-up is internet connection, so they are okay.

**Senator LUNDY**—They did not say anything other than 'fibre to the estate'.

**Prof. Green**—Okay, fibre to the estate.

**Senator LUNDY**—I do not think there was any breach of the Trade Practices Act. It was just one of those unfortunate examples where we do not know whether the misleading occurred between the telecommunications company, or whether the developer understood the distinction and went ahead with the promotion anyway.

**Prof. Green**—Right. It comes back to my recommendation that, in any new development, they should be putting conduits in from a designated piece of land to the individual homes. If you look at the development in cabling technologies—this is what I call the copper—we have been through cat 5, cat 6 and there is now cat 7 on the horizon. If you look at the advancement in fibre technologies, the fibre technology drivers, we are going to have to change out the cables.

One of the big problems we have in upgrading our telecom network today is that they direct bury the cables. If you have conduits into the place, you can upgrade the estate. I have already done one estate where we upgraded from the coaxial cable, which was predominantly for TV, and put in a fibre network. That gave them all the TV services, plus their broadband and everything. The big problem they had in fact was getting the link from the estate back to Perth.

The message here is that there are advances in cable technology that are causing the cable life to decrease, simply because you will exceed the capacity of the cable, whereas back in the good

old days of copper, for 40 years there was very little increase in demand on its capabilities. Basically we have seen the demand increase—that is where ADSL2 came in—and there is still ongoing research. So you need to mandate that the people put in the conduits and the infrastructure, because that upgrade is going to happen in the future.

**Senator LUNDY**—Two quick questions on a different issue, because I am getting the eye from the chair.

**CHAIR**—She knows.

**Senator LUNDY**—With respect to your recommendation to structurally separate Telstra into two separate companies with different boards, can you explain to the committee why the two different boards are important in the structural separation model that you are promoting?

**Prof. Green**—If I can refer to my submission in April 2005, I outlined and described to the committee the major flaw in the Australian legislation that we have got to date, which is that it is not possible to build a legally enforceable economic model. There are too many variables, so many degrees of freedom, that it physically is not possible. Other countries and other regulators have discovered that, whatever they do, they are not going to get a decent outcome and they are moving to structural separation. So that solves part of the regulatory regime.

The other one is, having worked for a telecom, the process of selling the services to the customer and the processes for building the infrastructure have quite substantially different goals and directives. As I have indicated, for the infrastructure, you want to carry as much traffic as possible, because that is how you are going to make money. At the moment, a number of studies have shown that the fibre infrastructure in Australia is probably less than five per cent utilised. That to me is a pointer to disaster.

So the structural separation is that they have different goals, different outcomes and, ideally, they should not be trying to sell to a customer. Their customers in fact should be the retailers. There are plenty of avenues. The old ACIF or the old TAF forums were ideal for establishing those standards so that it was common across all the retailers.

**Senator LUNDY**—Thank you. My final question relates to the point you make about synchronous bandwidth speeds between the supplier and the customer. The points you make about those minimum bandwidth requirements, to what degree should those modern attributes of a quality communications system be built into what we talk about as the USO, the universal standard obligation. Does the review of the USO present an opportunity to reconfigure what those minimum requirements of quality of service are?

**Prof. Green**—I am strongly recommending yes. Again, there is a good case—I will say 12 megabits. If you look at the way people are utilising the internet at home, and having been involved in the design of a fibre network here in Perth and the way people did actually use it when they had the bandwidths, the 12 megabits is actually light.

Bear in mind, ADSL does not have the coverage that people think it has, because you have only got to go—it is a short distance—sometimes two kilometres, maybe if you are lucky three

kilometres, and you will get 12 megabits. Beyond that, you have had it. There are a large number of people who are beyond that three-kilometre limit.

**Senator LUNDY**—ADSL is asynchronous digital subscriber line. How does the promotion of ADSL as a service fit within this particular recommendation of yours about synchronous speeds? Are you saying that ADSL does not have a future if we picked up your recommendation about synchronous—

**Prof. Green**—In any build-out you are going to get fibre to the node and from then on you will then get the build to the premises. This is why I was saying that, in the structurally separated, the person who does build the national infrastructure should be mandated not to strand assets. There is significant investment and all they need is a decent band or backhaul connection and then those things. Bear in mind that this is not going to be a rollout over one or two years; it is probably a five- to eight-year program. In that time the ADSL services will still be valid, so there is no point in cutting them off. I am saying that it should be mandated that they cooperate and work with the existing infrastructure.

**CHAIR**—Thank you, Dr Green.

**Senator IAN MACDONALD**—Dr Green, from an uneducated technologist, I think you said—in talking about separation—that clearly there was one main-line channel which should be owned by the network operator and then others should be able to move off that. Is it correct that you were saying something like that?

**Prof. Green**—That should be the ultimate goal, in that all the switching should be owned by the retailers, because it is in the switching that you get the intelligent services that people want.

**Senator IAN MACDONALD**—As I understand it, both Telstra and Optus currently do have a main line, if I can call it that. If the NBN operator were to take over that main line, depending on who it is—or if it is anyone, as it is increasingly looking, and perhaps this is not what you said—I understood you to say, as others have said, that the main line—the trunk line—should be owned by the wholesaler and others should use it. But if the wholesaler is to own the main line, it really means that the government or someone would have to confiscate the existing main lines of either Telstra or Optus, does it?

**Prof. Green**—No, because there is significant investment already in place to allow a third party to construct, hire or in fact buy some assets that will give them quite a bit of the—especially inter-capital city.

**Senator IAN MACDONALD**—Yes.

**Prof. Green**—And there are opportunities for growing the fibre or building the parallel fibre network into the regions.

**Senator IAN MACDONALD**—But are you saying that we then might have three parallel lines between the capital cities, one owned by Telstra, one owned by Optus and one owned by the new NBN operator, if it happened to be not one of those two?

**Prof. Green**—Let's take the case right now between Perth and the eastern states. We actually have four fibre cables. The big problem that all of them face is that it takes a week to repair the cable if it goes down, so they have no backup. Where Telstra were able to undermine the other three, including Optus, it was that they were the only ones who had an alternative network and could offer a backup service, because they actually had two fibre cables.

So the NBN should be allowed to hire or buy capacity on the existing infrastructure and then build where there is no infrastructure, because there are places where, yes, the infrastructure is good and there is no point in the NBN building it. That is why I come back to my policy statement: the new NBN should be mandated to interact and use the resources that are available and not strand assets, so that they can take advantage of what is already there, reduce their build and increase the rollout. They should target and focus on the areas where there is a lack of infrastructure.

**Senator IAN MACDONALD**—So, of the four lines running across the Nullarbor at the moment, you are saying that the successful NBN bidder should be mandatorily given access to one of those at an arbitrated commercial price?

**Prof. Green**—There are already commercial prices available for them. Yes. If you look at how AARNet has built its network, that is a good basic model for the NBN to start from, because they have had to hire the long-term infrastructure and build their own switches. So we are not saying that NBN should not be allowed to exclude the infrastructure. We are saying it should be mandated to cooperate and work with the existing infrastructure providers. It may be that the existing infrastructure may not be adequate and they deem it necessary to build a new one. They should be given that opportunity.

**Senator IAN MACDONALD**—The last company you mentioned, that is the fourth one running across the Nullarbor, is it?

**Prof. Green**—No, AARNet actually buy their capacity on two of the four companies. So they have actually got backup. They bought capacity on two lines.

**Senator IAN MACDONALD**—So they do not run their own line?

**Prof. Green**—They have hired it, yes. Particularly in WA, we desperately need an alternate fibre link up to the north for the mining and manufacturing. There is one line, which is Telstra, and the prices are exorbitant. In that case, the NBN should be building its own capacity, because they will get lower price for a greater capacity.

**Senator IAN MACDONALD**—But it would run parallel to Telstra's, if it were not Telstra's?

**Prof. Green**—It would run parallel, yes, and it would promote competition, which is the other key thing that has driven the advances that we have here in Australia.

**Senator IAN MACDONALD**—Is that the most efficient way to do it, though?

**Prof. Green**—Yes. In your long haul you want duplication. You need it for reliability. What two of them are trying to do is offer each other equivalent capacity on each other's line so that if

one goes down they keep going on the other one. In fact, from a national security point of view, running one line is a disaster. So it is not a case of overbuild. There are issues other than that.

**Senator MINCHIN**—What is to stop somebody doing that right now?

**Prof. Green**—We are trying to do it, but at the moment we have no leadership or guidance. There is no access to the tail end, to the customer. That is blocking them. You go into Karratha or Port Hedland or whatever it is; they then need to go to the individual customers in that area, and that is the problem.

The large mining groups have got the money. It is quite possible they will say, ‘Okay. We will build a link from your node into our mine site,’ but they are just like one customer. They need a lot of customers to get the traffic to justify their investment. That is where the NBN can provide a significant advantage. It will actually help those who have already built fibre.

**Senator IAN MACDONALD**—But if the NBN operator is not Telstra—let’s hypothetically say it is Optus—how would they overcome the problem that you say is currently there preventing Optus from doing it?

**Prof. Green**—The regulatory needs to include that they will be mandated access to the copper to the premises at the moment. The copper is going to be a core part of the solution for the NBN for the next eight years while—

**Senator IAN MACDONALD**—Mandated at a price?

**Prof. Green**—Yes. Make it at a price. The difficulty is—and this is where I have said there is a flaw in legislation—working out what that price is.

**CHAIR**—Thank you very much, Dr Green, for your submission and for your time today. You have given the committee some information to think about.

**Proceedings suspended from 1.16 pm to 2.01 pm**

**FRONTINO, Mr Anthony, Managing Director, CipherTel Pty Ltd**

**CHAIR**—The committee welcomes Mr Frontino. Thank you for your tolerance and for your time today. I think you have been in the public gallery for most of today, so your persistence, I am sure, reflects your experience in the sector. You have heard that the proceedings today are public. If you wish any part of your evidence to be given in private, you can request that that be the case. The evidence that you do give is protected by parliamentary privilege. If you wish to object to answering any of the questions asked by either myself or my colleagues, you might provide the grounds upon which you wish to do so and the committee will consider that. We do not have a written submission from you, Mr Frontino, so would you care to make an opening statement to the committee?

**Mr Frontino**—Yes, thank you. We are a small ISP in Bunbury, Western Australia, probably one of the oldest in the state. The ISP was originally called Gateway Internet Services and was established in 1993. CipherTel have been the owners of that particular ISP for the last five years, and over the last five years we have found that the industry is constantly altering, moving, and we have had to reinvent the business time and time again to keep up with the market demands of the particular products that are now being offered in the internet business.

Over that period of five years we have probably absorbed some smaller ISPs as well, and what we are noticing is the trend of smaller regional community ISPs dropping away. There are very few of the small ISPs left in rural areas—in the regional areas—because of the economics of running an ISP today. It is becoming too expensive. It is very hard to compete with the product at a wholesale level and then try to resell it.

The other aspect of the business is trying to keep up with the bandwidth requirements in rural Australia. We probably pay three to four times what it would cost to deliver services in, say, the capital cities of Australia. For a one-megabit feed into Bunbury, where we are located, we are paying about \$1,000. An equivalent feed into Perth could be acquired for maybe \$250 to \$300. So straightaway there is that uncompetitive edge where we are trying to compete with the larger organisations. The reason the business is having to diversify is that we cannot be just a simple ISP any more; we have to offer other services to the community so that we can stay a locally based community service.

What we have done over the last five years is build our own radio network in the south-west. It is quite extensive and it comes all the way back up to Perth. The reason we have done that is obviously to try and minimise the cost for our end customers. We have had the ability to deliver in excess of 12 megabits to the people of the south-west for probably three years. Unfortunately, we cannot afford to give them that 12 megabits now.

The reason for that is that we do not have the economy of scale in the smaller areas. Where we could get backhaul at a reasonable price, we could then redistribute that to the general public at a comparable price to what they would be paying in metropolitan areas.

Over the last three years we have sustained the business by diversifying and developing techniques to deliver services to local government, and state government in certain areas. We do



larger mining areas and small business. The main part of our revenue is structured from those types of businesses. So we cannot actually make a model out of the domestic mums and dads type of product. In building a business model in Western Australia, where we have 33 per cent of the land mass and only 10 per cent of the population, which gives you a ratio of roughly two people per square kilometre, you can see the logistics of trying to deliver a high-speed service and then only picking up one or two households. They all demand that they have some sort of high-speed broadband, and HiBIS has helped in delivering some of those services to some of those areas. We also provide a wholesale service to some of those HiBIS providers.

In a nutshell, what I would like to see with the national program is assistance whereby we can get broadband backbone to regional Australia—regional Western Australia obviously—at a cost-effective price. If the system rolls out a broadband network that allows us the ability to have 100 megabits, we as a small organisation cannot afford to buy that product only to service maybe 100 people, so there are definitely some issues that need to be addressed in relation to how they roll the program out and access to the nodes. We have no trouble with the technology that we have, delivering it for the last mile. In some cases the last mile is 100 kilometres. This last-mile technology has developed and has gone a long way in the last two or three years, and there are no issues with delivering it further abroad than fibre to the node.

Yes, we would certainly like to have the ability to plug into a national network, but I believe that the costing is very important for regional Australia, to make it a viable proposition for smaller ISPs like ourselves to still be in the marketplace.

**CHAIR**—Thank you, Mr Frontino.

**Senator LUNDY**—Can you describe for the committee, perhaps even in more specific terms, why those economies of scale are not there for you as a company when you are required to purchase the backhaul bandwidth at the price you are currently required to purchase it at.

**Mr Frontino**—Because our area is so widespread, there is a carriage fee involved. Say we take a feed down to Bunbury, and that might service a population of 10,000 people. We then have to take that service another 100 kilometres or 200 kilometres out to another region, but we are not going to be able to get it for the same price as in the regional centre. Every time we carriage that feed another 100 kilometres or 200 kilometres—and we might only want 10 megabits aggregated—we are going to be paying the same price for those 10 megabits at that point, whether it is in Bunbury or 200 kilometres away. Economy of scale does not come into it, as in, ‘Yes, we might be purchasing 100 megabits of data total.’ It is the fact that we have to move that 100 megabits of data so far around the countryside.

**Senator LUNDY**—Given you have described that as being one of the reasons why it is not viable for you to provide these services, what are your specific suggestions or ideas about either the structure of the sector or the access regime and associated costs for access that you may like to articulate and recommend to the committee?

**Mr Frontino**—When we talk about regional Australia and capital cities, this particular area is only 170 kilometres from a capital city. We should not be paying six to 10 times the price for the data as our counterparts do in capital cities. There is no reason why the pricing structure could not take this into consideration. We are not saying that you need to deliver this service to every

small community in Western Australia, because I do not think that that will be viable. Let smaller industry look at resolving the last-mile solutions but concentrate on the regional areas that have populations over 20,000 or 30,000 people but are still paying huge costs for their data.

**Senator MINCHIN**—What are you suggesting? That that cost differential should be subsidised, say, by the government; or regulated pricing or what? How do you solve it?

**Mr Frontino**—Typically, regional Australia always suffers, whether it be fuel prices or any utility price. The cost to deliver to a regional community is always higher than to a capital city. But what the government needs to look at is that the revenues that come from these regional communities tend to be a higher percentage of what is actually coming out of capital cities, so I do believe that these facilities should be subsidised to some degree where there is a flat pricing structure; not to all places, I understand that, but mainly to major regional areas.

**Senator LUNDY**—So would fixing a fair or an equitable price for that backhaul bitstream be the best way forward for your company?

**Mr Frontino**—One of the issues is obviously wholesale in metropolitan areas. We have a choice of wholesalers we can go to. Under this scheme we are not going to have a choice of wholesalers to go to, otherwise it will be a wholesale over a wholesale arrangement. So it looks like we are going to get back to a ‘one pipe, one carrier’ scenario. We do need to be protected with the price structure, otherwise nothing is going to change. As I said, we could have delivered 12 megabits three years ago to 50 per cent or 60 per cent of our area but it is economically not viable to do so because of the cost structure versus capital city versus regional Australia.

**Senator LUNDY**—Can I put it to you this way: as a company operating in this space and affected directly by this issue, would it be better for your company to have that wholesale issue resolved and be confident in a fair and equitable price in the future—that is, this could be one of the outcomes from NBN—or is your preferred view that, as a company and as a service provider, you attract some subsidy to offset those costs of wholesale access? Is there a preferred model that you have?

**Mr Frontino**—I think both models have merit. What we are finding is that with certain programs there have been in the past, we have seen our market share decline, where we have not been able to compete because we do not have a subsidy to offer six months free internet or free installation, so that is why we have had to refocus the business to offer local services, to promote the business as a local ISP providing a local service to compete with the free six months internet. So, yes, I can see merit in both of those.

**Senator LUNDY**—Okay. Thanks.

**Senator IAN MACDONALD**—Just for the record, Bunbury, which I remember well, is, what did you say, about 150 kilometres away from Perth?

**Mr Frontino**—It is about 160-odd kilometres by road.

**Senator IAN MACDONALD**—How many people?

**Mr Frontino**—Bunbury now has a population of about 100,000 within its regional area.

**Senator IAN MACDONALD**—Why are the local governments and mining operations dealing with you rather than with Telstra or Optus or iiNet?

**Mr Frontino**—A lot of our work now does come from the major carriers. It looks like the major carriers are not interested in the last mile. It becomes too expensive for them to put engineering in to do a link that might only be three or four kilometres. When they give those costs to the end client, the end client says, ‘I can’t pay \$1 million for a feed.’ That is what has happened in the last two and three years. The majority of our business is basically handed to us by the larger carriers saying, ‘We have clients on the outskirts. They are temporary construction sites; they are only going to be there for two years. They want a 10-megabit feed. Can you accommodate them?’ I would say, ‘Yes, we can. We can do it very quickly, very cost-effectively.’ Normally we have the system up and running within maybe a month to two months.

**Senator IAN MACDONALD**—And you get it from more than one of the big guys, or are you associated with—

**Mr Frontino**—Yes, basically every week we have inquiries. We have one coming from Telstra now for Fitzroy Crossing. We have done links in Broome and Karratha, basically these last-mile type connections, where they do connect to a larger carrier. The larger carrier will then transport the data, or we transport the data for the larger carrier, to their end client.

**Senator IAN MACDONALD**—So you are not confined, obviously, to Bunbury if you are doing work in Fitzroy Crossing.

**Mr Frontino**—No, we are basically doing it state-wide and we even have some interstate interest.

**Senator IAN MACDONALD**—This is your RF?

**Mr Frontino**—RF, yes. We do a combination of RF. We do DSLAMs. We will put DSLAMs into mining industry, and also retirement villages. What we are finding is that the retired community or the retirement village do not want to be signing 12-month or two-year contracts. They would prefer to have a month-by-month type plan. They are not high-volume users, but they do want something that is a bit faster than dial-up. What we can do is offer them a localised DSLAM solution. It is normally fed by an RF link, which then goes back to a wholesale provided service, and we can do that very cost-effectively for those particular clients.

**Senator IAN MACDONALD**—Were you familiar with the OPEL proposal?

**Mr Frontino**—Yes, very familiar with that. The reason we were familiar with that particular proposal was that the product that we use and deploy, which is the Alvarion product out of Israel, was the product of choice by OPEL to be deployed through the rest of Australia. We have probably had the first base stations in Australia up to five years ago, so they used some of our infrastructure as basically a test case on what could be provided, where and how.

**Senator LUNDY**—What impact would it have had on your business?

**Mr Frontino**—Again, the OPEL footprint was still only picking the low-hanging fruit, as everybody says. When we looked at the maps of OPEL, we could still see that there were a lot of black spots that were not going to be covered by the OPEL solution, so we did not feel that it was going to affect our business because we had moved away from the model of trying to compete in that domestic delivery of internet services.

**Senator IAN MACDONALD**—Sorry, let me understand that. You are saying you would still have worked in the black spot areas?

**Mr Frontino**—We would still work in the black spot areas, yes, most definitely because, as I said, the footprint of the OPEL maps still left out a lot of areas that were not covered.

**Senator IAN MACDONALD**—So how can you deal in the black spot areas where the big guys can't?

**Mr Frontino**—Basically, we cannot do it for the domestic market. We can do it for the corporate market. We can very quickly and easily deploy a base station. We will co-locate with other carriers or other tower providers and basically get into a black spot very quickly.

**Senator IAN MACDONALD**—You are using wireless, then?

**Mr Frontino**—Using wireless for most of the backhaul solutions, yes.

**Senator LUNDY**—Wireless for backhaul, so microwave?

**Mr Frontino**—Basically microwave, yes. So we use wireless for backhaul. We also use wireless for multipoint deliveries of services. WiMAX is a product that is not very well utilised here in Australia yet. The technology is still evolving. The products for WiMAX are still evolving as well. Within the next 12 months we will probably see most of the mobility products coming into Australia—laptops, PDAs—being WiMAX-ready for Asia, Europe and America, but there are no WiMAX facilities here in Australia.

**Senator IAN MACDONALD**—And the Yorke Peninsula, I think, in South Australia.

**Mr Frontino**—Yes.

**Senator MINCHIN**—Yes, under the Broadband Guarantee.

**Mr Frontino**—There are small pockets that are starting to play with the WiMAX technology.

**CHAIR**—Mr Frontino, how do you do what you do? Do you use your direct labour force to roll out your services?

**Mr Frontino**—We certainly do. We use our direct labour force and contractors.

**CHAIR**—How many do you employ?

**Mr Frontino**—There are six of us that are directly employed and then there is an array of contractors that we use.

**CHAIR**—What do the contractors do for you?

**Mr Frontino**—Climb towers mainly. Basically cabling. Field work.

**Senator IAN MACDONALD**—What do the six of you do? Are you selling?

**Mr Frontino**—Basically it is made up of administration and system control or NOC centre control.

**CHAIR**—So, to the extent that you are out there doing, it is essentially a contracting workforce, is it?

**Mr Frontino**—No. We have only got two subcontractors. The rest of the work is mainly done in-house. We do look after the biggest privately owned medical database in Australia. We look after most of the medical fraternity in the south-west. As I said, we have local government links; we look after local government. We have got state government. We are also working with homeland security aspects. So we are quite a diverse small company.

**CHAIR**—So do you have any perspective on the ability of the market, and the hands-on bit of the market, to deliver the national broadband network in terms of setting up?

**Mr Frontino**—Western Australia is going to be a logistical nightmare for this particular program, just given the sparseness and the population and the return of revenue from the amount of money they need to spend. Somehow I do not think the figures are going to weigh up for a commercial venture to say, without some sort of subsidy, ‘We are going to be delivering fibre to the node to all these small communities.’ They keep saying ‘98 per cent of the population’, but in Western Australia 98 per cent of the population is not within four kilometres of a RIM or an exchange in regional and rural Western Australia. It is based around easy pickings, I think.

**CHAIR**—What do you think is meant by ‘98 per cent of the population’?

**Mr Frontino**—I would say that they are looking at the eastern seaboard, where it is basically a denser population. We have got 10 per cent of the population in Western Australia, so you take away 10 per cent from the 100 per cent and you are left with 90 per cent.

**CHAIR**—So you are doing a crude but understandable mathematical equation.

**Mr Frontino**—That is correct.

**Senator MINCHIN**—You have identified this backhaul issue.

**Mr Frontino**—It is probably the biggest issue.

**Senator MINCHIN**—I am not quite clear how you see what we all think we understand to be Labor's national broadband network proposal solving that problem. Can you just explain how you see it solving that problem?

**Mr Frontino**—I suppose in its current form it will not. I think that the program needs to be more focused on backhaul. I am sure that comments that have been made over the last couple of days of your inquiry have brought up the issue that backhaul is probably the biggest issue that all ISPs face throughout Australia—not necessarily delivering it to the home at this particular point in time. Whether it is delivered by DSL or by wireless or by fibre, the backhaul does not exist to the actual node as it stands.

**Senator LUNDY**—To follow Senator Minchin's point, is that because of the constraint it has on your capacity to compete in those existing markets and to reach out into markets where there is currently no competition? Is that really the heart of that issue?

**Mr Frontino**—Most definitely. If we could buy the backhaul at the same price as our city counterparts, we would have delivered high-speed broadband to the region three years ago, but we could not make a viable business model to do so. I have people ringing me every day saying, 'Can I have high-speed internet?' I say, 'Yes, you can. We can deliver it. We can deliver it within two or three days. But you won't be prepared to pay the price that it really costs us.' That is why currently our whole business model is based around corporate and government. It is to sustain viability and still be there.

**Senator LUNDY**—Do you have a view on whether that problem could be resolved? And given the point made, I know, by other senators that the regulatory issues surrounding this program are still needing to be clarified, do you have a view on whether they would best be clarified by looking at the structure of the industry and some potential structural separation, or do you have a view on whether the outcomes could be achieved by a stronger and more effective access regime and perhaps setting of prices by the ACCC regarding the cost of that backhaul bitstream?

**Mr Frontino**—A pricing structure that was set for backhaul which basically gave the opportunity to all ISPs throughout Australia to use the backhaul, whether it is with data or it is just a raw channel, would certainly improve the business models that small ISPs have in undertaking delivering services to their communities.

**CHAIR**—Mr Frontino, thank you very much—unless there is anything else you would like to say in closing?

**Mr Frontino**—On the infrastructure that is being put into place, we talk about conduiting for fibre or for networks. I think it is important that local government does get involved, that town planning or planning infrastructure gets involved, and that the infrastructure for these services is planned for well in advance, before the roads go down and the bridges are built. I think Dr Green mentioned the Bunbury bypass. They have been battling there for several years, saying, 'Let's put the conduits in for that particular fibre whether the fibre is there or not.' Now there have been 12 or 13 bridges built, and overpasses and underpasses. It could hugely minimise the cost to put fibre in at this point of time versus putting it in two years down the track when the price could be 10 to 15 times higher.

**CHAIR**—Thank you, Mr Frontino. Thank you for your Bunbury and broader regional message.

[2.30 pm]

**MONKS, Mr Peter, Acting Chief Executive Officer, City of Perth**

**CHAIR**—Welcome, Mr Monks. Thank you for your appearance before the committee today. The evidence that you give will be public. It is subject to parliamentary privilege, which means that any attempts to influence your evidence or influence anything in respect of the evidence provided before the committee can be unlawful and can be regarded as contempt of the Senate, as can providing false or misleading information to the committee. If you wish to object to answering any of the questions put to you today, please say so, and please state the ground upon which you wish to do so and the committee can then consider your request. Have you got an opening statement that you would like to make to the committee?

**Mr Monks**—Yes, I have. I will take the opportunity to reiterate some of the points in the submission from the Council of Capital Cities Lord Mayors, which I am representing today on behalf of my CEO, Frank Edwards. The CCCLM made a submission to the inquiry because a major broadband network is vitally important to ensure that Australian cities remain globally competitive. The capital cities of Australia are the engine rooms of economic growth in Australia and are responsible for 78.3 per cent of economic growth in the country over the last five years.

The CCCLM *Partners in prosperity* document released in 2007 supported communication carriers to dramatically increase bandwidth by increasing capacity, upgrading to a higher bandwidth infrastructure, developing technologies that squeeze more bandwidth out of existing infrastructure and developing compression technologies that squeeze data in fewer bites. You will have the CCCLM's submission before you, so I will not repeat all of the points, but my capital city colleagues were keen that I reiterate a few key points for this inquiry to consider.

The first point is the importance of the need to separate the ownership of the broadband infrastructure from the operation of service providers. It is considered that there is an inherent conflict of interest in being the owner of the broadband infrastructure network and also being a service provider in competition with other service providers. In a variety of subtle or not so subtle ways, the owner of the network can restrict access to other service providers if it is perceived to conflict with their own commercial interests if they were also the service provider. This conflict is removed if the two systems are owned separately. Any future broadband system needs to protect the public interest and be fully open to everyone. The CCCLM considers that all users should be charged equally to access the network.

The second point is the need to ensure that any system is fully open in a technological sense so that everyone can receive and provide services on the network. Peer-to-peer capability is an important principle to pursue with any network. It is also important that the system is symmetrical so that download and upload sizes are the same, which they are not at present.

The third point was the importance in planning for the future by providing optical fibre to every home and business in Australia. The existing copper cable rollout, I understand, is not adequate to service Australia's needs in the future and does not reflect the optical fibre approach that other countries are providing at present. There may be vested interests proposing the



retention of the existing copper cable system, but I understand this does not reflect international best practice.

The fourth and final point essentially is to improve the way that telecommunications infrastructure is rolled out. This last point could easily be forgotten when dealing with the higher level technological components of any new network. However, local governments throughout Australia, and especially within the capital cities, have had many frustrations with telecommunication companies installing their infrastructure over many years.

Councils spend tens of millions of dollars each year improving the quality of their city streetscapes and public spaces that are continuously dug up and poorly reinstated by a whole variety of private contractors acting on behalf of telecommunication companies. Some parts of the city streets in Perth contain more pit lid covers than paving slabs. Pit lid covers continue to be ad hoc in design; do not comply with local specifications; are located at a variety of angles at the footpath; are invariably not level with the surface, creating trip hazards for pedestrians; street trees are being killed by cabling work; dead tree stumps cannot be removed because they would disturb cabling wrapped around the roots; and there are several footpaths in the city where street trees cannot be planted because of the extent of services on the footpath. I am happy to circulate some photos from the streets of Perth that help to illustrate this point.

The Telecommunications Act exempts much of these works as being minor works. The City of Perth, along with its other capital city colleagues, has employed officers whose sole job is to follow the contractors around at night to try to make sure that the reinstatements are done to the city's standards, with varying degrees of success.

Without labouring this point, it is simply requested that, in the preparation of any new legislation or regulations for the new broadband network, consideration be given to the impact that any installation works have on the streets and public spaces of our communities and a comprehensive regulatory framework is established that minimises these impacts.

That is my opening statement. I am happy to take questions but I do advise that my area of professional expertise does not include the technical detail of the broadband network information contained within the CCCLM's submission. I am happy to provide follow-up answers to any questions the inquiry members may have. I do note that the inquiry was also taking hearings in Brisbane. I do not know if that has occurred as yet or not.

**CHAIR**—It is ahead of us, Mr Monks.

**Mr Monks**—My CCCLM colleague, Dave Jackson, is the appropriate officer who has been assisting the CCCLM in this submission.

**CHAIR**—In respect of the technical aspects?

**Mr Monks**—Yes.

**CHAIR**—Thank you very much, Mr Monks, for that opening statement. For those of us who are motivated pictorially, the photographs that you have offered might be of interest and are for circulation around the committee today.

**Senator LUNDY**—It is really good to see the CCCLM taking such an interest in this issue. We have heard a lot of focus on rural and regional areas to date and I know the CCCLM brings very much a capital city focus, which is also welcome. To what extent has the organisation done any economic assessment of what we have missed out on with respect to economic growth or potential economic growth because of some of the constraints on accessing broadband in the past, and can you point to any studies or reports or investigations by your organisation into those constraints and what it has cost us as an economy in the various capital cities?

**Mr Monks**—I understand the question. I am not personally aware of whether we have that sort of information that you are after. What the economic impacts are of that particular infrastructure is the question we ask on any of our policy committees. I am on the CCCLM's sustainability and infrastructure committee and we have not, as part of that committee, considered the question of broadband and the economic impacts of broadband. But I am certainly happy to follow up with the CCCLM head office in Canberra and forward on to the inquiry any information that we have that would assist.

**Senator LUNDY**—That would be welcome. But to pick up on the point about sustainability, I do know that one of the issues raised about broadband access and reliable, affordable broadband access plays into the issue of traffic congestion in cities. The concept of telecommuting, if broadband were ubiquitously available, presents itself as another option to perhaps ease congestion on our roads, which I know is an issue that preoccupies the CCCLM to a great extent.

**Mr Monks**—I agree with the sentiment entirely.

**Senator LUNDY**—I will leave it at that, but I will be interested to see if you can dig up anything that you have done, because I do think it is important that this committee has an insight into the effect of cities as well. We know that through the late nineties and the early part of this decade high-density developments within cities were often installed with technology that was essentially a broadband blocker. Does the CCCLM have any policies, or do you think you should have policies, which require, through that local government regulation, new developments to facilitate broadband access, or certainly not to block it? Do you know if there is anything like that on the books of the city based local governments?

**Mr Monks**—I do not believe there is. Each state has its own planning legislation which dictates what conditions you can impose on any development that comes before you.

**Senator LUNDY**—Right.

**Mr Monks**—From the Western Australian example, I do not believe there is the legislative power to impose that as a condition. You could certainly request it.

**Senator LUNDY**—What about local government by-laws or something like that?

**Mr Monks**—I am not sure whether the local law would cover that sort of provision. In most cases, of course, building owners and developers want to provide facilities to attract tenants, but we have not tackled the blocking component of that.

**Senator LUNDY**—Thanks.

**Senator IAN MACDONALD**—Are you aware of what speeds the Perth City Council gets in your administration?

**Mr Monks**—I am sorry, I do not know that.

**Senator IAN MACDONALD**—In your own personal situation at work, is it pretty fast or pretty slow?

**Mr Monks**—My experience both at home and at work is that it is relatively slow. I have just come back from a four-month sabbatical in America, in Boston. The comparison is extraordinary between what we accept for broadband standards here and what I was experiencing in Boston.

**Senator IAN MACDONALD**—That was not the answer I was expecting. You would have a fairly big IT section in the Perth council.

**Mr Monks**—Yes, we do.

**Senator IAN MACDONALD**—I was going to ask if you could get that information for me on notice, but I think we are seeing Brisbane City Council in Brisbane, aren't we? Is the Brisbane City Council coming to see us in Brisbane? Well, would you mind getting your IT people to do a slow email around to all of their colleagues in the other capital cities just to get me an idea of what sorts of speeds the councils in each of the capital cities are getting. I would have expected that you would have been getting as good as anyone in Australia.

**Mr Monks**—My point was not so much a comparison with other Australian cities—

**Senator IAN MACDONALD**—No, with Boston. I appreciate that.

**Mr Monks**—but my experience in Boston.

**CHAIR**—Perhaps your colleague who is providing evidence to us in Brisbane could communicate that at the time. That is another way to do it.

**Senator IAN MACDONALD**—Are we getting someone in Brisbane?

**Mr Monks**—I can ask them. I will certainly ask the question.

**Senator IAN MACDONALD**—For those that know what they are doing, which is not me, a one-line email would get you an answer straightaway, if you would not mind passing that on.

**Mr Monks**—I will do that. I will pass that on.

**Senator IAN MACDONALD**—That is really all I had.

**Senator MINCHIN**—On that point, you should not feel embarrassed. In that AiG survey the other day, 50 per cent of the ICT sector respondents had no idea what their speeds were.

**Mr Monks**—I just had my system at home sped up, so I am thinking I should know the answer to that.

**Senator MINCHIN**—In terms of this NBN rollout and what you said about what I think you described as the Telecommunications Act and its exemption for telecommunications companies, could you give me a bit more detail on that.

**Mr Monks**—The Telecommunications Act exempts low-impact facilities from being providers.

**Senator MINCHIN**—Exempts them from any, what, local government regulation?

**Mr Monks**—That is correct, from the requirement to obtain planning approval or a permit. The act does require works to be reinstated to a satisfactory standard but, without a formal approval process, we have found that difficult to enforce from time to time. I must admit, that having an officer following people around and, on the spot, making them dig something up and do it again is proving effective, but it is a somewhat cumbersome way to deal with it.

**Senator MINCHIN**—What gives you the power to do that?

**Mr Monks**—I think it is just simply peer pressure on the spot.

**Senator IAN MACDONALD**—You would have by-laws about interfering with your footpaths, I would have thought.

**Senator MINCHIN**—No. That is what he is saying: they are exempt, apparently.

**Mr Monks**—Exactly. They are exempt from requiring either an approval under a planning approval or an approval under a Local Government Act local law.

**Senator MINCHIN**—What is low impact? There is a definition, is there? It allows, what, virtually all the things that we saw in those photos to be done without any local government permission, authority or oversight at all?

**Mr Monks**—Yes. They do not require approval. There is a clause in the act that refers to a reinstatement to the standard that it was before, and that is the opportunity that we have in talking to the person—that they have not reinstated it as it was before—more so than the local law. That is the mechanism that we use.

**Senator MINCHIN**—One of the interesting things about this NBN, as we understand it, based on fibre to the node, is that there are going to be tens of thousands of what some described as miniature exchanges built all over metropolitan Australia, which are variously described as things the size of fairly substantial refrigerators sitting on footpaths.

Nobody has ever really talked about or considered how that is all going to be done; how that fits in with local government regulations; what role local government will have in that; and the extent to which local communities will have the opportunity to say, ‘Well, no, thanks very much. We’re actually happy to stay with our copper rather than have these things sitting on our

footpaths.’ Are you familiar with this issue and the extent to which these mini-exchanges would be exempt from local government planning?

**Mr Monks**—No, I am not aware of the specifics of that.

**Senator MINCHIN**—I would suggest that local government in Australia may want to get its head around all this, because it is, to me, one of the real sleeper issues in this whole NBN proposal. I think it would be very important for local government to focus on that and on its role, because I think it is going to be quite controversial. I do not think anyone has really thought it through.

**Mr Monks**—At the city, we have been trying to identify landholdings that the city owns that we could make available to an infrastructure carrier to install these sorts of facilities. We own a lot of property as public parks or reserves or streetscape places, as well as private freehold property. So that has been our response to try to facilitate where facilities are located. But if that sort of structure were being put on footpaths and public spaces indiscriminately around the city, that would be of real concern.

**Senator MINCHIN**—Yes, because I do not think these would escape by way of the low-impact exemption. I think they would be subject to planning requirements, which is another major factor, unless there were some attempt at a federal level to try to exempt them.

**Mr Monks**—The low-impact facilities are defined very much as the sort of size of the pit covers that are shown in the photos. If it is above 600 millimetres, then it is meant to require a planning approval. If it is lower than 600 millimetres, you could get away without a planning approval.

**Senator MINCHIN**—Anyway, I would be interested if the local government did take up this issue. Thanks.

**CHAIR**—Thank you very much, Mr Monks.

**Proceedings suspended from 2.48 pm to 3.15 pm**

**HAILES, Ms Allison, Executive Manager, Western Australian Local Government Association**

**McGUIGAN, Mr Philip, Western Australian Local Government Association**

**CHAIR**—Welcome to WALGA, the WA Local Government Association. Ms Hailes and Mr McGuigan, thank you for your attendance today and for the evidence that you are about to give, and your submission as well. The evidence that you give is public. If you wish at any stage for any part of your evidence to be provided in private, you may request that, and the committee will consider it. Your evidence is subject to parliamentary privilege, and attempts to influence a party giving evidence to this committee are unlawful and can be found to be in contempt of the Senate, as can be providing false or misleading evidence to the committee. If you wish at any stage to object to answering any of the questions that I or my colleagues may wish to ask you, you may do so, in which case please state the ground upon which you are objecting to answering the question, and the committee will consider the appropriate course of action from there. At this stage do you wish to amend or vary what you have provided to the committee thus far?

**Ms Hailes**—Thank you. The association has not provided a written submission; therefore, we might just make comment.

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

**Ms Hailes**—Thank you, Senator, and Senator Macdonald and Senator Lundy. During the time provided I would like to give a brief introduction of myself, my colleague and my organisation, a short summary of the main points of our position and then take questions from the panel.

I am the Executive Manager of Planning and Community Development at the Local Government Association. My colleague is Philip McGuigan, the ICT Policy and Programs Manager. WALGA—the WA Local Government Association—is the peak body for local government in Western Australia. We provide an essential voice for almost 1,300 elected members, some 11,000 employees and almost two million constituents in WA. We have 139 councils in Western Australia that are our members, so we have 100 per cent membership at the moment, and the association provides professional advice and offers services to members around the state, with the intention that they provide financial benefits to the local governments and to the communities that they serve. Our aim is that local government in WA will be built on good governance, autonomy, local leadership, democracy, community engagement, and diversity.

In terms of ICT specifically, the association currently provides a range of ICT support and services to the sector. We have approximately 80 local governments that utilise those ICT services in various manners; therefore, WALGA's comments represent a broad voice for our membership base on this matter.

In terms of the proposed NBN, I would like to say that the association supports the development of broadband infrastructure in Australia and we would like to stress the importance of an appropriate regulatory model and enhanced competition in the telecommunications sector.

We recognise the importance of high-speed broadband access to the continued economic growth of the country, and for WA, and also for the equitable delivery of and access to government services, particularly for regional and remote areas. As such, WALGA supports the objectives and desired outcomes of the Commonwealth's proposal for a national broadband network. We strongly support the Commonwealth's proposal to ensure that the network is open access and to consider adjustments to the current regulatory regime.

WALGA considers that the NBN will significantly change the telecommunications industry, potentially creating a new infrastructure bottleneck in the backhaul or wholesale market. WALGA is concerned that the successful proponent of the NBN is likely to control this infrastructure bottleneck and this will provide the proponent with a significant market advantage. We believe the Commonwealth must ensure that industry has competitive access to the infrastructure that is developed and WALGA believes that this could best be achieved through structural separation of the successful proponent of the NBN.

In terms of access and the infrastructure that is developed, WALGA is concerned about the potential for duplication of, or underutilisation of, the existing network. We are also concerned that the NBN will have limited coverage in WA, based on previous population-centric models of funding. We are also concerned about the two per cent of the population that will not be covered by the NBN and believe this could tend to be those in the more remote areas which are currently already significantly disadvantaged in some areas.

Finally, I would like to provide a summary of our key points, which include that we support the objectives of the NBN. We would like to stress the importance of an appropriate regulatory model and we would like to emphasise the need to separate the wholesale and retail aspects of the network. Thank you.

**CHAIR**—Thank you, Ms Hailes. Mr McGuigan, do you have anything to add?

**Mr McGuigan**—No, I do not.

**CHAIR**—Ms Hailes has indicated essentially the capacity in which she is here, but what is your expertise, Mr McGuigan, in terms of your attendance here today on behalf of the Local Government Association?

**Mr McGuigan**—I run the ICT services for the councils, the 80 that Allison mentioned. Most of it is to do with broadband or internet access and I assist in the policy setting.

**CHAIR**—Okay, thank you.

**Senator IAN MACDONALD**—I am well familiar with WALGA over association in years past but just for the record, could you give a broad explanation of what percentage of your councils would be in what you would call regional Western Australia—that is, outside the Perth-Bunbury area?

**Ms Hailes**—Of the 139 councils in Western Australia, I think 111 are country councils and the balance are metropolitan, so we have 29 metropolitan councils.

**Senator IAN MACDONALD**—So you are effectively the voice of country Western Australia, aren't you, across all fields, but through the various local governments in those areas?

**Ms Hailes**—Certainly. We do not differentiate our membership in terms of country or metro, but membership of the councils in the country areas of Western Australia forms a significant component.

**Senator IAN MACDONALD**—I was around when you used to have three associations. At the time we all realised it was pretty silly.

**Ms Hailes**—Yes.

**Senator IAN MACDONALD**—That is past history. But I do acknowledge that WALGA has a close association with country WA and provides a voice where perhaps others would not normally be heard, because it is in that area that I wanted to talk about the broadband. Are you aware of the sorts of varying access and speeds that your member councils, outside the Perth region, get from the broadband at the current time?

**Ms Hailes**—I will make a brief comment and then perhaps Philip will provide more information. My understanding is that councils that are in significant regional areas or regional centres enjoy a reasonable level of broadband coverage. However, for the balance of the country councils, that can vary significantly. I believe that we have about half a dozen country councils who have ADSL2 or equivalent access, but then we also have a number of councils who are still on a dial-up arrangement, so there is a huge difference. My understanding is that the infrastructure exists in the relevant exchanges but that that is not available at the moment or it is cost prohibitive to make those arrangements with the carrier.

**Mr McGuigan**—Following on from what Allison said, some of the councils can get up to 24 megabits per second, but they are in the more centralised remote areas, mainly down south and the south-west.

**Senator IAN MACDONALD**—Just on that, and no embarrassment to him, I asked the representative from the Council of Capital Cities Lord Mayors, who is a Perth guy, how the Perth City Council went and he was not aware. He was going to find out. Would they be getting 24 megabits per second?

**Mr McGuigan**—Sorry, which council?

**Senator IAN MACDONALD**—The Perth City Council.

**Mr McGuigan**—I would have thought so, because they are smack in the middle of the metro area with all the fibre-optics going by. When you step to, say, Bunbury and places of that nature, which are major metropolitan areas outside the city metropolitan area, you will get fairly high bandwidths. When you start to go to the more remote sites, you are lucky if you are getting one megabit. Some of them are 512 kilobits per second, so it is a wide variety. Of course, that is assuming that they actually have the infrastructure out there. There are many sites that do not have the ability to use broadband or internet. There are places that do not have coverage at all.



**Senator IAN MACDONALD**—Are there? What, council administrations that do not have access?

**Mr McGuigan**—I imagine there would be some in there.

**Ms Hailes**—The association has been told by member councils that, as long as they address the last-mile issue, then they can have access to broadband. But the councils find it cost prohibitive to put those sorts of arrangements in place. The association did run a project which was formerly funded by the Commonwealth government under the broadband aggregation demand program.

**Senator LUNDY**—I was going to ask you if you aggregated demand for those contracts for the councils.

**Ms Hailes**—We did. We had a broadband aggregation broker located in the Great Southern and we worked with the state based broadband aggregation brokers. I would have to say that the aggregation process of working with the community and with local businesses worked well but the anecdotal feedback that we received from the broker that was engaged by the association was that a broadband service was fortuitously provided by Telstra just before any other service provider moved into the market. So we had a situation where the aggregator was developing interest in the service provider market, may have had three or four service providers interested, and had been told previously by Telstra that it was not viable to provide a service in that area, but just prior to the other service providers implementing anything, Telstra would flick the switch, so to speak.

**Senator LUNDY**—Pull the price out of the bottom drawer. We have seen it before.

**Ms Hailes**—Yes. Undoubtedly, providing a basis for aggregation and development of the level of interest in broadband in those small communities did improve the situation there and did create interest with the service providers, but I am not sure how much ongoing competition that has actually provided.

**Senator LUNDY**—Probably none.

**Ms Hailes**—Yes.

**Senator IAN MACDONALD**—Have you made a submission to the government about the national broadband network proposal?

**Ms Hailes**—No. The association has made submissions previously on reviews of telecommunications and also on the prospective sale of Telstra prior to previous tranches but, in regard to the NBN specifically, we have not made a written submission.

**Senator IAN MACDONALD**—You are aware that the proposal is that the government will subsidise the proposal for up to \$5.7 billion, and there is media commentary that the whole thing might cost anywhere from \$10 billion to \$30 billion, but people pick on \$15 billion as a ballpark figure. Does your association have a view on what way the government's contribution of up to \$5.7 billion should be used?

**Ms Hailes**—I might make a general comment and then ask my colleague to make a further comment. Our primary concern is that existing infrastructure will be duplicated, so our preference would be that any additional funds spent in improving national infrastructure for telecommunications would be to either improve or enhance the infrastructure that is already there. But certainly in any future arrangement we see it as critical that the ownership of the infrastructure is separate from any retail services that are provided across that infrastructure.

**Mr McGuigan**—I would like to see the funding spent in underserved areas, in those communities that do not have reasonable access to telecommunications. You will find that in the bush there are many places that have a small amount of infrastructure but that could really do with a lot more, and that is really where the funding should be spent. The metropolitan areas seem to be well serviced, as does the south-west, but as you go up north and into the bush—east—you will find that the servicing is not very good.

**Senator IAN MACDONALD**—You said, Mr McGuigan, in answer to my question, ‘I would like’. Is that WALGA’s official position?

**Mr McGuigan**—Yes. WALGA’s position would be that it should be spent on the underserved areas in the first instance—on the remote and rural areas.

**Senator IAN MACDONALD**—That is a formal position of the association?

**Ms Hailes**—Our state council has previously resolved that, in any future development of the telecommunications industry, whether that be the further sale of Telstra or the development of infrastructure, we recognise that in the metropolitan areas there are some black spots and that those need to be addressed, but there needs to be parity of access within the regional, rural and remote areas and that that inequity in terms of availability and pricing et cetera would need to be addressed as a priority.

**Senator IAN MACDONALD**—There is no clarity of where the taxpayers’ \$5.7 billion is going, but many people have suggested to us that it should be, as you have suggested, in underserved areas, and they have been talking about a roll-in of the broadband rather than a rollout of the broadband. But that would be fairly high on your priorities? Sorry, no, let me not put words into your mouth. That is something that you would be very keen on?

**Ms Hailes**—Yes. We would like to see that there is a level playing field and that country areas enjoy the same standard of services and the same level of pricing as their metropolitan counterparts. If that means rolling in as opposed to rolling out, then that would be our position.

**Senator IAN MACDONALD**—Thanks for that. My final question just for the moment is a difficult question which you may not be prepared to answer. You have been aware that there has been a lot of talk about nation-building infrastructure across the whole spectrum—dams and roads and

railways and schools and hospitals and everything. First of all, do WALGA have a view or a policy—but, if not, would you like to hazard a guess—on where WALGA would place decent broadband to the whole of Western Australia as opposed to every other infrastructure priority that I know all your councils have been considering, as they have right around Australia? So: (a)

do you have a policy, do you know; or (b) would you hazard a guess where it would be in the list of priorities?

**Ms Hailes**—We do not currently have a policy. We are working on developing a submission to Infrastructure Australia. In terms of where broadband per se sits—or I talk about telecommunications infrastructure—as you would be aware, the roads and rail networks are obviously a high priority and I would suggest that telecommunications infrastructure would be not far behind that, and then obviously regional and community infrastructure would come into the picture as well. I would expect that telecommunications infrastructure would be one of the higher priorities for country councils, and I think that that is not just for the local governments to provide services to their constituents but, rather, to enable regional and economic development, particularly in country areas.

**Senator IAN MACDONALD**—Are you intending to do a survey of your member councils in relation to Infrastructure Australia or infrastructure generally, asking them to list their priorities? Is that part of your investigations?

**Ms Hailes**—Yes. Through our internal economist and also our infrastructure section we are consulting with our members on the priority projects in infrastructure for submission under any funding that is available through Infrastructure Australia, through the Major Cities Unit or through the regional and community infrastructure fund as it becomes available.

**Senator IAN MACDONALD**—I know councils, from long association with them, would always go for a road.

**Ms Hailes**—Yes.

**Senator IAN MACDONALD**—But in this day and age I would not be surprised if most of them would not now indicate that good telecommunications infrastructure is even more important than a road. That is just a guess.

**Senator LUNDY**—Perhaps. That is actually my question. I wanted to ask you, to follow up this direct point from Senator Macdonald, where does WALGA rate the relative importance of broadband on that list of issues that you see as critical to the economic future of the regions and of councils, and the social future as well? On the scale of relativities, I guess, what is the relative importance?

**Ms Hailes**—In terms of globalisation, the state's international competitiveness, the continuation of the growth that we are experiencing in WA and our varied regional areas—and the metropolitan area for that matter—being able to compete in that market, it is critical infrastructure. It would rate highly. In terms of just the social fabric of the community, the networks that are available and also the connectivity of people in remote and rural areas to core government services are critical. Telecommunications play a significant role in a myriad of facets of Australian life, particularly in rural and remote areas.

**Senator LUNDY**—Thank you. Mr McGuigan, can I ask you, because of your familiarity with the actual connections and broadband contracts et cetera, what are your observations about why councils would need higher bandwidth networks, particularly in relation to this point about

service delivery to constituents and the ways in which councils in the future will extract cost efficiencies utilising digital technology?

**Mr McGuigan**—One of the problems at the moment is that a lot of the councils actually do not get the services that the metropolitan areas get and therefore they are disadvantaged in terms of providing certain services. Their constituents are remote as well, so therefore it is hard for them to actually come into a council office. It would be worthwhile if they could stay at home and do their banking or whatever from home and therefore access the facilities of the local governments as well. So that, and allowing them to get what we generally take for granted in the metropolitan areas, is probably one of the biggest benefits .

**Senator LUNDY**—One of the observations I have is that we have seen some metropolitan councils do extremely well because the vast majority of the citizens in their areas do have connectivity, so they are able to extract terrific economies of scale and cost efficiencies by providing digital services online, whether it is licensing or submitting planning applications—all sorts of things. I am trying to get a feel for what efficiencies particularly rural and regional councils cannot exploit because of lack of broadband networks with the citizens they represent. From WALGA's point of view, how does this mess with your future plans? How does this constrain you as an organisation that I know develops a lot of these digital initiatives on behalf of your membership councils? That is what I want to know.

**Mr McGuigan**—Without having the broadband facilities in the local community, some of the initiatives that we have set up we are not actually able to roll out there, so therefore the community and the local government cannot participate. One of the big things is email. They cannot access information on libraries or they have no access to email. Being remote, it allows them to communicate with other people, because some of the farms are a couple of hundred kilometres apart. So it is more about community spirit.

If you are able to put the infrastructure in place, then hopefully businesses will stay and they will encourage industry to come into the community. That will encourage people to stay there and you will not have a migration of the younger people out of the communities.

**Senator LUNDY**—Ms Hailes?

**Ms Hailes**—I would like to add that everyone is aware of the development of e-government services or e-government and the desire to have joined-up government. Certainly local government would like to participate in that. The association, as you mentioned previously, has run a number of programs whereby we have aggregated or coordinated projects to deliver online services through a huge number of local governments. As a consequence of previous federal funding, 80 councils are now able to provide limited—but some—online services.

We do see that 24/7 access to local government services is highly desirable—just having online access to planning or building applications, dog licences, all of the services that councils do provide. We are also strongly supportive of e-democracy. For services that require cooperation between spheres of government, particularly things like emergency management in times of crisis, having access to the broadband technology to enable all of the parties involved in those responses to be communicating together is critical.

Then there are also shared business services. One hundred and thirty-nine councils in Western Australia use separate business systems. They are all paying separately for those business systems. So at the moment we do not have economies of scale. We have identified that there are a huge number of areas where that could be alleviated and so we strongly support the development of shared services across local government. In fact, it is one of the key tenets of our Systemic Sustainability Study report.

That report identifies that there are significant benefits in councils working together on a regional basis and sharing a lot of the infrastructure that exists. That is dependent upon them having the level of telecommunications access that is required to support those platforms. So we are looking at providing services or infrastructure or technologies to the councils in a way that aggregates and therefore creates economies of scale so that the councils themselves can be more efficient in delivering those services and also in their internal processes and systems.

**Senator LUNDY**—Indeed, perpetuating all the good reasons why the number of councils remains the same and they can still function as they do within their communities on a sustainable basis.

**Ms Hailes**—That is right. In our Systemic Sustainability Study the recommendations highlight the need to ensure that local democracy exists.

**Senator LUNDY**—Is strengthened.

**Ms Hailes**—In a state as big as WA, that is even more critical, so we would like to see that the elected representation in those communities remains, but where councils are using business systems or plant and equipment or infrastructure that could be leveraged across a number of councils, that those levels of cooperation be encouraged.

**Senator LUNDY**—Sure. Keeping it in the realms of telecommunications, you are quite right to raise whole-of-governments or multigovernment—all spheres of government working together—because, from a federal policy and a state government aspiration, they are wanting to deliver more effective services in an online environment. But it is really the efforts of local government and connectivity made in those local communities that determines whether or not that is possible at a state or federal level as well. That is my observation of it, but it is good to hear from you that you are thinking that way already. You are already thinking of the role that you play in conjunction with the other spheres of government.

**Ms Hailes**—Yes. Thank you, Senator. For a number of years now we have considered that, particularly in those rural and remote areas, there are significant opportunities for the councils to be a hub, if you will.

**Senator LUNDY**—Yes. Especially with the configuration of rural councils in WA. I know that is quite unique.

**Ms Hailes**—That is right. So we support hub-and-spoke models. We would support engagement of the community through local government. Certainly the aspiration of whole-of-government or joined-up government services would be fantastic and in some areas I think local government, being the shopfront for government, is an untapped opportunity.

**Senator LUNDY**—I have always had that view. You are the closest to the community. Local governments, I think, have been the great innovators—not all, because not all have the resources, but some have been quite extraordinary and world-leading innovators in the area of online services. So congratulations for the role that you have played in that.

**Ms Hailes**—Thank you.

**CHAIR**—Ms Hailes, you mentioned, in response to Senator Macdonald, road and rail. Other witnesses have suggested that that could perhaps be used as part of the rollout. You could use the road and rail infrastructure to deliver on the national broadband network. Does your organisation have a view on that?

**Senator LUNDY**—It was about putting in place conduits.

**CHAIR**—Yes, conduit. I am sorry, I left that bit out. In particular, perhaps the wisdom of doing that, particularly when you are building that infrastructure in the first place.

**Ms Hailes**—Yes, the association has considered that issue previously and we have advocated that in new developments, whether they be subdivisions or whether it be roads infrastructure, where it is possible to put conduit through so that that public space can be used by a number of providers without the need to continually retrench and put new cables through or what have you, that is preferable.

The one thing that councils experience difficulty with is that at the moment the various service providers do not coordinate their infrastructure works and so a council can have a footpath that is dug up, has new infrastructure put in one week, it gets rebuilt and the following week another carrier will come along and do the very same thing. So reinstatement works are a real problem, and that lack of coordination, as I said. Particularly in greenfield sites where you are pushing new infrastructure through, the use of conduit would be preferable.

**Senator LUNDY**—In relation to the constraints on local governments about how much they can get involved in approving telecommunications infrastructure under the federal legislation, those rules are there for a reason, too, and that is to facilitate the rapid rollout of desirable telecommunications infrastructure. Do you as an organisation have a formal view about that, or are there any modifications to those current rules that WALGA have been advocating specifically that might get the balance perhaps a little more favourable to what your view is?

**Ms Hailes**—Yes. The association made quite a comprehensive submission when the Telecommunications Act was first developed and then during review, and local government's position in WA has been that it is opposed to low-impact facilities being exempt from requiring planning approval. That has been in the past due to concerns from residents but then also due to the ad hoc way that the infrastructure has been deployed and the amenity impacts et cetera.

Local government does recognise, however, that there are public works that are critical to the services that are provided to residents, just in terms of the universal service obligation. So I would suggest that things have improved since the code of practice was introduced and that, with the change in the infrastructure that is used and it becoming smaller et cetera, local governments have, I suppose, lessened the concerns that were raised.

**Senator LUNDY**—That was over 10 years ago. Was it in the 1997 legislation that that went through?

**Ms Hailes**—Yes. We have had issues raised since then. We have endeavoured to work with the carriers groups to resolve those. We have endeavoured to encourage carriers to co-locate wherever possible and to coordinate works. What we want to avoid is a proliferation of individual infrastructures that are a blight on the amenity. But we would consider that the carriers have taken steps to address some of the bad practices that were perhaps demonstrated early on.

**Senator LUNDY**—With respect to the rollout of NBN, which will be at some point, is there any specific role that you think local governments ought to be able to play with respect to the physical rollout of that network? Is there one issue, whether it is co-locating pits or something like that, or some specific element of that that you would like to see local government have more of a say in? Please take that on notice if you would like, because your answer will be important to us.

**Ms Hailes**—Thank you, I will take that on notice and provide commentary at a later date. But I do know that in the past councils have expressed interest in existing infrastructure that they have—whether it is masts or antennas et cetera—that sit on high spots in country areas being utilised by carriers to enable the provision of better services or a broader footprint to their community, so they would certainly be willing to have a dialogue about the use of council infrastructure to support the network.

**Senator LUNDY**—Terrific! Thank you. We have had quite a few witnesses today mention the perspective of local government and it has been a really useful dimension to this inquiry.

**Ms Hailes**—Thank you.

**CHAIR**—Indeed. Thanks, Ms Hailes. Thank you, Mr McGuigan for your time today and your evidence. That completes our fourth day of hearing into the national broadband network and we resume in Brisbane. So thank you, colleagues. Thank you, secretariat. Thank you, Hansard.

**Ms Hailes**—Thank you for the opportunity.

**Committee adjourned at 3.59 pm**