

**REPORT OF PROCEEDINGS BEFORE**

**STANDING COMMITTEE ON BROADBAND IN RURAL AND  
REGIONAL COMMUNITIES**

**INQUIRY INTO BROADBAND IN RURAL AND REGIONAL  
COMMUNITIES: KEY ISSUES FOR FURTHER INVESTIGATION**

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**At Sydney on Monday 23 June 2008**

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**The Committee met at 9.30 a.m.**

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**PRESENT**

Mr P. J. Costa (Chair)

Mr A. J. Constance

Mr D. R. Harris

Mr G. F. Martin

Mr G. K. Provest

Mr S. J. R. Whan

**ALAN JAMES BROWN**, Farmer and grazier, Chair of the Rural Affairs Committee and Vice-President, New South Wales Farmers Association, Gundamain, Tarcutta, New South Wales, sworn and examined:

**BRIANNA CASEY**, Senior Policy Officer, Rural Affairs, New South Wales Farmers Association, level 25, 66 Goulburn Street, Sydney and

**RICHARD JOHN WIDOWS**, Policy Officer, Rural Affairs, New South Wales Farmers Association, level 25, 66 Goulburn Street, Sydney, affirmed and examined:

**CHAIR:** I am advised that you have been issued with a copy of the Committee's terms of reference and a copy of the Legislative Assembly's Standing Orders Nos 291, 292 and 293 that relate to the examination of witnesses. Is that correct?

**Mr WIDOWS:** Yes.

**CHAIR:** I draw your attention to the fact that your evidence is given under parliamentary privilege and you are generally protected from legal or administrative action that might otherwise result in relation to the information you provide. I should also point out that any deliberate misleading of the Committee may constitute a contempt of Parliament and an offence under the Parliamentary Evidence Act 1901.

Would you like to make a brief opening statement before we proceed to questions?

**Mr BROWN:** I would very much like to do that. I would like to just run through briefly where we have been with this and where we think we are going and then leave it open to questions from the Committee. First, I am Vice-President of the New South Wales Farmers Association. I am also chair of the Rural Affairs Committee, which has the carriage of this important topic. I am a farmer east of Wagga Wagga so, I also have a personal interest in broadband telecommunications, as you would realise. New South Wales Farmers is an apolitical, a voluntary industry body representing the majority of commercial farm operations throughout the farming community in New South Wales. Access to affordable, reliable and metro comparable—and that is the key issue—telecommunications services is a key issue for farmers and rural communities, particularly in regional and remote areas. The association, and particularly the Rural Affairs Committee that I am chair of, continues to be a very active participant in the telecommunications debate, particularly in highlighting key service and market failures within rural and remote areas. Therefore, your Committee's inquiry is of interest not only to the association but rural communities more broadly. I am sure you have copies of our submissions so I will not go into great detail but I would like to touch on a few key issues.

First is the OPEL cancellation. A recent cancellation of OPEL has left some big question marks around future investment in broadband infrastructure in regional New South Wales, particularly the time frame for this investment. For example, the OPEL contract promised broadband speeds of 12 megabits a second to 99 per cent of the population by June 2009, whereas the Federal Government's National Broadband Network proposal has been touted to deliver 12 megabits a second to 98 per cent of the population by 2013. The problem for New South Wales Farmers Association is that the bulk of our membership in the last 2 per cent, so we have a vested interest.

Next is the ISDN closure. We are closely monitoring this year's ISDN closure. We are concerned that Telstra's withdrawal of its ISDN services at the end of 2008 will leave many people in regional New South Wales with limited broadband Internet options that may in some cases result in a step backwards in service. For example, Telstra's Next G broadband service, although this service is now available to a wide and growing proportion of the population, in terms of price, it is still a long way from being defined as a metro comparable service. I would add to that patchiness, because if you look at the Telstra maps and then talk to people on the ground—and you are talking to one of them right now—the service is nowhere near what the map says it is. In my case, the only way I can get service in a lot of areas where I work is to climb on the roof of a tractor, and it is not a pretty sight. I have to do it occasionally because it is the only way you can get it to work. If you start talking about putting broadband into areas like this, you have to consider that the bulk of the houses in our area are located in the valleys. They were put there long ago because of water supply issues. So, to get some sort of wireless broadband down into those valleys is quite difficult. While the Next G is very good where it works, it has to be able to work where customers are.

Obviously dial up the Internet represents a dramatic backward step in technology, and I do not think I have to tell you how bad that can be. It will be unacceptable for most businesses and regional users. With the satellite service under the broadband guarantee, we are concerned that the ISDN closure may increase demand on satellite services under the Australian broadband guarantee. Given the uncertainty surrounding the future funding of the Australian broadband guarantee, this will need to be monitored closely. It is my belief that we will be left behind in terms of speed for those rural and remote customers where satellite is the only option. Perhaps it is adequate now but it certainly will not be within the next few years. That is a key point. You do not need regional businesses to be left behind in broadband speeds. If you are reduced to satellite only, I suspect we will be left thoroughly behind. This situation is unacceptable, and the association recommends that government prevents Telstra from closing ISDN services until such time as an appropriate replacement service is available that does not represent a step backwards in service.

On the regulation of Internet connections, the high-speed broadband Internet has become a critical service to business and consumer alike, with many businesses now finding their broadband Internet connection to be more important than a basic phone service. Even the way I do business, we use the Internet all the time. I am on two-way satellite, and when you see what other people can do and what I have to do, you can still set the thing going to pick up an Internet site, go away and get a cup of tea and when you come back it is not there. It is just not acceptable any more. You see the way the businesses that supply me work. They work extensively off the Internet. You need high-speed broadband for a whole lot of reasons more than I am saying now. When you provide a service like this people find ways to utilise it even better.

In acknowledging this situation the association is proposing that the regulation of the National Broadband Network and broadband Internet connections in general include amendments to telecommunications legislation and legislative instruments such as the Universal Service Obligation, Customer Service Guarantee and network reliability framework. Amendments would bring the National Broadband Network and broadband Internet connections into line with that currently in place for standard telephone services. A number of legislative instruments are relevant to telecommunications, each requiring a detailed analysis and regular compliance reporting by government in order to assess their effectiveness in meeting objectives.

The effectiveness of the Universal Service Obligation and the Customer Service Guarantee are of particular interest to the association. The Universal Service Obligation key issues of relevance to the National Broadband Network requiring attention are that the Universal Service Obligation must be broadened to include a guarantee that timely and affordable access to future technology be provided to rural and regional New South Wales; the Universal Service Obligation must be broadened to include data standards as well as telephony standards—recognising the important role of the digital data service obligation; and legislated, automatic penalties and a rectification process should be defined for breaches of the Universal Service Obligation.

Key issues of Customer Service Guarantee [CSG] requiring attention are that the Customer Service Guarantee must include Internet access for repairs as well as connections; each of the Customer Service Guarantee criteria must be met for each customer category, urban through to remote, in each State, rather than simply the national average; the Customer Service Guarantee criteria must include a better measure of carrier performance and volume of faults and new installations and must not be based on community size—in other words, it should be geographic, not demographic criteria; and members are reporting regular breaches of the Customer Service Guarantee, but few are complaining to the Ombudsman. This legislated instrument is clearly not being enforced strongly enough. Legislated automatic penalties and a rectification process should be defined for breaches of the Customer Service Guarantee.

In relation to funding for the National Broadband Network, one of the association's most significant telecommunications concerns at present is the Federal Government's intention to redirect the \$2 billion Communications Fund for use in areas other than those solely benefiting regional Australia, as it was originally intended. Although I realise it was the previous Federal Government, the clear basis upon which we were sold the Telstra deal was that the Communications Fund would be put aside and its proceeds would go to making sure that market value was addressed in regional areas. When you remove the fund, there is nothing in its place. There is a vacuum, and we think it is a serious issue.

The Communications Fund was set aside in recognition of the unavoidable market failure that regionally isolated Australians would face in the absence of a regulated national telecommunications provider. Its establishment was a key determining factor in the eventual privatisation of Telstra. The association recognises that the national broadband guarantee will benefit a large proportion of the population and, as such, will require significant investment. However, it should be recognised that the large proportion of rural and

remote Australia will not benefit from the new network for many years, if at all. As such, withdrawing critical ongoing funding for regional telecommunications from the Communications Fund to fund the network is simply not acceptable.

We understand that the Communications Fund was established under legislation which guaranteed that the principal \$2 billion would not be touched and that the interest earned on the fund, which was estimated at approximately \$400 million every three years, would be used only to fund regional telecommunications projects relating to the recommendations of a Regional Telecommunications Independent Review Committee. The loss of reviews regularly of regional telecommunications needs, as a result of changes to the Communications Fund, is of extreme concern.

In relation to Federal lobbying, it is my understanding that your committee not only is collecting locally specific information on broadband performance and possible solutions in the rural and remote communities but also has a lobbying function. As such, the association has an expectation that our recommendations, and the recommendations of others, will be taken forward to the Commonwealth. As you are no doubt aware, there are a number of nationally significant telecommunications inquiries being undertaken this year. We have personally lodged submissions to the Department of Broadband, Communications and the Digital Economy regarding Regulatory Issues Associated with the National Broadband Network in June 2008, the Senate Standing Committee on Environment, Communications and the Arts inquiring into the Telecommunications Legislation Amendment (Communications Fund) Bill 2008 in April 2008, the Regional Telecommunications Independent Review Committee in December 2007, as well as two submissions to your own inquiry.

Obviously, the issues are varied and complex. However, our three key priorities, which hopefully match priorities for your committee, are, first, to ensure that all people in New South Wales are able to access metro-comparable broadband at metro-comparable prices; second, to encourage private investment and provide infrastructure for improved broad band access for rural and remote customers; and, third, to ensure the Communications Fund is retained for its original purpose. I am seeking your assurances that your committee also will be lobbying nationally on these issues.

In conclusion, I thank the committee for tackling such a complex and diverse issue of such high importance to farm families and rural communities. The association is committed to working with government and service providers in seeking solutions to ongoing telecommunications challenges of importance to our members. I will be very happy to try to answer questions if I can. Thank you for inviting us to attend. Hopefully we can provide some value to your inquiry.

**CHAIR:** Thank you very much, Mr Brown, for your very comprehensive opening statement.

**Mr BROWN:** I am sorry. I dragged it out a bit.

**CHAIR:** No, it is good because I can cross off half the questions. Well done, and we do appreciate your frankness. I will ask a question in relation to Code Division Multiple Access [CDMA] and transitional arrangements. The closure of the Telstra CDMA network has been a big issue throughout regional communities, as we all know. Would you like to make a comment on how well the transition to Next G has gone for rural communities?

**Mr BROWN:** Generally, reasonably well. There are still some residual problems caused mainly by the quality of handsets that were out there. We still have problems getting some people to come in from the cold, essentially. They are generally people who had a reliable service but then, when they go into an unreliable area, they find out that their handset is not up to it. We have been working very closely with Telstra on this. After some time they actually grasped the nettle and did the job of getting those crook handsets out of the system. Generally speaking I would say that the level of calls that we are getting has fallen away quite dramatically. Given all the hairs that were on the transition process, I think it has ended up being quite reasonable, but we still have ongoing concerns, as I was saying earlier, with this patchy coverage. It is a fact of life. We do not expect that Telstra could ever cover the whole landscape.

The problem I have personally is that I am a group captain of the Rural Fire Service. Telstra will jump up and down if I say it, but the fact is that mobile coverage has become essential to a quick response to fire incidents. Where the coverage is patchy, it becomes a serious issue for my people when they are trying to work. I except what Telstra says—that it is not an emergency service, which it is not—but when you have had a CDMA service that was so good that people came to rely on it, and then you remove that and put in something

that is somewhat patchy, they will tell you that it is working. I have even had my local man come around with all his phones on in his car, driving around. He says, "Look, it is all working perfectly." I will say, "Yes, it is. But stop here and try to make the call", and it does not work. There are still problems with that. The problem is that what we had, CDMA, was so good.

**Mr GERARD MARTIN:** Just on that point, are you saying that the new system, Next G, is not as good as the CDMA, or are they pretty much comparable in that where you had problems with the CDMA, you still have problems with the new system?

**Mr BROWN:** It is an inter-related problem. I am not going to pretend for a moment to be an expert on coverage, but what I do know is that even the handset that I have, even though it has the blue tick, still is somewhat less in performance compared to the other machine you could get. There is still a problem of handsets.

**Mr GERARD MARTIN:** Telstra has just issued us with new phones. I think it is the T165.

**Mr BROWN:** Yes, the 165.

**CHAIR:** One of these.

**Mr BROWN:** Yes, that is the one.

**Mr GERARD MARTIN:** Our experience of them is that they are a lot better than the ones we had.

**Mr BROWN:** Yes, they are, but the problem for us is that they are costly. This is \$20 a month but that is \$30 a month minimum.

**Ms CASEY:** And then you have a car kits and aerials and external fittings.

**CHAIR:** That is correct.

**Ms CASEY:** As far as member feedback is concerned, a lot of the criticism we have received from the people who have made the transition from Next G, coming back to your point about coverage, is that it tends to be in different locations. If you look at an A4 sheet of paper and that was CDMA coverage, you may still have an A4 sheet of paper with Next G coverage but it is just that they do not line up perfectly. They might be on an angle. So where you could get CDMA coverage somewhere, you cannot get Next G, and vice versa. That has been a critical challenge for members.

**Mr ANDREW CONSTANCE:** I have noticed it particularly with highway networks down my way because the Princes Highway is not even covered the whole way down. Your poor cocky, who might be out in the coastal valley, is really struggling. In terms of your membership, where are the hot spots of complaints coming from around New South Wales about the patchiness of both the phone service and broadband?

**Ms CASEY:** The short answer to that is "all over". We can get calls from the Tweed area, from people who are less than 20 kilometres from the coast.

**Mr ANDREW CONSTANCE:** Is it more coastal as opposed to, say, the Western Division?

**Mr WIDOWS:** The Western Division is good. That is the one place where generally it has been improved, from what I have heard. But like Brianna said, the maps have just moved a little bit. The people who are jumping up and down are the people who used to have CDMA and relied on it for their businesses, and now all of a sudden they do not have the mobile service and it can be devastating.

**Ms CASEY:** The added complexity to that with respect to the Western Division is the Next G wireless link where people have gone from CDMA wireless local loop as their landline service and they now have Next G wireless link as their landline service. You have a very tricky transitional arrangement with that particular product. While the calls are dropping off to us, I think there are still some issues around that.

**Mr ANDREW CONSTANCE:** What did Telstra do with that issue?

**Ms CASEY:** It had to be dealt with one on one. It was literally a case of every single member ringing us and reporting those concerns, us matching them with the local Telstra representative, their going out to the property with all the sorts of bits of machinery that I cannot give names to, and just trying to work out what the individually tailored solutions were to that particular property. It was not an easy process by any stretch of the imagination.

**Mr BROWN:** I emphasise that Telstra, certainly to us, has been very good in terms of providing resources when we highlight issues. We had to drag them kicking and screaming at the start, but they did get on with the job very well in terms of providing resources to our membership.

**Mr STEVE WHAN:** Can I ask about the ISDN closure? Do you have any idea what proportion of your members are using the ISDN network still?

**Mr BROWN:** I think we would have to take that on notice.

**Mr STEVE WHAN:** We can probably ask Telstra that when they give evidence.

**Ms CASEY:** I believe it is commercially in confidence but we would be very interested to see the answer.

**Mr DAVID HARRIS:** You talked about Universal Service Obligations. I am not 100 per cent clear but I think that only applies to Telstra, is that correct?

**Mr BROWN:** No, it applies only to voice telephony. It is a fixed service in every house basically. It is 2.4 kilobits.

**Mr DAVID HARRIS:** Would you be supportive of an organisation if that were extended to broadband coverage, whether it was a percentage that each organisation had to supply to rural areas?

**Mr BROWN:** Certainly on the first point we want to see regulation in general extended out to cover this because broadband in the last decade or so—it maybe less—has shifted from being a luxury to an essential and we think that regulation should move with that. To answer the second part of the question, we would have to maybe provide a more detailed answer.

**Mr DAVID HARRIS:** A large company would have to have a certain percentage, down to the smaller ones because it would be impossible to make them all do the same. There are a lot of on-sellers?

**Mr BROWN:** Yes, and quite clearly we are a lobby organisation; we are not a how-to-do-it organisation. We ask and say what we think should happen. How it is done is for others.

**Ms CASEY:** The submissions we are working on at present go to the guts of that issue. For us, the crucial issue is moving away from simply a standard telephone service to include current technology that picks up broadband. If the USO and the CSD can include those data standards, how that is applied commercially to service providers is very complicated and it is a matter of politics than policy in many respects, but for us the issue of policy is getting those data standards built in.

**Mr BROWN:** We actually have a unique opportunity at this point in time in ensuring that regional Australia does not become second-class with telecommunications. There is an opportunity here—and I suspect that we are looking at it right now—to keep regional Australia right at the forefront or to let it slide off and become second-class.

**CHAIR:** And that is the lobbying that you mentioned early, that is what we are about too.

**Mr GERARD MARTIN:** We are meeting with our Federal counterparts on 7 August in Canberra to meet with the committee and we have also had a meeting with the committee that was set up by the previous Government and Chair, the former AMA president Dr Bill Glasson.

**Mr BROWN:** We appeared before him.

**Mr GERARD MARTIN:** We are going to Canberra specifically to take our concerns there.

**Mr BROWN:** We would be very interested to provide anything we can to help you.

**CHAIR:** You can be sure that we are advocates.

**Mr GERARD MARTIN:** What you say today will be relayed.

**Mr GEOFF PROVEST:** You have spoken a couple of times about the cost of farming and how this is inhibiting business. Out at Orange a farmer who specialises in breeding merino rams said that all his sales were on the Internet. Have you done any cost analysis of what it is costing the farming community in not having this access?

**Mr BROWN:** I would say no.

**Mr GEOFF PROVEST:** You said, Alan, that you need to have high-speed broadband to do business. What do you do if you cannot get it? Do you drive to a neighbour's place? The Australian people are innovators.

**Mr BROWN:** I would answer by saying that you often need the equipment there before people think of ways to use it. It is very difficult to come up with an idea if you do not have the technology to put in place. To answer your question directly, I find two-way satellite adequate at the moment for the way I operate but I know a lot of people who operate on a much more sophisticated level than I do—larger scale farmers in particular, but not exclusively—that would struggle with the sorts of speeds that I encounter and they need higher speed.

**Mr STEVE WHAN:** Is that particularly the upload speed? I think that is fairly slow?

**Mr BROWN:** Yes, but speed in general. The problem for me is that if you have a business that is contemplating setting up somewhere and you have a choice of places to put the business, and here they are going to get 12 megabits per second while another place they will get 256K, which is what you are talking about at the moment with two-way satellite, what do you think they are going to do?

**Mr ANDREW CONSTANCE:** Do you have any examples of where there has been a failure as a result of that?

**Mr BROWN:** Directly, no.

**Mr ANDREW CONSTANCE:** Just to take it one step further, how does it play internationally in terms of farmers in the United States and the benefits they might have in terms of their telecommunications versus Australia?

**Mr BROWN:** I am certainly not qualified to give you a sensible answer.

**Ms CASEY:** I think the Glasson inquiry is probably hearing those sorts of examples on local, State and international levels. To come back to a point that Alan made at the commencement, it is not just the farmers themselves who are suffering as a result of limited access to broadband; it is rural communities more broadly and part of the brief that we look after is around rural communities and social development. For us, the attraction and retention of skilled professionals is crucial. If we cannot attract young doctors, young lawyers and young accountants into rural areas with some of the basic necessities they get in the city, it presents another layer of challenge for us.

We need to ensure, particularly for our younger farmers and their partners coming through, that they have what they expect to have in the city, and we grew up with basic telecommunications as a basic need. If we can look towards solutions, we will start having a positive ripple effect towards rural communities more broadly.

**Mr BROWN:** I can think of one example. On the little road that I live on there is a senior electrical engineer who lives there and who works for a transmission company. For him dial up was a nightmare. He is struggling along at the moment with two-way satellite but his job does not involve driving to a problem; his job involves being able to see online what the problem is and telling someone out there how to fix it. He complains constantly about his Internet access. The point I make is that I would like to see those sorts of people, who want

to live in the community, which he obviously does, having the capability to do the work that he does from where he wants to leave. Obviously there have to be limits based on geography but this is really not a geographical problem; it is more of a will. The technology exists to do this, if there is a will from government to do.

**Mr STEVE WHAN:** A lot of people got a subsidy of their satellite under the broadband guarantee. Are you finding holes in where the broadband guarantee applies in terms of people who theoretically can get some other technology to their home but they cannot actually get it? Is that something that has arisen? I have seen some examples in my area of that.

**Mr BROWN:** No, I am not aware of that.

**Mr WIDOWS:** I have not come across that very regularly, no.

**Mr STEVE WHAN:** So most people who want a satellite are able to get it?

**Mr BROWN:** Yes.

**Ms CASEY:** That we are hearing about.

**Ms CASEY:** Yes, that is just what we have come across.

**Ms CASEY:** But certainly there is a lot of conjecture about what that situation will be in six months time when ISDN does come to a close and that comes under more pressure. What that means in 12 months time; that will be the crucial issue for us.

**Mr BROWN:** We actually put a fair bit of effort into informing our membership what is out there for them and they tend to react positively to that. They are much more attuned to what is available now than they were in the past.

**Mr WIDOWS:** That is certainly something we have come across. With the ABGs especially people are not aware that it is there or that they have access to it and they will just go ahead and call their local provider and they will not inform them of it because they do not want to necessarily, so we are very conscious about getting that message out there. I think it is quite well out there now.

**Mr GERARD MARTIN:** Is this one of the problems, just getting the right information? We have heard before that it depends on who you talk to what you get told? Do you have any thoughts on that and how it could be improved?

**Ms CASEY:** Many. For us as an association, we are here to represent the interests of our members and we try to provide them with as many services as we can. For us, trying to get accurate, up-to-date information on telecommunications is key. We did a next G survey of members in January this year just to get a feel from the grassroots of what was happening with CDMA, what was happening next G and how members are reacting. It is fair to say that we were overwhelmed by the response that we got. In a five-day period to get more than 1,000 in January from farmers was extraordinary. That is said that farmers were not only aware of the issue but were unbelievably interested in it. So, for us, it has been members giving input to us but also us giving feedback to them. So any major developments we hear about in the world of telecommunications we feed straight back to members through our internal newsletters, networks et cetera because we are finding that they do not always receive that information on a commercial basis.

**Mr WIDOWS:** I think they tend to get frustrated as well. There is a level of frustration with people not knowing where to go. They might call Telstra to report a problem but if you call the Telstra hotline it can take half an hour to get onto an actual person. So having the right numbers is our job. We make sure that we try to inform our members about where to go. But I do not think, on the broader scale, that is necessarily very clear to people. They tend not to know what to do to improve their situation with telecommunications. It is a bit beyond them, so they neglect it.

**Mr STEVE WHAN:** You mentioned that you are concerned about the OPEL consortium being ditched by the new Government. In terms of what is going to come next, what technology do you think can overcome some of the issues for people living in valleys and so on? The wireless technology that was proposed would have also faced a number of those limitations, particularly outside a 10- or 12-kilometre radius.

**Mr BROWN:** We said many times, and very plainly, that we had great concerns about what was proposed by OPEL. But I will say again: We are not a "how to"; we are a "what you should". It appears that the best technology to use with broadband is cable. Whether it is possible to extend the cable from the fibre to the node to a further point—I cannot think of what it is called—and whether that is the best way, we are not sure. It appears as though it is.

**Mr STEVE WHAN:** So basically you are after a much wider rollout of fibre.

**Mr BROWN:** The other way to go, for me, is a much wider rollout of mobile towers because it produces a twin benefit in that you extend mobile coverage and then you can put in the Next G technology. But it has got to go in at a reasonable cost. You cannot expect people to pay what they are presently charging for Next G broadband if they are going to use it on the scale that we think will happen in the future. But, for me, the best solution is more towers. But of course then you run into the problem that Next G is owned by Telstra.

**Mr STEVE WHAN:** Does Next G have reasonable data speeds?

**Mr BROWN:** Yes. Where it works, it works very well. The obvious solution is if you put mobile towers into areas that are barely, or not, economic from a mobile perspective and then have broadband coverage going in, you really are benefiting more people. We are getting considerable pressure from our membership, who want mobile towers built in the area. The areas are clearly not economic for Telstra to build on but if the community can develop sufficient push, and if push becomes extra money from somewhere else to build it, obviously you have a problem then with regulating Telstra.

**CHAIR:** Are you aware of the Yetman model? The Committee was presented with a model from Yetman—it was a community collaboration model that involved bringing the industry and the local community together. The community, in collaboration with Telstra, co-funded the tower. Therefore, it made it a business case for Telstra to run a service there. Have you heard of that one?

**Mr BROWN:** Yes.

**CHAIR:** What are your thoughts on that?

**Mr BROWN:** I am open to anything like that that produces that result. It is a win-win for everyone if we can do it. We always have problems with systems that are not open access. That is always an issue. But if a model can be presented so that people can be guaranteed a reasonable service at a reasonable cost, I am all for it. Once again, we are concerned not about who owns the thing but does it work and how much does it cost?

**CHAIR:** I have a question in relation to the State Government; we have been talking a lot about Telstra. What are your views on how the State Government could encourage competition in rural and regional areas in relation to telecommunications? What sort of role do you think the State might be able to play? Can you put your head around that?

**Mr BROWN:** Yes. My first comment would be that we would always prefer some form of open access model because it does not seem to work unless there is open access. But, beyond that, I will have to take the question on notice.

**Ms CASEY:** Off the top of my head, one of the crucial gaps that I think the State Government could assist in addressing is the question of accurate and up-to-date information—ensuring that rural and regional communities have accurate information on what their options are, doing case studies and writing up case studies like Yetman to say, "If your community doesn't have an economically viable case for a telecommunications provider to have a tower, you can look at a private investment scenario where it is co-funded and done like this." Coming back to the point that Richard made, if you are having a telecommunications problem related to X, ring this number; if it is Y, ring that number; if it is the TIO, ring that number. Our members are hearing it from us but where does the remainder of the rural population get that message? That is a crucial gap that could be filled. I think the issue around private investment is critical for the State Government as well—looking at what the incentives are, how we attract private investment and looking at the flow-on effects. We obviously have very clear targets from the State Government about improving services in regional and rural areas. How do we do that from a telecommunications point of view? What will the benefits be? What does it mean for local schoolteachers, lawyers, partners of farmers et cetera?

**Mr ANDREW CONSTANCE:** Do you have any views in relation to how National Parks is handling the mobile telephone tower issue? I get a lot of feedback in relation to that.

**Mr BROWN:** In what way? They do not want towers on their hills?

**CHAIR:** That is it exactly.

**Mr BROWN:** My response would be that the tower occupies an area about the size of this room.

**Mr ANDREW CONSTANCE:** Three trees, yes.

**Mr GERARD MARTIN:** State Forests are a bit the same.

**Mr BROWN:** What we have talked about this morning is that we are moving from some sort of luxury to an essential service. That is the way this is going. The whole community needs to be aware that it has become an essential service, because it has. The attitude should be taken that this is now an essential service; it is a little more than worrying about three trees on top of the odd hill.

**Mr GEOFF PROVEST:** Some rural industries in Griffith, for example, took the matter into their own hands and paid for their own fibre just to survive.

**Mr BROWN:** That is exactly right. The problem is of course when you have a smaller-scale business it becomes much harder to do. I am aware of that example, and I thought it was a marvellous bit of innovation.

**Mr GEOFF PROVEST:** There is also the State Government one: the Soul system. I do not know whether there is any potential in future for greater access and competition.

**Mr BROWN:** I agree with both examples you have given. But in reality we are interested in service provision. How it is provided is more the area of government and industry. We are a very limited resource organisation; we struggle even to research as far as we do now. In terms of saying, "Well, it should be done by this crowd or this company or so forth", we do not get involved. We just say, "We want the service out there and we want it provided at metro comparable prices". That is the limit of our interest.

**Mr GERARD MARTIN:** When you say "metro comparable prices", do you mean that literally?

**Mr BROWN:** Yes. This is not a geographical problem. There are some geographic issues, as Steve said quite correctly, but they are quite solvable. It is about will.

**CHAIR:** In your submission you make some recommendations that the State and Federal governments might work together to look at some viable ways of encouraging public-private investment. Does your association have any involvement with the State Government in improving rural communications, such as on the Regional Communities Consultative Council?

**Mr BROWN:** We have a representative on it. His name is John Ainsworth.

**CHAIR:** What about the broadband advisory panel?

**Ms CASEY:** Not that I am aware of, but we may.

**CHAIR:** So you have input at that level.

**Mr BROWN:** Can we take that question on notice?

**CHAIR:** Yes.

**Mr BROWN:** It is something we should be doing. We will come back to you directly on that.

**Mr DAVID HARRIS:** Is the satellite link you utilise VOIP capable?

**Mr BROWN:** Yes.

**Mr DAVID HARRIS:** Are you hearing much about people changing over from landlines to IP communications, which is a lot cheaper?

**Mr BROWN:** Not really, because the standard is not all that marvellous. We use it as an association, but it is still ordinary. To be honest, two or three years ago I thought that was the only way we would go, but once you use it for a while you go back to the phone: you pay the money to get the quality.

**Mr DAVID HARRIS:** With comparability to metropolitan areas, a lot of people are now giving up their landlines because that is expensive and they are turning to mobile or VOIP. That is obviously a disadvantage in rural areas because, as you say, you will not have those opportunities. So that is a consideration.

**Mr BROWN:** That is right. Under the current technology we do not, but I would have thought with what is out there in the future we should.

**Mr DAVID HARRIS:** With the Next G network, obviously at the moment there are only certain phones that work, which means that those phones corner the market?

**Mr BROWN:** Yes.

**Mr DAVID HARRIS:** Obviously, as the phones improve, a wider range will be available.

**Mr BROWN:** Yes.

**Mr DAVID HARRIS:** But certainly, most people probably change their mobile phone every three or four years, if they sign up to a contract. So, basically, if everyone is locked in there is actually no competition in terms of pricing or deals in rural areas because, in effect, you can only get one that works?

**Mr BROWN:** Yes, it is a problem. There are a couple that work, but the problem for us is that one that works really well does not have a direct connection cable, so the only people who can use it are the ones who can put up with Bluetooth or go without. Personally, I go without because my normal work routine involves being in and out of vehicles all day. I rarely sit in the tractor all day; I often do variety of things. The concept of carrying a magnetic aerial or doing something else is nonsense. So I put up with the patchy coverage and basically use the message bank a lot. But you are right: there is a problem with the number of phones that are available.

**CHAIR:** I use a Bluetooth connection and it is a little unsatisfactory at times. It crackles a lot, and people on the other end who are listening to me believe I am in some kind of box somewhere. It is okay on my side but it is not too good on the other side.

**Mr BROWN:** I talk to a gentleman at Boggabilla quite regularly. It just sounds like an echo around a tin can: it is just terrible.

**CHAIR:** Thank you very much for your attendance this morning. We appreciate your input as we continue to progress this very important issue. I am sure we will have further communications with you in the future.

**(The witnesses withdrew.)**

**(Short adjournment)**

**JAMES BREEN**, Director, Infrastructure Services, Department of Educating and Training, level 2, 39A Herbert Street, St Leonards, sworn and examined:

**CHAIR:** I thank you for appearing and providing evidence on the Standing Committee on Broadband in Rural and Regional Communities inquiry. I am advised that you have been issued with a copy of the committee's terms of reference, and standing orders 291, 292 and 293 of the Legislative Assembly that relate to the examination of witnesses. Is that correct?

**Mr BREEN:** That is correct.

**CHAIR:** In what capacity do you appear before the committee?

**Mr BREEN:** I am the Director, Infrastructure Services from the Information Technology Directorate of the Department of Education and Training.

**CHAIR:** Your evidence today is given under parliamentary privilege, and you are generally protected from legal or administrative action that might otherwise result in relation to the information you provide. I also point out that any deliberate misleading of the committee may constitute a contempt of the Parliament, and an offence under the Parliamentary Evidence Act 1901. Do you want to make a brief opening statement before committee members ask questions?

**Mr BREEN:** No, I am okay.

**CHAIR:** The committee appreciates the efforts of the department and yourself in making a submission to the inquiry last year, and its recent contribution to whole of government submissions. One of our great challenges has been that the policy and legislative background is moving pretty quickly, and the information we received has been overtaken by events. Would you provide an update on any recent developments in your agency's experience of broadband in rural and regional communities?

**Mr BREEN:** In the past six months we have been working very hard to get the Connected Classrooms Program established, up and running and procurement processes around some of the carrier-type services that we need to buy, and some of the other bits and pieces. The Connected Classrooms Program is effectively three main streams. One is a fairly massive upgrade of our wide area network connecting all schools and TAFEs. The second piece of it is installation of what we call an interactive classroom, one into every school over the next 3½ years, which is a combination of interactive whiteboards and video conferencing, and some other equipment. The third piece is the development of a series of learning tools that make all of that technology that has been put in there usable. New technologies like forums, and wiki and blogs, and collaborative spaces to enhance the way teaching and learning is delivered in the classroom. It is not meant as a replacement for traditional teaching but as a supporter for it.

I am the business sponsor of the Connected Classrooms Program for the network upgrade project. In that space we are effectively putting five-times capacity into our network with the aim of doing that with close to the same recurrent expenditure that we have now. We spend about \$50 million a year on our wide area network at the moment, and then we spend a bit more on our satellite provision that we provide, which I will get into a bit later on, and then our Internet access, and the filtering environment that goes with that, to a total of approximately \$60 million a year on our network. To date we have about 2,500 sites on our network when you include our State offices, TAFEs, all of our schools, some schools that we have in Juvenile Justice systems and in hospitals and other bits and pieces. For approximately two-thirds of the 2,500 sites we have procured and ordered services which are fibre-based services at 10 meg or more connectivity to those sites. That roll-out will occur over the next six or nine months as we plan and do various installations and what have you that are required. The remaining approximately 800 sites we are in the process of procuring from the market on those ones as well. I am hopeful that within the next say three months we will have an identified a 10 meg or better solution for every one of our sites.

There will be a number of quite remote sites that we might not get to with a scaleable fibre-based or terrestrial-type service but we will get to it with some upgraded capacity of some form, be that more throughput through the satellite or be that through some of the Next G-type services. A good example is a few weeks ago I was out at Weilmoringle, which is about 200 odd kilometres north-east of Burke, which has a school, a post office shop, a homestead and an Aboriginal community and the biggest Next G tower I have ever seen in my life

right next to the school. We flew there in a little four-seater plane and I connected to that Next G network and got very good throughput. In that case where we will decommission satellite, we will connect to the wireless network that is right next to it, and that will be a good service for that area. I then went on to a couple of other more remote places, in particular, Wanaaring where there is no mobile phone coverage at all—reception kicks in about 80 kilometres down the road.

Out of our 2,500 sites, after we finish our procurement, I guess we will probably have perhaps 20 that are still on some sort of satellite or wireless type connection as really the only alternative. By buying in big bundles we are able to effectively average, if you like, the installation cost across many sites so that we can get to some of these ones that are perhaps more difficult, and if we do them on a stand-alone basis it would be very expensive. By amortising that cost over a number of sites we are able to bring down the average costs quite substantially. We have got some good outcomes from the first lot of procurement we are doing in that we have got to five times capacity as an identified, locked in solution for effectively the same amount of recurrent that we are paying. That includes a lot of our Sydney metropolitan sites, which are pretty easy for carriers to get to, but it also includes a lot of our remote sites across the State. I think from a network upgrade point of view we are progressively doing quite well getting those services in.

One of the things that I have been talking through with the broadband management committee, of which I am the Department of Education and Training [DET] representative as a whole of government committee, run through the GCIO, is how do we work with particularly Health and Police in some of those remote sites to perhaps the three of us, contributing a bit to its cost, and then through some sort of local community expression of interest type process as to who might sign up for those sorts of broadband services in some of those 20-odd problem sites that we are going to end up with. We may be able to drive some services into those sites. I think it is really only through taking a whole of government as opposed to an individual agency approach that we are going to be able to get a business case or a commercial proposal that any carrier might be interested in.

**CHAIR:** Has that been done anywhere?

**Mr BREEN:** We have got a couple of spots where we share connections. So where we have got a health clinic in a school we allow the Health network, if you like, to join to the DET network. We are looking specifically at Enngonia as one place to get started and Wanaaring, a couple of places to get started straight away. We have not got that in place just yet but we are certainly working pretty closely with Health and Police to try to identify some of them because I think doing them in a batch perhaps makes it a more viable proposition than doing them as one-off type installations.

**Mr GEOFF PROVEST:** Do you get cooperation between the other agencies?

**Mr BREEN:** Better than we have been getting in the past. I think it is through opening up what it is that we are doing, and letting other agencies see the network that we are building that they start to see that they cannot possibly in isolation build their own; that we do need to take a whole of government type approach. The DET network is the biggest private network in terms of the number of sites connected probably in the world. In terms of the carrier space in Australia it would probably not be far behind Telstra and Optus in terms of the amount of traffic that we have around the network every day.

In fact, looking at the various factors we would be the equivalent of a 250,000-odd customer Internet service provider. That is the sort of traffic we have going around our network every day. Over the last four or five years we have put a lot of money into building that network. I would say that in most cases the core of our network is a carrier-grade type network. Our challenge is to make the connectivity of the schools into that network more reliable and scalable. We are working on that and looking at some options around having a back up, if you like, connection at schools which might use the wireless network so if the main link is out we can connect temporarily through wireless and get at least some services.

The introduction of the interactive classroom, and the way that will inevitably impact on teaching going forward, means we must move into an environment where the network is always on and is always there. We do not have the luxury of saying, "You will be out of action for three or four days but that is okay; life goes on." Because for many of our distance education type students' school life does not go on: life stops. We need to make sure that is becoming more robust. We are also expanding the provision of our connectivity to secondary students through satellites. At the moment distance education from year 7 onwards effectively is back to the correspondence packs. We are now investing into installing equipment in about 150 or 160 homesteads of

secondary students and the distance education group is now working out the curriculum that needs to be changed in order to deliver those sorts of services.

**Mr STEVE WHAN:** Some of the DET is already happening. Karabar seems to use their conferencing stuff a lot, which goes around New South Wales.

**Mr BREEN:** Yes.

**Mr STEVE WHAN:** So far people have been providing their own equipment at home to do that?

**Mr BREEN:** You mean for distance education type students?

**Mr STEVE WHAN:** Yes.

**Mr BREEN:** From a house?

**Mr STEVE WHAN:** Yes.

**Mr BREEN:** In many cases, you are absolutely correct. The way the satellite is installed at the moment in a homestead is that there is a personal computer [PC] as well as part of the package to ensure it all connects properly. I think as we test more with the next generation network and where that might be more appropriately used, for example, or any other wireless networks that are out there, we will change slightly what equipment is used in those sites. Our videoconferencing infrastructure has almost 600 cameras on it, which makes it almost one of the biggest infrastructures in the world as a private network right now. Over the next few years we are rolling out another 2,000 to schools and then we expect a lot of schools will also use their budgets to buy more equipment. We are expecting to get to, perhaps, somewhere about 5,000 cameras, which have a lot of positives and a lot of challenges that come with it.

**Mr GEOFF PROVEST:** I know from up my way—and I have seen this when I was principal—between Tweed River High School and Kings Cliff High School at times the performance was working fine and then it started to get patchy. They have said that is ongoing and those schools are pretty much in urban areas.

**Mr BREEN:** That would be like a current state network. What we have in our network at the moment is about six or eight carriers and we have about six or eight different types of technologies. Effectively DET is operating as a carrier, in that we are doing the data interconnect and the guarantee of service, if you like, between point A and point B. I think that is primarily because the carriers have not come up with a data interconnect plan where they will honour, if you like, the priority of the traffic through the network. They have had it in place for many years for the voice, whereas with data they do not have that. What we have had to do ourselves is that. At the moment in most cases we bring all traffic back to Sydney and then back out to wherever that site may be. There are some cases where we do it a little bit differently but in most cases it all comes back to Sydney and then back again. Unfortunately, what that means is that if you do have two high schools in the same town, or very close to each other, the traffic all comes back to Sydney and back again—it just has that effect of latency. In some cases if you are changing the carrier in that path then you have issues. Our new network will remove all of those things.

**Mr GEOFF PROVEST:** Because they also said at certain times of the day it is good and other times it is not so good.

**Mr BREEN:** That is right.

**Mr STEVE WHAN:** It depends on how much traffic there is.

**Mr BREEN:** That is exactly right, yes. The carrier network to date has not been very sophisticated in the way the quality of service is managed, the guaranteeing of a packet from end to end. But now we are getting a lot more technology in the network to allow that to happen. We also manage it, where we manage the network as well. I think we will see over time, through increased bandwidth and better management of the traffic, a lot of those issues will disappear.

**Mr STEVE WHAN:** I am particularly interested in expanding the curriculum choice of small high schools by using conferencing facilities. How much work is going into that at the moment? Where the kids are

actually at a high school somewhere using the conferencing facilities to go to another school to access a teacher there? Is there some restriction on the number of kids who are allowed to do from a particular school?

**Mr BREEN:** The restriction probably would come back to the amount of available equipment in the school to participate in a videoconference. Other than that, I am not aware from an information technology [IT] view of any restrictions on numbers—there may be, but I am not sure. To give a couple of examples where those things are happening. In western New South Wales for many years they have had the distance education access program where clusters of schools join up. It started off originally 20 years ago where it was by audio: phone. It has now moved into video conferencing. I was in Peak Hill probably 12 months or so ago looking at where they have two classrooms set up and year 11 and year 12 students are participating with other schools where the teacher at another site is conducting classes by video conferencing. Some of these kids are sitting in these rooms all day participating in video conferencing. That is effectively how they go to school. Around Orange a new program is being kicked off which is linking up four or five schools in that area, to allow students to work with students from other schools and collaborate with them on various things.

One of the things that the distance education group is doing at the moment is effectively a review of the way they deliver distance education. Do they need to change their model? At the moment a lot of it is a teacher out to many individuals, whereas it might be a teacher to clusters of students in schools. That is where I think schools that want to offer additional classes, if you like, for their students, they will be looking to fund more of these rooms where they can use video conferencing to connect to the rest of the network in terms of those classes.

**Mr DAVID HARRIS:** I would like to start by congratulating you. I am from a school background. I started with Keylink and Nexus many years ago in the 1980s. I was at one of my high schools the other day looking at the new connected classroom. I also have lectured in technology in education for a long time. People do not really understand the complexity of schools when you have a lot of cowboys and lots of range of equipment and software going on. I think the way the network has been set up is very effective. Congratulations to you and your team on that major achievement.

One of the things the Committee has been looking at is how government infrastructure can actually assist local communities. I was at the Centre for Biological Information Technology [CBIT] a couple of weeks ago and they have a new concept where if you have a broadband connection you can set up as an Internet service provider [ISP]—they allow access to the local community through their system. Schools are only open for certain hours a day, have you explored any potential for schools to actually make money themselves by opening as an ISP in the out-of-hour times?

**Mr BREEN:** I have not explored it from the point of view of schools making money because that is perhaps more for the schools or the department to look at. From the point of view of sharing the network there are a couple of schools of thought. One is, yes, let us open it up to all and try to leverage that investment so that once school finishes at 3.00 p.m. or so there can be alternative uses of the network until the next morning. Conceptually that is a good way of making our investment sweat a bit harder, if you like. My network security people always then go into convulsions about how we are going to manage this and how we know that the sorts of traffic that we allow on the network after hours is appropriate or inappropriate, as the case may be. How do we allow that connectivity, because if we have a service coming into a school that terminates with our equipment, we need to connect out to those other providers? We need to do that either through some sort of wireless-type setup or rooms that people can come into and use equipment. There are a few other implications of doing some of that.

One of the things we are very conscious about—we have invested a lot in the last few years—is making sure that the student who logs on is in fact the student and not an anonymous user about whom we have no understanding. We insist on individual log-ins that the students manage, and that they have appropriate password security around them. It is all linked back to their enrolment status and that feeds the identity system and the students get their passwords and what have you from there. We do not conceptually want to change that approach.

**Mr DAVID HARRIS:** The model I saw had a front-end router that outside traffic came through and that has a firewall so the actual network is totally protected, and the router sends the traffic through the other ISP. You collect X amount of dollars for making the service available and it is automatically credited to a central account. It was quite interesting and they were saying that if you owned a shop you could put this out the

front and have something like an Internet café making money on the side and it would not affect your own network.

**Mr BREEN:** One of the things we are seeing is the notion of school being between 9.00 a.m. and 3.00 p.m. really being challenged, particularly with extra classes after hours and in some cases using equipment that might be doubled booked or triple booked during the day, so more hours are required. Another thing we are seeing is a lot more professional learning and development via the network after hours. Teachers are still there for two or three hours after school finishes. In some cases we are also seeing, for example, TAFE and schools sharing some sites in the evening so that TAFE students come in at night to do various bits and pieces and use the equipment as well. The notion of a six-hour window of maximum usage and 18 hours of non-use is being challenged. We are seeing the hours extended to 9.00 p.m. or 10.00 p.m., during which time there is a fair amount of traffic, and then it obviously tails off overnight.

**CHAIR:** That TAFE model was occurring when I was a principal for some years. I had TAFE come in and basically take over the service from about 5.00 p.m. onwards. Is that happening often?

**Mr BREEN:** The support model we have in place now is that in our regions we have one IT group that is responsible for schools and TAFE, so in most cases the equipment is managed by the same group of people irrespective of whether it is in a school site or a TAFE site. It all comes back through the same network and the same filtering environment. In most cases a pretty similar sort of service is provided. Where TAFE has particular requirements that may not be installed in a school I think they come to agreement with the school as to how they might do that. Another good example is that in Port Macquarie we have a TAFE and next to it a branch of the University of New England, I think. There is an agreement in place almost like a joint venture where the university connects through the school's network to get back to the main campus of the university. The infrastructure is shared there, leveraging some of the National Communications Fund [NCF] programs of a couple of years ago. We are starting to see places where the service is shared. I would say in general it is shared more for the same type of purpose in the sense of delivery of education as opposed to utilisation of the infrastructure.

**Mr GERARD MARTIN:** You said earlier on you had about six to eight service providers. Is Soul the major provider of the broadband network that has been run out to regional centres?

**Mr BREEN:** About 40 per cent of our services are delivered through the Soul network, about 35 or 40 per cent through Telstra and the rest is through Optus and Uecomm, and a few with NEC, Argus and a couple of others.

**CHAIR:** Can you tell us how the country areas program works and how the technology could help with that?

**Mr BREEN:** The country areas program is effectively, as I said earlier, clusters of schools getting together and working on a class being established that has students in multiple sites.

**CHAIR:** Is that based on the district level or is it just an informal gathering?

**Mr BREEN:** Within the regions the notion is to break them up into learning communities. In fact that is the primary driver of how we are scheduling sites for the network upgrade—whether they are participating or want to participate in a learning community of six, eight or 10 high schools and primary schools as opposed to having individual sites. That is the way the regional education directors have scheduled their installations because they want to create these learning communities. This is particularly in areas outside the metropolitan area, but even within the metropolitan area, in order to deliver on what we call the middle years strategy—the transition from primary school to high school—we are seeing that instead of all the kids being bussed to the high school once a week for a transition program in term 4 it is starting to be done through videoconferencing on a more regular basis to get them comfortable with that process.

**Mr STEVE WHAN:** Just going back to the rollout of broadband connections and connected classrooms, essentially every school, no matter what size, is going to end up with a connected classroom facility, right down to the six-student school with a single teacher. How many did you say were going to have fibre-optic connections versus other forms of connections?

**Mr BREEN:** We do not have an identified solution yet for about the final 800, but if you look at what we have been able to do to date I think we are going to end up with—it is hard to give a percentage—perhaps the last 2 or 3 per cent of our sites may not have a terrestrial-type service. At the moment about 65 per cent of our sites have some sort of fibre-delivered service, so I think we can pick up another 30 per cent in coming back to the market now. Last time we went out on a major scale was four or five years ago, at which point there was a combination of copper and some of the ADSL and other services. Now, by bundling our procurement we are getting the ability to put fibre into a lot of these places. In addition, I think the carriers have invested in the last few years in getting services out there.

**Mr STEVE WHAN:** Is it possible to get a list or a timetable of when the schools are expected to be connected—I know it would be a very long list because there are a lot of schools—or when the connected classrooms are going into schools in regional areas?

**Mr BREEN:** There are two elements to that. One is the installation of the interactive classroom, which is typically installing the video conferencing and that sort of stuff in the room. The schedule for that at the moment is based on funding in the business case, if you like, which is up until 30 June. So in another few days the first 200 will be finished. Then every 12 months after that it is basically another 800. The schools, the school education directors and the regional directors are prioritising that as to how they want to roll it out. That is the installation in the classroom. There are a couple of factors there. One is the establishment of the learning communities and the other is the readiness of the staff to be able to use that technology to teach differently. That is something that the schools side of the business is driving for us, which I think is good.

The other piece is the network upgrade itself. We get much better economy by doing that more quickly because we are able to do it effectively within our current spend by the way we have procured. So that would be probably a lot faster than the interactive classroom. One of the things we working on now is what is the plan for those two-thirds that we have an order in place for? What is the schedule to get those out? As I said earlier, I think it is probably a 6 to 9 to 12 months process, depending on some of those sites. Based on past experience in doing those installations, some of them are pretty substantial projects. I have a bunch of photos here from previous installations where we have bored under rivers, bogged D9s, all sorts of things in terms of getting this equipment in, ploughed up private property, undertaken reports on architectural significance and various things.

**Mr GERARD MARTIN:** We are not the environmental committee.

**Mr STEVE WHAN:** There are some interesting locations.

**Mr BREEN:** In some cases we have had to go across Aboriginal burial grounds and those sorts of things. It involves quite an extensive consultation period. The actual work is probably not so hard.

**Mr STEVE WHAN:** Do you do that or does the provider?

**Mr BREEN:** Both. We take a very active role in planning those site upgrades in terms of the discussions with the schools, making sure that all the carrier people who will be on site have been through appropriate working with children screenings and things like that. It is quite a logistical exercise that we go through to manage those upgrades to get the connectivity into the school and then from there into the classroom, which is the next hop on the path.

**Mr DAVID HARRIS:** Many larger high schools are changing over to VoIP networks. Is there any plan to do that on a bigger scale, where schools do not fund it themselves?

**Mr BREEN:** I have some thoughts on that. Certainly in terms of anything locked in, no. The network that we are building will be capable of taking voice on it as well. It will also be capable of IPTV so that we can broadcast on the network, as opposed to perhaps through a satellite or cable system, or not broadcast. It opens up a whole new delivery channel for distance education and for others to be able to effectively broadcast education channels.

**Mr DAVID HARRIS:** I know at a lot of schools one company has offered a server that comes with educational videos that can be streamed through every computer in the classroom across the network.

**Mr BREEN:** That project is called the CPC project—content pre-provisioning cache, to get a bit technical. That is basically replicating to the local server about 40,000-odd what we call digital learning

objects—little clips of various bits and pieces—and the school then can play that on its local network without any major network impacts. That gets replicated overnight and it is there for them to use each day. If there are any changes, the next ones come through at the next refresh period. That is a very interesting project because it is putting all this material right there in front of them. The challenge for us is to make sure that they understand what is there, how to get it out. Once you get to 40,000 objects, there is a whole search and retrieval aspect to it that you did not have previously. How do you rate them so that the more popular ones come up first? There are all these sorts of issues.

**CHAIR:** It takes censoring to a much higher level.

**Mr BREEN:** Of course. With those, it is all created by our Centre for Learning Innovation; so it is inside our network. But you could see a situation down the track where you are taking content from external providers and bringing some of that content in or perhaps content from other school networks that we might want to connect with. In fact, the elements of the digital education revolution that is probably of most interest to us is how do we connect our network to other learning networks elsewhere in the world, making sure we know exactly who is on the other end. The whole authentication model becomes even more complex. But it is about starting to use some of their material and also sharing some of the stuff that we have created. Part of the interactive classroom will be to be able to record and retrieve those sessions for kids who perhaps missed a lesson. They can retrieve it and sit through the session themselves.

**Mr GEOFF PROVEST:** Are you pleased with the speed that it is being rolled out at?

**Mr BREEN:** I am quite pleased, given the complexity of what we are doing. To be honest, we run the risk of perhaps the technology getting a little bit ahead of the readiness of the system to use it. We are constantly saying, "Let's not just put all this stuff out there if we don't have a workforce that is able to use it." The challenge is the notion of digital immigrants versus digital natives. All of the kids in the school have grown up with technology; it is second nature to them. All of those who are teaching and interacting with kids in that learning space have not. They have had to learn it along the way. It is an interesting dilemma we are going through. In many classes the kids are the ones showing the teacher how to use the equipment, which has its natural limitations.

**Mr DAVID HARRIS:** That is a very good point. We had a situation in one classroom where the students were doing the traditional project on cardboard and in the classroom next door, with a teacher very talented in technology, the students were using the same content but creating documentaries with voice-overs, animation, clips from *National Geographic* and presenting it at a whole of school assembly. The divide was amazing.

**Mr BREEN:** I think that will be a challenge going forward. The other challenge is the bottleneck that will remain—the number of devices not being enough for the demand, and not just from a videoconferencing point of view. Realistically, perhaps futuristically, we should have an interactive whiteboard in every classroom. We have, I think, up to 50,000 classrooms around the State. That has a bunch of implications. What is the right ratio of students to PCs?

**CHAIR:** So much for chalk; it is gone.

**Mr STEVE WHAN:** PCs are another big issue.

**Mr BREEN:** I think it will become perhaps the bottleneck going forward. I do not think it will be the network or the variety of digital content. I think it will be the number of devices that can access it.

**CHAIR:** And training for people to be able to use it.

**Mr BREEN:** Yes.

**CHAIR:** Jim, thank you very much for your attendance. We appreciate your input.

**(The witness withdrew.)**

**(Short adjournment)**

**COLIN JOHN GRIFFITH**, General Manager of Strategy, Government Chief Information Office, Department of Commerce, 2 Rawson Place, Sydney,

**BEN XENOS McCARTHY**, Acting Director of Telecommunications, Government Chief Information Office, Department of Commerce, 2 Rawson Place, Sydney, and

**TODD JAMES CLEWETT**, Director, Innovation Unit, Department of State and Regional Development, Level 49 MLC Centre, Martin Place, Sydney, affirmed and examined:

**CHAIR:** We welcome representatives of the Department of Commerce and the Department of State and Regional Development. Thank you for appearing today to provide evidence on the Broadband in Rural and Regional Communities inquiry. I am advised that you have been issued with a copy of the Committee's terms of reference and also a copy of the Legislative Assembly's Standing Orders 291, 292 and 293 relating to the examination of witnesses. Is that correct?

**Mr GRIFFITH:** Yes.

**CHAIR:** I draw your attention to the fact that your evidence is given under parliamentary privilege and you are generally protected from legal or administrative action that might otherwise result in relation to the information you provide. I also point out that any deliberate misleading of the Committee may constitute a contempt of the Parliament and an offence under the Parliamentary Evidence Act 1901. Would you like to make a brief opening statement before we proceed with questions?

**Mr GRIFFITH:** Thank you. As you would be aware, the Department of Commerce made a submission to your Committee regarding the terms of reference.

**CHAIR:** Thank you.

**Mr GRIFFITH:** I suppose the key points arising out of the submission were first a recognition that the primary responsibility for telecommunications clearly rests with the Commonwealth Government; however, recognising that, we do recognise the important role that telecommunications—especially broadband—plays in delivering government services and also in terms of the wider social and economic benefit to the citizens of New South Wales. Recognising those points the Department of Commerce, working in association with other government agencies, has looked at two major directions. One is how we can work with the Commonwealth Government to leverage some of their funding opportunities, but also the debate around regulatory reform and the structure of the industry going forward, how we can participate in that dialogue or discussion, and secondly how we use our procurement to acquire telecommunications in a cost-effective way to ensure we get value for money for government and provide the kind of connectivity to deliver, connectivity to our government offices, but also how we can buy in such a way to benefit the wider industry and wider community.

**CHAIR:** I will now open the examination and Committee members might wish to ask questions as we go. Could you explain the role of the New South Wales broadband advisory panel?

**Mr GRIFFITH:** As you would be aware, the Commonwealth Government has initiated a National Broadband Network program and it has pursued a tender and is looking to invest \$4.9 billion of Commonwealth money to co-invest in a major new piece of infrastructure providing fibre-optic roll-out, potentially fibre to the node or fibre to premise roll-out, across the country. Presumably it is at least a \$10 billion project; it is a very significant piece of investment in helping shape the future of the telecommunications, especially broadband, industry. We have established a New South Wales advisory group and the purpose of the advisory group is to identify issues or opportunities for New South Wales and how it may participate, advise and liaise with the Commonwealth Government regarding the National Broadband Network.

**Mr GERARD MARTIN:** Just on that theme, some of the submissions the Committee has received from the private sector tell us that the Government should really not be in the business of picking technology but should leave it to the markets. Do you agree with that, and do you see some conflict with your group and the private sector in general?

**Mr GRIFFITH:** On the latter point, I do not think there is any conflict with the private sector whatsoever. We are really looking to see how New South Wales as a whole can be positioned with regard to the

Commonwealth Government's initiative. The issue around technology and neutrality is an interesting one. In general I think the general philosophy of governments, both at Federal and State levels, is we should be technology-neutral where possible; we should not pick technology winners. However, that said, the Federal Government has initiated a program and it has been very specific in saying it wants a high-capacity symmetric network and that does require a significant amount of fibre-optic deployment.

The real debate probably within industry is what level of fibre-optic deployment is it. Is it directly to the premise or is it just to the node? So I think that issue is really an internal industry debate and the Federal Government ultimately is leaving it to industry to put up their submissions in terms of the technology architecture.

**CHAIR:** Could you provide the Committee with an overview of the Government Broadband Service we have? We understand there are 24 centres across the State. Where are those centres, what are they up to and what proportion of the State is not covered? What is the status of these services?

**Mr GRIFFITH:** The NSW Government Broadband Service is a scheme that was initiated approximately three years ago. The purpose of the service was to provide high-capacity broadband to major government facilities across the State. The situation prior to the establishment of the service was that outside of metropolitan Sydney there was really only one carrier that could provide high-capacity broadband services to government premises—services above 10Mbps and above, which typically would require fibre-optic connections because there was only one carrier.

The Government Broadband Service aggregated government demand across a number of agencies, people like health and education, and went to the market to create a core network, and the core network was designed in such a way that it would allow a number of carriers to bid and provide fibre-optic connections to those 24 locations throughout the State. Three companies entered the bidding: Telstra, Optus and Soul Communications, and Soul Communications was awarded the tender for the core network, and it now provides non-Telstra alternative fibre connections to those 24 locations throughout the State.

**Mr ANDREW CONSTANCE:** What was the cost of setting up the network?

**Mr GRIFFITH:** It was a procurement contract, so the value of the contract was really what we were spending on buying telecommunications. We did not invest in the capital in the network; that was done by industry.

**Mr ANDREW CONSTANCE:** So what was the cost?

**Mr GRIFFITH:** Reputedly, from Soul Communications there was about \$42 million worth of capital works that they spent. There were fibre networks running up and down the Pacific Highway and also the Newell Highway and what they did was invest that money in breaking out that fibre—cutting into the fibre, running the fibre leads into the major towns. Towns like Dubbo, Lismore, Albury, for example, for the first time had non-Telstra fibre break-outs in those towns.

**Mr ANDREW CONSTANCE:** I know certainly at the time there was this intent to try and encourage private sector spin-off from the establishment of the network. Is there any evidence that that has happened in terms of those 24 centres?

**Mr GRIFFITH:** I think the intent was, effectively, by having competition to two sets of fibre and effectively two highways going into a town, it would create competition.

**Mr ANDREW CONSTANCE:** Is there evidence to show that that has happened?

**Mr GRIFFITH:** Yes, there is evidence to show that that has happened. A number of smaller Internet service providers [ISPs] or wireless broadband providers have used that alternative fibre to connect back to Sydney. One of the challenges they had was not just to provide services in the local catchment area but also to provide a high capacity link back to Sydney. We can provide the Committee with a list of companies.

**Mr ANDREW CONSTANCE:** It would be good to see where that has happened. Earlier, the member for Bathurst asked a question relating to competitiveness, which is a relevant question. The other question that I have relates to those agencies that signed onto the network. How was a decision made relating to those agencies

versus other government agencies that could benefit from it? From the department's perspective, does it only add to the complexities and to potential duplication, as other agencies have to deal with broadband issues separately from the government network?

**Mr GRIFFITH:** The network was primarily focused around major users. It was really focused around people such as health and education as being the primary users. As you would be aware, health has a number of area health services. Up until the Government broadband service most of those area health services looked after their own connectivity within their region but they had very poor links between the regions. With a lot of the new health initiatives, such as electronic patient records and some of the corporate systems, they require whole-of-State coverage. The connections between the area health services became important and have to be of a high quality and highly reliable, and similarly for education. The network was really designed for those major users, not necessarily all the smaller agencies, per se.

**Mr ANDREW CONSTANCE:** Has any cost-benefit analysis been done of the network being available to those agencies?

**Mr GRIFFITH:** Yes, there has been a cost-benefit analysis, for example, for the cost of high-capacity links. We have fairly good evidence about the reduction of those high-capacity services. For example, in the years 2000 to 2001, over \$50,000 to \$40,000 would generally be an indicative price for a 10-megabits per second link. With the Government broadband service the new price across the State generally was about \$20,000 per annum. That gives you some sort of indication of the price reductions.

**Mr GERARD MARTIN:** I refer to the Soul network and to the Department of Health. Is there any evidence to date that it has been used extensively for telemedicine, in particular for more remote areas, or is there a capacity or quality problem?

**Mr GRIFFITH:** As I said earlier, I think that question is probably best directed to the Department of Health. We are not involved in running the applications, so it might be better to speak to the Department of Health.

**Mr STEVE WHAN:** How much unused capacity is there on the State broadband network? How much dark fibre is there?

**Mr GRIFFITH:** We buy a service. We leave it to industry to engineer and design the service. Industry basically delivers a service. If we say that we want 50 megabits per second coming out of Broken Hill, industry will give us 50 megabits per second coming out of Broken Hill. We have given industry specifications about the quality of the service, for example, that it must be available most of the time. There are no other technical requirements.

**Mr STEVE WHAN:** Is some of the infrastructure not owned by the State? For example, some of the optic fibre that runs along roads and railways?

**Mr GRIFFITH:** When the project was initiated we were aware that State Rail and TransGrid owned a considerable amount of fibre. In the final design most of the fibre is acquired from a company called NextGen, which runs long-distance fibre networks into capital fibre networks. I believe it is using some fibre from TransGrid. TransGrid fibre runs out west up to Armidale and down to Albury. Some of that is a primary link and some of it is just for a redundant link. It is used in case the main link is broken.

**Mr STEVE WHAN:** How much fibre do the railways own and why was that not being used?

**Mr GRIFFITH:** I think the main issue for the rail fibre is that it is primarily in metropolitan areas, which is where there is a lot of existing capacity. It is really when you get outside the greater Sydney area that you have a scarcity of alternative fibre.

**Mr GEOFF PROVEST:** You said earlier that the major users were the Department of Education and Training and the Department of Health?

**Mr GRIFFITH:** Yes.

**Mr GEOFF PROVEST:** Is your department the driving force for the other agencies? Do they have to approach you, or do you approach them?

**Mr GRIFFITH:** Ben, who is with me, does a lot of the day-to-day management of this process. Generally, under the State Contracts Control Board, contracts are established that agencies can buy off. They do their own purchasing. Effectively, the Department of Commerce, through NSW Procurement generally, will establish contracts where agencies can buy certain services. They get competitive quotes and they will buy those services. Generally that is what has happened in telecommunications.

**Mr GEOFF PROVEST:** It is just that we heard earlier from the Department of Education and Training, which had been talking to the police and to a few other government agencies.

**Mr GRIFFITH:** Generally, we have a telecommunications or broadband management committee. We get the chief executive officer and information officers from a number of larger agencies together and we plan how to manage and buy our telecommunications. For example, education is probably the biggest purchaser of broadband in the State. We try to work closely with education. It is a cooperative relationship and we try to use its purchasing muscle to benefit other agencies.

**Mr GEOFF PROVEST:** Has that been successful?

**Mr GRIFFITH:** Yes, it has been successful.

**Mr ANDREW CONSTANCE:** What was the appeal for going with Soul versus Telstra as the network in the first place?

**Mr GRIFFITH:** Basically, there was a tender process. It was a competitive process of evaluating criteria and assessing the best bid, value for money and the outcome that we were after.

**Mr ANDREW CONSTANCE:** I refer to the Cross-City Tunnel and to other infrastructure. Were any business consideration fees or advertising incentives offered, or was anything else offered?

**Mr GRIFFITH:** As I said, basically it is a procurement contract, so no fees were paid by the State Government, if I understand your question correctly. Basically, we were using our procurement dollars. We are not paying them any money and they were not paying us any money as a contribution. I believe that under the contract there was a clause that they would offer us some airtime as it owned the NBN network in Newcastle at the time. I do not believe we ever took up that offer.

**Mr ANDREW CONSTANCE:** So that \$1 million in advertising was not expended?

**Mr GRIFFITH:** No.

**Mr GERARD MARTIN:** Mr Clewett, as Director of Innovation in the Department of State and Regional Development, does that apply specifically to information technology [IT] innovation, or does it apply across the board?

**Mr CLEWETT:** The focus of the unit's work is innovation across the board. That means innovation, wherever it occurs in industry. Historically, there has been a focus by governments worldwide on innovation at the research and development or high-technology end. Our work is more focused on innovation where it happens in industry and understanding how the tools of government can be applied to increase or enhance innovation across industry.

**Mr GERARD MARTIN:** Are you involved in any projects or have you had any dialogue with people in rural and regional New South Wales and people in the agricultural industry? What sorts of developments have we had there?

**Mr CLEWETT:** Our work is being done as a result of the Government's statement on innovation. Our work is focused on five industry sectors. Those sectors are: finance, high-value manufacturing, coal, the creative industries, and transport and logistics. Those sectors were identified as sectors of great importance to the New South Wales economy—sectors in which special effort should be made in the immediate term. Our work does not focus on agriculture as an industry, per se. Some of the work we are doing, particularly around broadband,

does have an impact on rural industries. Our work with the panel is seeking to understand what is the best position the Government can put to the Federal Government that would advance the interests of industry, including, in this instance especially, rural industries in New South Wales.

Therefore, one of the questions for us is what type of rollout or speed of rollout its most beneficial to New South Wales. A subsection of that is what is most beneficial to rural New South Wales. The innovation unit's focus is working with the Department of Commence on the national rollout. That is likely to be a five-year process. So who starts and who finishes is material to the gains that are made. International evidence shows there is a great advantage in being first out of the blocks. We are trying to build an evidence case for the Government to take to Canberra with the rationale for why New South Wales should be first out of the blocks.

**Mr GERARD MARTIN:** The committee has received a submission from the New South Wales Farmers Association. One of its worries is that rural and regional farming businesses, and business in general, will be left behind if they do not have speed or capacity. As a Government trying to get organisations to relocate or to attract medical professionals or business professionals to regional areas, if they do not have the same level of services as are available in the metropolitan area we will have this continuing divide. Are you specifically addressing that in your submission to Canberra?

**Mr CLEWETT:** It is a specific focus of the panel; it is a very real concern. If there are towns or regions with no access to broadband, their scope for economic growth is possibly limited. Beyond that, there is the issue of government service delivery opportunities. The committee discussed before the opportunities arising out of health care and education specifically. The opportunities created if the town or region has greater broadband access are magnified.

**Mr ANDREW CONSTANCE:** How were the 24 on the government network selected?

**Mr GRIFFITH:** They are primarily locations which have area health services and major TAFE centres and which have large population centres of over 15,000 to 20,000 people.

**Mr DAVID HARRIS:** The Department of State and Regional Development currently provides payroll tax incentives to companies relocating to regional areas. That is a really good program and my area has certainly benefited. Has any thought been given to requiring that new estates being built on the Central Coast, the Hunter and in some regional areas install fibre in the estate at the construction stage rather undertaking expensive retrofitting down the track when businesses are setting up? Is any consideration being given to programs or incentives to install the fibre in at the beginning to attract businesses that are relocating?

**Mr CLEWETT:** I will answer in two parts. First, the Department of Planning is facing a number of issues around requirements for greenfield zones—that is, new developments. Secondly, the opportunities arising out of the \$10-billion federal investment could include those types of things. That is precisely the work of the panel—that is, understanding the opportunities and what the role of governments might be to take advantage of those opportunities.

**Mr GEOFF PROVEST:** This is relevant to my area. Do you have much liaison with other State counterparts? In my area Telstra blends over the State border; it does not recognise State borders with regard to area codes and phone systems.

**CHAIR:** The member is from Tweed.

**Mr GEOFF PROVEST:** There is always cross-pollination.

**Mr GRIFFITH:** There is a considerable amount of dialogue with our equivalents in the other States. One of the Council of Australian Government's groups is called The Online Council. That is an opportunity to get the various State, Territory and Commonwealth representatives to talk about telecommunications and broadband issues. Separate from that, a number of groups get together to discuss telecommunications planning and best practice across States and Territories.

**Mr GEOFF PROVEST:** Who decides the fee structure for the Soul system for the different departments?

**Mr GRIFFITH:** The fee structure was established as part of the contract.

**Mr McCARTHY:** As part of the tender process we asked the suppliers to provide a fee structure. The services were broken into different panel contracts. As more agencies come on and use the service, the per-unit cost becomes cheaper for individual agencies.

**Mr GEOFF PROVEST:** So there is a real incentive for the other agencies.

**Mr McCARTHY:** That was the way it was designed. With New South Wales Health and the Department of Education and Training as anchor tenants and providing the critical mass, as more agencies came on the unit cost of traffic along the core network became cheaper for individual agencies.

**Mr GEOFF PROVEST:** How many agencies are signed up?

**Mr McCARTHY:** 25 agencies.

**Mr GEOFF PROVEST:** And how many do we have?

**Mr ANDREW CONSTANCE:** How many agencies signed up after the contract was first signed given that you had anchor tenants?

**Mr McCARTHY:** A number of core agencies signed up to the initial contract. They were the major users—the New South Wales Health, the Department of Education and Training, the New South Wales Police Force, the Attorney General's Department and the Department of Commerce. From there the procurement activities are left up to the agencies.

**Mr ANDREW CONSTANCE:** What happen if the Government decides not to renew its contract with Soul in two years? Where does the leave all these agencies?

**Mr McCARTHY:** The agencies are buying services and the services are the same as services that they would buy from other panel contractors. Depending on the situation with the panel contracts, if Soul were the supplier, they may be able to continue purchasing services or they may choose to migrate to a different supplier.

**Mr STEVE WHAN:** But would they migrate as one body? What would happen to the infrastructure that Soul has built to service those centres?

**Mr McCARTHY:** I think individual agencies would manage their own migration. The decision around procurement activities and management of the networks is done at an agency level. The Government gave no guarantees of ongoing use of Soul's infrastructure beyond the term of the contracts.

**Mr GERARD MARTIN:** In terms of the broadband committee's whole-of-government approach, is there not a conflict if at the end of that period they can do what they like?

**Mr GRIFFITH:** The Government as a whole will make a decision as to the nature of its forward procurement arrangements. The agencies would then make decision. Probably one of the key issues is where we have good competition we can allow disaggregated purchasing. However, where there is imperfect competition, the benefits of aggregation are the greatest.

**Mr ANDREW CONSTANCE:** But one would hope that that competition would thrive in light of the Government's setting up the network in the first place.

**Mr GRIFFITH:** Yes. The other issue is that we are very aware of the importance of this National Broadband Network. If anything, that will help to shape the future of the industry. Is it Telstra or is it an alternative to Telstra? That will be a key issue and we will have to respond to that in terms of our procurement.

**Mr ANDREW CONSTANCE:** What are the performance benchmarks on Soul throughout the life of the contract? Have they been met?

**Mr McCARTHY:** The contract contained a number of service levels across the different areas from billing, reporting, provisioning and service specific levels. There were financial penalties associated with those. The contract is monitored centrally, but individual agencies actually manage the services.

**Mr ANDREW CONSTANCE:** Have any penalties been issued?

**Mr McCARTHY:** I believe some agencies have issued penalties.

**Mr ANDREW CONSTANCE:** What would be a typical penalty? For example, what will cause the Attorney General's department to issue a penalty?

**Mr McCARTHY:** I do not know the specifics, but there were formulas.

**Mr GRIFFITH:** I think we could respond to those in detail. Do not quote me the exact numbers, but if there is a major significant outage, it might be a month's rebate of fees, for example. That is the type of thing.

**CHAIR:** Moving now to mobile phones, are you aware of the Yetman program model? In Yetman there was a collaborative arrangement with government and the private sector to actually bring a mobile service into that community. Have you been privy to that?

**Mr GRIFFITH:** I am not familiar with the details. I know the broad issues.

**CHAIR:** Do you see the role of the State Government in building some sort of community collaboration to attract investment in risk areas? My understanding is that in Yetman emergency services and some groups came together with the private sector and actually co-funded the towers. That made it a good business case for somebody like Telstra to come in and say, "Okay we will deliver the service." Have you explored that at all?

**Mr GRIFFITH:** Mobile phone coverage is a key issue of concern to us and particularly a number of emergency service organisations. So, we have had a lot of active dialogue with them and with some of the major carriers, particularly Telstra. With the CDMA closure we had a lot of dialogue with Telstra, police, ambulance service, people like that. There was a lot of dialogue around that. There has been, and going forward I expect there will be, an issue of coverage around blackspots and how we best address those. Again, there is no firm policy on that. We are looking also at how the Federal Government takes these issues forward. In the past there were funding programs to address some of these blackspots and to extend some of this infrastructure into additional coverage along highways.

**Mr GERARD MARTIN:** Have you any view on how the rollout of the Next G is accepted or compares to CDMA in respect to coverage problem areas et cetera?

**Mr GRIFFITH:** The Federal Government has asked or requested that the National Broadband Network cover 98 per cent of the population. They are leaving it to industry to identify what that 98 per cent coverage is. We are not privy to the exact coverage at this stage. We will find out about the exact process later in the year. We are unclear at the moment, so it is a bit hard to say how it compares to the CDMA coverage.

**Mr GERARD MARTIN:** But in respect to your day-to-day operations do you not get any feedback from areas or perhaps through the Department of State and Regional Development? Todd, do you get complaints from the regional office that the coverage is not there?

**Mr CLEWETT:** I do not know too much about that specific issue. What I know is that we are seeking to understand specifically who has coverage and who does not. That is a piece of work we are doing as part of the panel. So, that goes beyond the anecdote "I get it, I don't get it" but understand at a postcode level who does and who does not.

**CHAIR:** Can you give us a briefing on the progress of the government radio network and where you are up to?

**Mr GRIFFITH:** There has been a considerable amount of planning about the future of the government radio network. That still is subject to final decision as to how we can migrate that to the next technology standard. I think that is an accurate picture of where we are up to.

**CHAIR:** It concerned access to bandwidth or other issues, did it not?

**Mr GRIFFITH:** There are a number of spectrum issues, how we can use spectrum more efficiently, but also that the current technology is reaching the end of its life and they are required to upgrade to the next digital standard.

**Mr GERARD MARTIN:** Is there an issue with, say, police believing they have to have a selective area?

**Mr GRIFFITH:** That is all part of the discussions: spectrum issues, coverage, yes.

**CHAIR:** Has a time frame been set?

**Mr GRIFFITH:** I will have to get that information back to you.

**Mr GEOFF PROVEST:** Are there different fees for metro as compared to regional and rural areas? Is there a scale of fees?

**Mr McCARTHY:** Across the different contracts?

**Mr GEOFF PROVEST:** That has been an issue?

**Mr McCARTHY:** Sure.

**Mr GEOFF PROVEST:** Obviously, regional people will want to have access to metro services but at metro prices?

**Mr McCARTHY:** The fee structure of the government broadband is the same across the State. The local access component, which connects the core to individual sites, varies across the sites, and that is distance based.

**Mr GEOFF PROVEST:** So it would be a higher cost in regional areas?

**Mr McCARTHY:** It is a higher cost depending on the distance. The reality is that the suppliers have to build infrastructure and there is a cost associated with that the longer the infrastructure. We established also the Government Telecommunications Agreements, which cover the fixed voice and mobile. Through those agreements it is one price for all agencies across the State.

**Mr ANDREW CONSTANCE:** Has there been any engagement with the Federal Government and the Department of Commerce in relation to the rollout of the national broadband project in respect to where the New South Wales Government might see the best model for ownership of that network moving forward and, obviously, the benefits that could be derived for the New South Wales Government?

**Mr GRIFFITH:** Yes, there have been a number of meetings with the Federal Department of Broadband, Communications and the Digital Economy. We are actually planning to have one of their senior officials meet with our advisory group in the coming month to discuss those issues.

**Mr ANDREW CONSTANCE:** Down the track there could be benefits for, say, the Department of Community Services and Centrelink together through that type of process?

**Mr GRIFFITH:** Yes, very much so. We are aware that if someone is building a large-scale fibre network throughout Australia, there are a lot of opportunities to connect up not just private businesses and homes but also government sites.

**Mr ANDREW CONSTANCE:** What would be the impact of that on the New South Wales government network?

**Mr GRIFFITH:** Very major. It is a significant development. That is why we are very interested in what happens. It is an opportunity as much as anything, and the Federal Government has indicated already that it is prepared to put \$100 million on the table to connect fibre to schools, for example.

**Mr ANDREW CONSTANCE:** Do you see a return on the \$43 million that the New South Wales taxpayers put up?

**Mr GRIFFITH:** Well, as I said, we did not spend that \$43 million. We purchased a service.

**Mr GERARD MARTIN:** So your answer to the question was it will have a significant impact on the New South Wales government service. Is that significant as a threat or a challenge?

**Mr GRIFFITH:** It is an opportunity. If there is a lot of investment in new fibre networks throughout the State, if that is designed in such a way as to connect up with our government facilities, that would be a good thing, if it is at the right price. Also, if the solution promotes competition, and competition broadly, not just in metropolitan areas but in regional areas, that would be a good thing as well, and we would like to take advantage of that. The Federal Government is proposing this as a wholesale network, so the nature of the retail arrangements over that wholesale network are yet to be clarified also. There are a number of important regulatory issues around that.

**Mr ANDREW CONSTANCE:** So, as a potential purchaser, do you have a preference for government ownership of the project?

**Mr GRIFFITH:** There was a meeting of the Online Council of Ministers last month in Canberra, and the State and Territory Ministers indicated their interest in supporting the National Broadband Network approach. Government ownership is only an issue federally. State governments are not expressing an interest in taking ownership of a particular network.

**CHAIR:** You are doing some coordination. Do you see the State as having another role to play in the coordination? We have a whole gambit of fibres being rolled out or have been rolled out, and you are attempting, particularly at the State level, to coordinate agencies. Do you see the State as having a larger role to play in that at all, taking it beyond?

**Mr GRIFFITH:** Our coordination role is primarily focused around purchasing, not network design and network roll-out per se, that is primarily a role for industry, although I think with the National Broadband Network, given the scale of the infrastructure and the scale of the investment, I think we are interested in engaging with that process to see how it can be shortened.

**Mr CLEWETT:** And that was the key theme in the submission that the Department of State and Regional Development and the Department of Commerce made to the Federal Government expert panel, the value in collaboration, given the complexity and the interdependencies, and coordination not just between now and the awarding of the tender but beyond.

**Mr STEVE WHAN:** We talked a while ago about the private ISPs using the sole network in those 24 centres. We spoke to the education representative earlier about the fact that a lot of small schools will be getting either fibre or some other broadband in there. Is there much more thought about how those communities that might not have another broadband provider can access those facilities through their homes or wireless networks, how they can link in and use it in towns that do not have alternatives?

**Mr GRIFFITH:** I think your question probably goes to the heart of competition. If there is a single set of infrastructure going into a town and a single retail provider—and I think that is an issue the Federal Government is trying to address, how to promote competition. Generally I would make an observation, when we buy services, we do not act as a carrier and on sell those services to either the community or businesses.

**Mr STEVE WHAN:** There is physical infrastructure going into some of the small schools. I am aware of a two-teacher school with an optic fibre link in the electorate I represent and the rest of the town has nowhere near that sort of access. Is there some broader government thought about how that school could be opened up and used by more in the community?

**Mr GRIFFITH:** As I said, I think the issue there is that that the infrastructure is owned by Telstra—or I assume is Telstra fibre given that it is a remote town—and that goes to the heart of the open access regime and competitive regime that the Federal Government establishes to encourage carriers to provide services in those towns or someone else to purchase capacity on that fibre and resell capacity. That goes to the heart of this issue

about allowing retail competition on common infrastructure, where the community can only afford to pay for one set of infrastructure.

**Mr STEVE WHAN:** Over the years the State Government has supported a number of community technology centres and things like that in towns, and they might have a school up the road that has a better link than they have. Can we look at how we can, maybe, merge them together or shift them in together?

**Mr GRIFFITH:** As I said, generally the way we purchased services or anybody buys services you generally are not allowed to on sell to third parties. I think the fundamental issue. I understand the dilemma you are raising, is how do we encourage competition? If fibre is going into a town how can we encourage competition to allow some of the smaller innovative ISPs to offer services at the right price?

**Mr GERARD MARTIN:** Is there any mechanism in government, rather than talking about encouraging competition, to encourage collaboration, recognising where something like that exists? Who would facilitate that? Is that not within your portfolio?

**Mr GRIFFITH:** That strategy and cooperation rests, in terms of government use, with the Department of Commerce and, as I said, we do have a broadband management committee which represents the major users. They are the type of opportunities we are interested in and that is something we are exploring, how we can use and share capacity within government. It is a bit like what we have done with government broadband but where there might be a local school we might be able to share the capacity with the police, for example, and that would be permissible under how we purchased the service.

**Mr GERARD MARTIN:** Is there a crossover role for your department? If you know there is a capacity and someone wants to come and use it from a business point of view, is that getting too complicated or is there a role for you people to be aware that the capacity is there and it could be on sold by a private organisation that would create economic activity in the area?

**Mr CLEWETT:** That is a worthwhile consideration. We are engaging in discussions with commerce at the right time. If you know of the opportunities and engage in discussions with commerce at the right time about how the contracts might be arranged to support it.

**Mr GEOFF PROVEST:** How many agencies are not using the government system?

**Mr McCARTHY:** I understand there are an excess of 100 agencies, but some of those are very small agencies. They may be based in metropolitan areas or serviced by agencies such as the CCSU or Business Link. All the major agencies are using it, and I think there are around 32 agencies currently using it.

**Mr GRIFFITH:** We will get back with an exact number.

**Mr STEVE WHAN:** A little bit off tangent from where we are at the moment, is much work being done overall in the government about how we can change the way government agencies work using broadband in working from home or a renewed look at taking agencies out of the centre of Sydney and putting them elsewhere and telecommuting to replace meetings? Potentially there is no reason why Treasury needs to sit here in the middle of Sydney. For example, it could go somewhere else and telecommute entirely to save the cost of rent and the pressure on transport in Sydney. Is any overall work going on in that area?

**Mr GRIFFITH:** Yes, that has been identified as an issue we need to address within this broadband advisory group. We are trying to look at not just how we help shape the investment for the National Broadband Network but how we can use it, what opportunities does this present, in rethinking how the Government can deliver its services to its own sites and also, if we have fibre to the home, how we could change how we operate, yes.

**Mr STEVE WHAN:** How would you expect that to proceed to make something happen?

**Mr GRIFFITH:** As I said, I think we have identified it as an issue. We have a committee to try to bring out those issues and to bring that back to our chief executives for action.

**Mr GERARD MARTIN:** Earlier the New South Wales Farmers Association was talking about various committees and we mentioned many others.

**Mr STEVE WHAN:** That is this one, the one that they were talking about earlier—the broadband advisory panel. Who are the members of the broadband advisory panel?

**Mr GRIFFITH:** I can send you a list. In Health and Education, it would be Jim Breen.

**Mr STEVE WHAN:** Basically it is an internal government committee?

**Mr GRIFFITH:** No. We have a number of external representatives, such as representatives from the Blayney council and representatives from NICTA, the National ICT Australia research centre, as members as well.

**Mr GERARD MARTIN:** Did you say it was the Blayney council?

**Mr GRIFFITH:** Yes.

**CHAIR:** So you are getting feedback?

**Mr GRIFFITH:** Yes.

**Mr GERARD MARTIN:** Is that Andrew Roach?

**Mr GRIFFITH:** Yes, Andrew Roach.

**Mr GERARD MARTIN:** He is the general manager?

**Mr GRIFFITH:** Yes.

**Mr ANDREW CONSTANCE:** Are there any providers on the panel?

**Mr GRIFFITH:** No, and it would probably be inappropriate to put them on.

**Mr ANDREW CONSTANCE:** Sure, I appreciate that, but I just thought I would ask.

**(The witnesses withdrew.)**

**CRAIG SMITH**, Deputy Chief Information Officer, New South Wales Health, 73 Miller Street, North Sydney, sworn and examined:

**CHAIR:** Mr Smith, I welcome you and thank you for appearing to provide evidence during our inquiry into broadband in rural and regional communities. I am advised that you have been issued with a copy of the committee's terms of reference and also a copy of the Legislative Assembly's Standing Orders 291, 292 and 293 relating to the examination of witnesses. Is that correct?

**Mr Craig SMITH:** I have.

**CHAIR:** I draw your attention to the fact that your evidence is given under parliamentary privilege and you are generally protected from legal or administrative action that might otherwise result in relation to the information you provide. I also point out that any deliberate misleading of the Committee may constitute contempt of the Parliament, which is an offence under the Parliamentary Evidence Act 1901. Would you like to make a brief opening statement before we proceed to questions?

**Mr Craig SMITH:** Thank you. I would like to make a statement about New South Wales Health and the capacity in which we use broadband services. Hopefully that will give us an introduction into questions. Broadband services are an essential communication and information access need for New South Wales Health. I am sure that is true of most government agencies. New South Wales Health requires broadband services to be available in all parts of the State and to be reliable, reasonably priced and of adequate capacity. I think those three points go to the heart of the challenges that Health faces in that space.

New South Wales Health uses broadband services for the delivery of our core clinical systems, such as electronic medical records, medical imaging solutions that are currently being rolled out across the State, electronic health records and community health systems, and Telehealth video conferencing. The broadband services that we require are basically high-speed services with appropriate redundancy and availability because of the nature of the solutions that we are putting across them. Clinical systems require high availability. In addition to that, we require secure protection of patients' information, so the solutions are required to be secure and affordably priced for equity of access. I will talk to some of the challenges during questioning related to the pricing in rural areas. The benefits that we receive basically are access to that information. That is the key issue—providing access to information across the whole of the enterprise, not just within the local metropolitan centres. Thank you.

**CHAIR:** Thank you very much for that. We will proceed with questions. The Committee appreciates the efforts of New South Wales Health in making submissions to the inquiry, and we thank you for that. One of our great challenges has been that the policy and legislative background has been changing so rapidly. In the light of that, could you give us a quick update about any recent developments in your agency's experience, particularly in relation to broadband? What is happening across your agency?

**Mr Craig SMITH:** There are a couple of points I would like to raise. There is an initiative under the Clever Networks Initiative whereby some Federal funding has been provided to further broadband implementation in rural areas. I will refer to some of my notes. We have been successful in securing Clever Networks funding for Greater Southern, Greater Western and North Coast Area Health Services. This funding will go towards improving broadband services for the provision and extension of those clinical systems to which I referred in my opening statement. In addition to that, for the Hunter New England Area Health Service as a separate mission, we have also received Clever Networks funding for specific improvement of broadband to deliver imaging capabilities.

**Mr GEOFF PROVEST:** What is that funding expended on?

**Mr Craig SMITH:** The funding itself is basically a shared commitment, so basically those funds are provided on a fifty-fifty shared basis. The agency provides half the funding and the additional funding is provided by the Federal Government. The money is actually spent on the broadband infrastructure for those services. For example, in Hunter New England, it would be enhancement of the capacity and connectivity between the rural centres to provide imaging services.

**Mr ANDREW CONSTANCE:** How would you purchase it in that instance?

**Mr Craig SMITH:** In this instance?

**Mr ANDREW CONSTANCE:** Yes.

**Mr Craig SMITH:** We use the Government broadband network.

**Mr GERARD MARTIN:** Soul?

**Mr Craig SMITH:** Yes.

**Mr ANDREW CONSTANCE:** How have you found Soul?

**Mr Craig SMITH:** Our challenge is the level of service, particularly in the rural areas. What we are finding is that the level of service that is delivered in those areas is obviously not as good as the metropolitan areas from a response capacity perspective.

**Mr ANDREW CONSTANCE:** Obviously, in a way, in you have been forced to take up the Soul option as opposed to other providers, and it is not necessarily delivering the best outcomes that could otherwise be obtained?

**Mr Craig SMITH:** I think that is a fair statement. In addition to that, I would say that sometimes there is just no alternative in those areas anyway.

**CHAIR:** True.

**Mr STEVE WHAN:** In terms of where you are at currently at the moment with health facilities—hospitals, multipurpose services [MPS] and things like that in rural New South Wales—can you give us an idea of what sort of proportion are currently connected to fibre broadband links, how many are waiting to be connected, and what sort of solutions you are looking for? Could you just give us an overview?

**Mr Craig SMITH:** Okay. Basically, New South Wales Health has broadband connectivity to all its hospitals, the difference being the capacity of each of those links. In addition to that, our community centres and centres external to the acute setting are where we have connectivity challenges. I do not have the specific numbers.

**Mr STEVE WHAN:** For health centres and community health centres?

**Mr Craig SMITH:** Health centres and community health centres, that is right—so in the community health space.

**Mr STEVE WHAN:** In terms of your links to hospitals, what sort of proportion of the links at the moment are capable of doing things like transmitting images from scans and X-rays and things like that, or doing teleconferencing for medical diagnosis and that sort of thing? How many just are not up to that?

**Mr Craig SMITH:** I do not have the particular statistics to support a statement, I am sorry.

**Mr GERARD MARTIN:** Could you get some information on that?

**Mr Craig SMITH:** I can, yes.

**CHAIR:** What happened with the challenges with Telehealth for the department, or what might be the challenges that you have experienced?

**Mr Craig SMITH:** The challenges with Telehealth that we have experienced relate to the earlier comments I made about broadband in general, and that is to simply find other services in rural settings, finding them at a competitive price and at appropriate capacity.

**CHAIR:** What about users? What about the people who actually use it? Is there a challenge in there in terms of the professional staff in Sydney, for example, helping with diagnosis for somebody who might be in Bathurst? Is there an interface or training problem there?

**Mr Craig SMITH:** I do not believe there is an interface or a training problem. Obviously there is a need for staff to be familiar with the services and we have training solutions to provide enhancement of people's knowledge in that space. I think it comes down to, for us, the simple fact of whether or not we can have the service connecting the two points that we are looking to connect.

**Mr ANDREW CONSTANCE:** In terms of an answer to that overall problem, where do you see the national broadband project going? Are you working with your Federal counterpart and colleagues in that regard to solicit an entirely different outcome in terms of health, I would imagine, potentially, if it rolls out in the way it should? Do you have any thoughts on that?

**Mr Craig SMITH:** Yes, we are working with Commerce, as a large government agency, and our view is that government should be an anchor tenant for such an initiative. We are working through Commerce to provide our needs and requests up into the national solution.

**Mr DAVID HARRIS:** The Department of Education and Training has an active program of connecting facilities and creating what they call connected classrooms. Does Health have a similar priority, because one of the problems with getting doctors and professional people to regional and rural areas is professional isolation. I would see that as a way of overcoming social isolation in being able to chat with colleagues rather than just talking on the phone; seeing them face-to-face. Is there an active program of setting up those facilities?

**Mr Craig SMITH:** Yes. That kind of capability is facilitated through a number of different initiatives within Health. One of the initiatives is the electronic medical record program, which will provide information to clinical staff across the State, information about the patient to help make decisions on diagnosis, for example. In addition, there is the electronic medical record program. Its goal is to provide access to images regardless of where the image was created, so we can share that across the continuum as well. In addition, there are the telehealth strategies that are looking to connect for face-to-face and videoconferencing between clinical staff.

**Mr ANDREW CONSTANCE:** Did Commerce indicate that penalties had been issued on Soul? I think this is an important point because of the government network that has been rolled out over the past three years, and there is another two years left to go on the contract. Has Health found that it has had to issue penalty notices?

**Mr Craig SMITH:** I am unaware of any penalty notices. I am aware of service level complaints.

**Mr ANDREW CONSTANCE:** You make the complaint to Commerce, which then passes it on, on behalf of the Department of Health?

**Mr Craig SMITH:** That is correct.

**Mr ANDREW CONSTANCE:** In terms of direct liaison with Soul, there is none or minimal?

**Mr Craig SMITH:** Minimal. Not that I have been party to.

**Mr ANDREW CONSTANCE:** Would that be adding to the frustration in terms of not being able to get the service up to scratch?

**Mr Craig SMITH:** I do not believe so. I think the frustration from our perspective is that we have an arrangement that provides an economy of scale and an amount of leverage with vendors. My frustration is that that is not working. I do not think it is so much that our agency or any other has required interaction with the service provider.

**Mr GERARD MARTIN:** Where you have a complaint with Soul, and given that there is a government broadband service coordinating a whole-of-government approach to this, if it is a capacity problem or whatever, do you go to them with detail and they get back to you after negotiating with Soul?

**Mr Craig SMITH:** Yes, there are a number of avenues we use. The first is to go through Commerce and work with the team that looks after that commercial arrangement but, in addition to that, this issue has been

escalated to the Government GCIO and I am on a review that has representation from a number of agencies where we are discussing the appropriate action to take in relation to the complaints that have been made.

**Mr GERARD MARTIN:** Are they complaints of a technical nature or they do not have the capacity to deliver some of the services such as high resolution imaging, or something like that?

**Mr Craig SMITH:** That is right, service level, capacity, response on maintenance, support and things like that, yes.

**Mr ANDREW CONSTANCE:** There have been no issues around security?

**Mr Craig SMITH:** Not as far as I know, no.

**CHAIR:** When it is not available, what do you do?

**Mr Craig SMITH:** That is the thing, and it goes to the point I raised earlier. From Health's perspective, we are talking about clinical patients. We see those as having a high-availability requirement because if we do take away the paper-based record—it is the point of these electronic systems to facilitate access of information—we require highly available solutions, but when they are down, we have to revert back to our siloed work processes and work practices, which means that potentially we cannot very easily disseminate that information outside of the facilities that it was created in.

**Mr STEVE WHAN:** Do you have a backup, a redundancy built in? Is there satellite backup or anything like that in your facilities?

**Mr Craig SMITH:** Some facilities have that capability. It is more and more a requirement as we roll out the new clinical initiatives, which are dependent on the electronic broadband infrastructure.

**Mr ANDREW CONSTANCE:** Do you have any evidence on how often the service is down? Is it regular? Are there any particular regional centres that are worse than others in terms of that?

**Mr Craig SMITH:** I do not have it with me, and I would find it hard to comment. However, I believe we could have access to that information. If you like, I could collate something.

**Mr ANDREW CONSTANCE:** Yes, thank you.

**Mr STEVE WHAN:** I had a local doctor raise with me a wish list of rolling out more imaging services into hospitals with the idea of reducing reliance on the need to have specialists in local areas, obviously doing a lot more remote diagnosis. How much thought have you and the Health Department put into whether the extra capital outlay involved in that would be worthwhile in the longer term with overcoming shortages of specialists?

**Mr Craig SMITH:** I guess there are two components to that and in my capacity as deputy chief information officer I can talk to the ICT component. The other component that I believe is related to your question is actually the infrastructure itself that relates to the clinical modality and clinical equipment that would create the images. That is not under my control. From an ICT perspective we have a statewide medical imaging program that we are currently rolling out. The program looks to address the point you raise with regards to we, as an agency, were having challenges filling and recruiting to roles in rural areas and those roles being staff specialists for reporting purposes for images. One of the benefits of the statewide imaging program was to try to address the shortage, and regardless of where the information was captured and collected, we would be able to leverage the other resources throughout the whole system for reporting purposes.

For example, an image captured in Wagga Wagga could be sent through to Westmead, which has a number of staff specialists and could report on that image and send it back without the requirement of films being packaged up, sent by courier and wait three days. So from an ICT perspective, using application and broadband infrastructure we are hoping to provide access to images for reporting purposes. I think the second part of the discussion we were having related to basically the modality infrastructure itself, the imaging equipment and placing that imaging equipment strategically around the State. I am unaware of what the organisation's current planning is for placement of that equipment.

**Mr STEVE WHAN:** Would it be something that the department is looking at as part of the big picture? It is obviously a big investment putting CT scanners around the place.

**Mr Craig SMITH:** Yes.

**Mr STEVE WHAN:** Would they look at that as an outlay on its own and justify that or would they look at it in terms of the overall delivery of service and improvements?

**Mr Craig SMITH:** I am unsure. I could not comment on that infrastructure, I am sorry.

**Mr STEVE WHAN:** On the medical records side, how does the work we are doing make online medical records link in with general practitioners [GPs] and who is providing the infrastructure to the GPs' surgeries so they are linking into it?

**Mr Craig SMITH:** The initiative we have in pilot in NSW Health right now is the electronic health record [EHR]. It is a pilot where we are connecting a group of patients and GPs in the Hunter New England and the Sydney West area health services. That pilot right now is providing the infrastructure to connect to the GPs—or at least providing some help with connecting the electronic health record with GP facilities.

**Mr GERARD MARTIN:** What is the length of this pilot program?

**Mr Craig SMITH:** The pilot is scheduled to run to March next year, I believe. We are currently discussing—and I do not believe we are looking to discontinue the pilot—leaving the pilot in lieu of a broader statewide initiative and rollout, which we are currently going through the strategy development and business case for to seek further funding from Treasury to roll it out across the State.

**Mr STEVE WHAN:** What Federal involvement will there be in a broader rollout? Obviously GPs come under the Federal jurisdiction and presumably you would want it all on one secure network—preferably an Australiawide network—in the long term.

**Mr Craig SMITH:** Potentially. Solutions like that, if they are available, would certainly be of an attractive nature to Health. Obviously the national broadband initiative could be leveraged in such a way and there is also work with the National E-Health Transition Authority from a national perspective for an electronic health record. The work we are doing in NSW Health is cognisant of that work. We are working to our current timetable hoping that we can leverage and/or connect into the national agendas for NEHTA and the Federal broadband strategy.

**Mr GERARD MARTIN:** I presume that the pilot is just looking at the technology part of it. So I guess all the privacy and probity issues have been addressed.

**Mr Craig SMITH:** Yes. The pilot does extend beyond just IT. It looks at the business model that will support the model moving forward. This pilot is informing a broader statewide initiative and structuring of that initiative so that we may change that business environment to provide that service and capability. Privacy and registration have certainly been points of focus in the pilot, and I believe the pilot was given special legislation from a privacy perspective to continue through to the March next year period in its current form.

**CHAIR:** Is the department looking at any other innovation in terms of IT? We have talked about imaging and about the transfer of data, et cetera. Are you investigating anything else?

**Mr Craig SMITH:** There is a number of new initiatives we are currently working on. One is basically taking the pilot initiative of the EHR and extending that. The others are solutions for rostering in the corporate space.

**CHAIR:** Operations.

**Mr Craig SMITH:** Yes, operational and back office. We are currently defining strategies for those as well. I am trying to remember everything else we are working on. There is a number of business cases that we are completing right now to go through and request funding for in the next budget round.

**CHAIR:** That was very informative. Thank you for appearing today. We appreciate the department's submission as well as your input today.

**Mr Craig SMITH:** Thank you.

**(The witness withdrew.)**

**(Luncheon adjournment)**

**(Public hearing resumed.)**

**LYNDA FRANCES SUMMERS**, Chair, Regional Communities Consultative Council, "Woganurra", Burma Road, Table Top, and

**FRANCES MARY SCHONBERG**, Manager, Office of Rural Affairs, Department of Lands, and secretariat support to Regional Communities Consultative Council, Post Office Box 1314, Orange, affirmed and examined:

**CHAIR:** I welcome you on behalf of the Committee as representatives of the Regional Communities Consultative Council and the Office of Rural Affairs. Thank you for appearing. I am advised that you have been issued with a copy of the Committee's terms of reference and also a copy of the Legislative Assembly Standing Orders 291, 292 and 293 that relate to the examination of witnesses. Is that correct?

**Ms SCHONBERG:** Yes.

**Ms SUMMERS:** Yes.

**CHAIR:** I draw your attention to the fact that your evidence is given under parliamentary privilege and you are generally protected from legal or administrative action that might otherwise result in relation to the information you provide. I should also point out that any deliberate misleading of the Committee may constitute a contempt of the Parliament and an offence under the Parliamentary Evidence Act 1901. Would you like to make a brief opening statement before we proceed to questions?

**Ms SUMMERS:** Yes, I would. I would like to preface my comments by talking a little bit about the Regional Communities Consultative Council [RCCC] that I represent. The RCCC is an independent community advisory body to the Premier of New South Wales and the New South Wales Minister for Rural Affairs. The council is comprised of an independent chair and 14 committee members drawn from regional New South Wales, representing a broad range of knowledge and sectors. There is myself, for example, from Table Top. Julie Imrie, representing the environment from the Nature Conservation Council, hales from Mudgee; Ruth Shanks from Dubbo is from the New South Wales Country Women's Association; Iris White is from Broulee and represents Aboriginal communities; Mick Madden is a union representative from Orange in New South Wales; Tim Sheed is a rice farmer and a business and industry representative from Jerilderie; Sue West is from Bathurst and represents Health; Peter Quarmby is from San Isidore and represents the NCOSS sector, social services; John Ainsworth from Macksville represents New South Wales Farmers; Bernadette Wenner from Wee Waa represents youth; Father Tim Cahill from Wellington, from the New South Wales Ecumenical Council, represents religious communities; Janet Hayes is from the New South Wales Local Government and Shires Associations and she hales from Deep Creek; Lyall Wilkinson from West Wyalong represents the Federation of Parents and Citizens Associations; Kevin Abey from Armidale represents economic development; and Diane Erika from Bonnells Bay represents ethnic communities.

I say that to demonstrate the wide reach of sector background as well as geographic placements. The value of the RCCC is in the broad representative perspective that the membership brings to the table in a collaborative and collegiate framework. We find that governments and departments have found bouncing ideas off the RCCC very valuable because it does give a broad perspective in relation to issues that might impact on the people of regional New South Wales.

In relation to rural and regional needs in telecommunications, the RCCC considers that delivering services, education and training requires affordable, high-quality, high-speed communication. High-speed broadband removes the tyranny of distance and brings equity into service provision. The ability to deliver specialist and professional services on line and in real time has emerged as a viable complement to traditional service delivery, and in some cases an alternative, particularly when access to traditional services is difficult or not feasible. Rural and regional communities continue to be impacted on a number of fronts, which challenge their long-term viability, but poor connectivity also acts in consort to reduce opportunity, stifle entrepreneurial initiatives and innovation, and severely degrade the quality of life for individuals and families.

Many city-based professionals are looking for a tree and sea change for professional, personal or family lifestyle reasons. Relocation choice means that these professionals take into account the quality and availability

of telecommunications and broadband infrastructure and services to support their lifestyle choices, and also offers opportunities to generate real incomes within these communities, and increasingly businesses in their decisions to relocate and redevelop are now also impacted by the availability of good communications infrastructure.

The RCCC considers that digital telecommunications requires infrastructure to be of a standard that is capable of supporting digital, voice and video applications for telehealth, telemedicine and telepsychiatry have all demonstrated the potential to deliver enormous service improvements as well as addressing the acute skill shortages that exist in those sectors. The standards for telecommunications and broadband services should be consistent with industry best practice and preferably global best practice and capable of supporting scalable data speed with capacity to support committed bit rate services, which is a quality of service requirement, such as voice over internet protocol, video conferencing, video streaming on ratios on a symmetrical service that allows seamless connectivity between parties. That means both ends need to have the same size pipe so you do not get the jitter that often occurs as people in the country with slower speeds try and connect with people in the city.

In conjunction with the recent Gellatly-led rural and regional task force public inquiry, which attended six regional cities, the New South Wales Regional Communities Consultative Council consulted with a further 113 regional New South Wales communities in five regions. The critical need for improved telecommunications and broadband was universally cited as within the top five priorities for communities and is now recognised by them as a critical pillar of economic development as well as a vital social infrastructure. The RCCC noted the importance of broadband for future economic and social development in the regions and the potential offered by effective regional planning, which incorporates industry, economic development, service delivery arms, local government and community input, and which leverages State-based IT infrastructure and investment for public benefit.

The RCCC has also researched the many and varied innovative models of broadband deployment both nationally and internationally, which focus on communities' triple bottom lines of economic, social and environmental values. Good telecommunications may never fully replace face-to-face service delivery but is an essential tool and an essential complement, and increasingly government services are moving all of their information online and, ironically, those who probably are most in need of access to that information often find it hardest to access it because they are the ones that do not have access to high-speed broadband.

To achieve equity the State Government needs to take the lead developing statewide strategies that identify and leverage off the significant investment of the New South Wales Government and which opens access for competition in rural and regional areas to provide affordable, high-speed, high-capacity connectivity. We consider this as having significant importance in planning. Planning at the regional and local level for a community's future needs to be undertaken. Rural and regional communities, businesses and industries identify high-speed telecommunications as being as fundamental to the modern regional economy as electricity, clean water and transportation infrastructure. Invigorating rural and regional communities through technology that allows access to clever applications will help build long-term sustainability and redress the capacity and skills drain. This local telecommunications infrastructure planning has the potential to encourage development and deployment of new and competitive telecommunications infrastructure.

So we have identified some lessons learnt from previous State Government trials and initiatives, and there has been a range of those that have been developed with local input. The New South Wales Government Fibre Towns Project saw broadband fibre loops being deployed in 16 country New South Wales towns for government services at the health and education sites, and there is an opportunity there to leverage that infrastructure for the benefit of local business and community and to enhance competition. The CCIF Mitchell link, which is an optic fibre from Lithgow to Parkes, is addressing a gap in broadband backbone infrastructure. A project in which I have been involved as a member of the Murray Regional Development Board is a wireless technical trial and a CountryTel community engagement model, which is a project that has created an acclaimed innovative business model and community engagement process to plan for rural and regional telecommunications infrastructure owned on behalf of the community, and in that case it is a not-for-profit.

The current situation at the national level sees the new Government proposing to invest in a comprehensive national open access optical fibre backbone network, which aims to ensure Australia catches up with the rest of the world both in terms of performance and affordability. In addition to this, a strong focus is developing in relation to the digital economy, including the emergence of rich media applications and content, which has also been signalled as a priority and which we consider has got great potential for the regions. Some of the issues that still need to be resolved for rural New South Wales are access to ubiquitous mobile broadband,

which will be critical for business and rural and regional development; there is a specific need to ensure competition in the wireless broadband market; there are no Universal Service Obligations for broadband as there are for telephony services; and infrastructure to many exchanges still needs upgrading before high-speed DSL services can be delivered because significant underserved areas—what were commonly known as black spots—still exist throughout regional New South Wales. Affordability and globally equivalent performance is critical to enable productivity competitiveness in the regions.

So we have worked to develop some principles that we think will encourage a competitive broadband environment, an overarching one being that the network needs to be technology-agnostic and network-neutral, which means that it would allow any standards-based network technology to connect and to be interoperable. A key priority will be effective Commonwealth and State engagement: having the Commonwealth and the States work together on a broadband model most appropriate to each unique State's requirements, together with a national imperative, possibly through the COAG model; reviewing and aligning the Commonwealth and State governments' regulatory policy settings to facilitate an open access agreed standards-based national broadband infrastructure which leverages existing assets and has globally competitive affordable pricing; and defining Federal, State and local responsibilities for the deployment to finance our management of the broadband infrastructure and the ultimate delivery of communication services to communities.

An important one for the future to consider is the spectrum allocation to the regions. We need to recognise the economic and productivity value and public value of spectrum and agree on appropriate allocation of globally compliant spectrum bands for mobile and wireless broadband data on a regional basis for the benefit of regional communities. In agreements we need to develop principles or codes to ensure that whatever is rolled out adheres to what we are trying to achieve. The first of these is the open access nationwide wholesale core backbone infrastructure model that delivers sustainable high-speed affordable services, operating procedures and structures that support a national wholesale broadband infrastructure with level-playing-field interchange tariffs, whether the retail access to the network is urban, rural or remote; a national protocol that allows access to the service providers who can meet the technical operating requirements subject to quality, efficiency, cost and security; and a backhaul and wholesale network that can be utilised by the most appropriate new technologies suited to local conditions, and this might mean fibre to the home, fibre to the node, fibre to the premise, broadband over power lines, a Wi-Fi, Wi-Max, 3G or any of the other emerging technologies that can hook into this backhaul network.

It is to ensure that spectrum bands are preserved to ensure that current and emergent technologies have guaranteed access, especially for rural and remote areas, and to consider a no-overbill principle that recognises previous contributions and investment to address anti-competitive behaviours. We have reviewed some potential State and regional governance models and believe that a review of the telecommunication needs of the State economy and community with specific regard to remote and rural communities needs to provide a baseline for allocations of infrastructure: so, basically invest where the need is greatest first.

We consider that State service delivery agencies could develop plans that could integrate existing and planned services at a local level and cooperatively manage delivery, so you will have agencies that currently have their own different networks combine all to one IP network that could leverage investment into a network that could be accessible by the community. These principles emerge from the RCCC's research of local, State and national models for broadband delivery, which focus on meeting community economic and social development needs.

Around the world, communities are increasingly intervening in the deployment of broadband to redress market failure where traditional carriers fail to invest in Next Generation technology. As recent as 8 June 2008, UK analyses of models of public sector interventions throughout Europe and the USA recommended the experimentation of models for public sector interventions in collaboration with commercial stakeholders, government and regulators. This is a concept pioneered in New South Wales by the Murray Development Board's community engagement initiative, the lessons from which are now informing international innovation in the sector.

Case studies of economic development in broadband models exist in communities as diverse as Tallinn in Estonia, Burlington in Vermont and Oklahoma City, Gainesville in Florida and Burlington in Ontario. With variety in chosen technology and business models to suit local environments and needs, a common feature is an all IP network of standards-based technology, which is open access. This enables innovation and competition to flourish at the retail level, resulting in applications to meet local need and affordability of access, and leveraging industry and social policy agreements. The allocation of public finance for broadband infrastructure should be

based on the ability to meet standards, but also to leverage the new investment for economic and social outcomes.

Federal, State and local governments have a role in driving the framework for this philosophical tenet to assist with community access to education, employment and training; integrate the needs of local industry for productivity and connectivity; address the digital divide through a mix of cheaper and easier access and greater connectivity; contribute to the riches of local cultural life; improve participation in the media; enhance community capacity by improving access and networking tools; enable community monitoring and management of environmental resources; encourage the more efficient use of transport and energy; and facilitate enhanced service delivery and the development of the digital economy reducing reliance on carbon emitting travel.

In summing up, we consider that governments at all levels have a role to ensure that a framework or a set of principles is in place to encourage open access, standards-based IP networks, with access to spectrum that is appropriate and that leverages existing public assets.

**CHAIR:** Thank you for your comprehensive opening statement. You have covered many of the issues that we wish to discuss. I refer to the Murray-Darling broadband project of the Regional Communities Consultative Council [RCCC] and ask you to elaborate on a project that has achieved some positive outcomes.

**Ms SUMMERS:** The one that we have done on the Murray?

**CHAIR:** Yes.

**Ms SUMMERS:** It commenced as a trial of what we call hybrid wireless. In hindsight, it was probably a little ahead of its time, in that it commenced four or five years ago before broadband became the economic imperative that it is today. Basically, it was to trial emerging technologies for wireless. At present we are trialling wifi mesh in the main street, or Dean Street, which is recording significant usage. More importantly, it has encouraged competition, in that we now have a far greater number of carriers providing services to the community. They have made more effort to be there.

**CHAIR:** Have they come in as a consequence?

**Ms SUMMERS:** Yes, that is right. I am aware that, as a result, council has provided free wireless broadband to a couple of its premises. Driving competition has been the main gain.

**Mr GERARD MARTIN:** Referring to competition, we heard evidence from Telstra that there are plenty of examples of smaller operators in the regions that have failed, or gone under, because they either lacked resources or were not able to provide top-class or world-class service. Do you have experience of that, or do you believe that there is a role for small community-based or private operators?

**Ms SUMMERS:** After examining some of the successful international models I think they are now moving to models that are implemented to underpin those social and economic development outcomes, which is where we need to go. The traditional carrier model is difficult for small operators to apply locally. Emerging international evidence demonstrates that different models can be applied to communities in regional areas and that they can survive.

**Mr GERARD MARTIN:** Without relying on any level of subsidy?

**Ms SUMMERS:** All the modelling that we have done and that we have researched is predicated on not requiring a subsidy. But those who have a kick-start as a result of investment from the State, or those who can leverage off public assets, certainly have a foot forward. In Australia that has been recognised by the fact that over \$4 billion is on the table to do precisely that.

**Mr STEVE WHAN:** How do you think we could better use the Soul link that the State Government has to provide services in local communities?

**Ms SUMMERS:** A few years ago the New South Wales Government announced that the assets it had deployed would become available for third party providers. I think a focus on allowing access to that would be useful so that other providers could use those links, on commercial terms of course, to engender competition, in particular, in regional areas.

**Mr STEVE WHAN:** This morning we heard from Department of Commerce representatives that some private providers are using the links in some of the bigger centres—the 24 centres. Are you suggesting that that is somewhat limited at the moment, or can that be done in some of the smaller centres?

**Ms SUMMERS:** Yes, indeed. Last year the RCCC and the Department of Commerce put a proposal to the Clever Networks Program—an initiative of the former Federal Government—to leverage off the fibre loops in the Soul network and the current government radio network to do that.

**Mr STEVE WHAN:** Have we seen your proposal?

**Ms SCHONBERG:** You do have a copy.

**Ms SUMMERS:** It is on CD but the paper version is quite thick.

**CHAIR:** It is quite thick. It was tabled members were not given a copy.

**Ms SUMMERS:** You certainly would not want me to read it to you.

**Mr GERARD MARTIN:** You made a strong point about the availability of spectrum. What do you see as major impediments to that, in particular, in regional areas?

**Ms SUMMERS:** Previous policy settings have resulted in spectrum being sold largely in national tranches in globally compliant bands, which means that carriers deploy infrastructure where populations are, as that is the basis of their model. It means that spectrum may be present and unoccupied in the regions but cannot be accessed because it has been sold off. We are working closely with the Australian Communications and Media Authority, which put out a discussion paper that proposes a private parks concept for these bands, which would be ideal for regional communities and which would work to encourage small providers to deploy.

**Mr GEOFF PROVEST:** What has been the reaction of local communities? Are many of them frustrated, or are they willing to commit financially to different options? When we visited Griffith I was amazed that some of the larger businesses took it on themselves to put in fibre.

**CHAIR:** In the Yetman model.

**Mr GEOFF PROVEST:** In the Yetman model the community raised its own funds. Are you aware of that?

**Ms SUMMERS:** Yes. We did an audit in our home town. A couple of dozen businesses put in their own microwave links to enable connectivity. The issue for them is that they now need to move forward to digital standards, so there is a need to swap out and upgrade. I think the timing to—

**Mr GEOFF PROVEST:** So there is willingness on all sides?

**Ms SUMMERS:** There is not only willingness; there is a need and there is frustration because what they want to do does not fit into the small boxes that carriers might provide for them.

**Mr GEOFF PROVEST:** There are a number of solutions to all the different problems?

**Ms SUMMERS:** Yes.

**Mr GEOFF PROVEST:** As an umbrella group how will that be brought together? Will it be a Federal initiative across the nation, or can the States do it?

**Ms SUMMERS:** It should involve all three layers of government working collaboratively together, so you have a national framework that talks about standards, open access, and providing that wholesale backbone—which is what the fibre rollout anticipates—and then having State and local government working together to plan how best that infrastructure should be deployed in the regions to suit their needs. For example, one community might be reliant on a mine that is reliant on specific communications technology, and leveraging that need to develop a community access network would be useful. In other areas it might be irrigation.

**Mr GEOFF PROVEST:** Do you find that people in regional areas are savvy with what is in the market, or do they receive only dribs and drabs of information? This morning we heard from New South Wales Farmers Association representatives who said that one of their roles was to advise their members about what was available in the marketplace.

**Ms SUMMERS:** I think there is a role for State governments and for the leadership per se to play in introducing new ideas that are being tackled internationally—the new business models, the new technology that is available—and to appreciate that there is a need for them to plan from the ground up.

**CHAIR:** Earlier you mentioned the need for Federal, State and local governments to work together. Have you given any thought to some kind of model that would help to coordinate that? How would that happen?

**Ms SUMMERS:** It would be useful to undertake that sort of research in New South Wales. We firmly believe that no one size fits all, but models are emerging, such as not-for-profit models, or pseudo utility models. Local government might have a role in some of them. It really needs to be tailor-made to the regions to suit their needs, their demand, their topography, the assets that already exist, and the willingness or unwillingness of carriers that are there either to collaborate or not to collaborate. Regional planning is the way to go.

**Mr GERARD MARTIN:** I see your organisation is fairly widespread and well represented. Have you had much feedback about the switching off of the CDMA service and how it compares to the Next G service?

**Ms SUMMERS:** I cannot give you statistics or anything other than anecdotal evidence and my own experience in having to do exactly that. I guess there is a level of frustration and dissatisfaction depending on where you are. But you can talk to other folk who say it works very well. Interestingly, in a general sense, although the new network provides capacity for data, it is considered a bit dear to use to any great extent. Although the technology is there, there is wariness about supporting it.

**CHAIR:** That was a very comprehensive presentation. Thank you. We have a whole series of questions and I was ticking them off as you spoke.

**Ms SUMMERS:** Sorry.

**CHAIR:** That is good and we appreciate it very much. Thank you for appearing before the committee.

**(The witnesses withdrew.)**

**BRETT RILEY**, Executive Director, Telstra CountryWide, 4 Ilya Avenue, Erina, and

**PAUL MITCHELL**, Group Manager for New South Wales Government, Telstra Enterprise and Government, Level 5, 320 Pitt Street, Sydney, affirmed and examined:

**LUCY WICKS**, Corporate Affairs Manager, New South Wales/Australian Capital Territory, Telstra Corporation Ltd, Level 11, 231 Elizabeth Street, Sydney, sworn and examined:

**CHAIR:** Thank you for appearing before the committee to provide evidence to the broadband in rural and regional communities inquiry. I am advised that you have been issued with a copy of the committee's terms of reference and also a copy of the Legislative Assembly's Standing Orders 291, 292 and 293 that relate to the examination of witnesses. Is that correct?

**Mr RILEY:** Yes.

**Ms WICKS:** Yes.

**Mr MITCHELL:** Yes.

**CHAIR:** I draw your attention to the fact that your evidence is given under parliamentary privilege and you are generally protected from the legal or administrative action that might otherwise result in relation to the information you provide. Any deliberate misleading of the committee may constitute a contempt of the Parliament and an offence under the Parliamentary Evidence Act 1901. Would you like to make a brief opening statement before proceeding to questions?

**Mr RILEY:** I will start by recapping some of the important announcements that Telstra has made of late regarding telecommunications in New South Wales. The main announcements we have made of late relate to the rollout of ADSL 2+ broadband, the further expansion of our Next G network and, of course, the Federal Government's announcement about the National Broadband Network.

ADSL 2+ provides speeds up to 20 megabytes a second. However, that is dependent on the distance from the exchange. Within 1.5 kilometres of a Telstra exchange the speed will be 12 megabytes to 20 megabytes a second. Out to three kilometres, it drops back to about eight megabytes a second. It is important to understand stand ADSL has distance limitations from the exchange. That is about 350 times faster than a standard dial-up connection at 56kbps and about 78 times faster than a standard ADSL connection. Telstra has recently upgraded an additional 900 exchanges around Australia to ADSL 2+, and about 80 per cent of them are in regional areas. For New South Wales that means approximately 730,000 homes and businesses have benefited from the upgrade. We are still upgrading more exchanges even now. That is the latest on ADSL 2+.

We now have up to 6,400 mobile Next G base stations, which provide 99 per cent of Australia's population with a Next G signal. That is about two million square kilometres in terms of land mass. CDMA covered about 1.6 million square kilometres. So we have moved from a network that covered 1.6 million square kilometres to one that now covers two million square kilometres. Next G has a good technology road map in front of it. By the end of this year, it will be delivering data speeds of 21 megabytes a second and by the end of next year it will be delivering data speeds of 42 megabytes a second. This wireless network will deliver equivalent speeds to those delivered by our ADSL network. However, of course, it will be available to 99 per cent of the population. In fact, there are about 190 network coverage locations where there was no CDMA coverage before. We also now have more than 60 Next G devices—there is a range of different handsets for different purposes—and the blue tick range of handsets for better coverage in regional areas or fringe-coverage areas. As with all of these, we recommend a like-for-like transition; that is, if you used a car aerial when you used CDMA, you should use one with Next G. That is the latest on Next G.

I will just move to the National Broadband Network and comment as far as I can. You are aware that there are gag orders to do with the tender process, so I will make some comment but be mindful of the gag orders. This is a huge job; this National Broadband Network is a very complex job. It will be the largest fibre network of its kind anywhere in the world. That in itself says something because sheer geography and population density gives you some idea of the economics of the build. It will be the single largest infrastructure project in Australia's history: bigger than the Snowy Mountains, bigger than any previous infrastructure project.

Nearly every home and business in every street around the country will be impacted. Telstra stands ready to deliver this critical nation-building project. We have been ready for some time.

We are ready to build as long as it makes commercial sense to build it, and we have made that very clear to the Federal Government. We have been building networks for the last 100 or so years. In fact, the detailed planning for this network has been going on for three years because we were keen to build this network two years ago when we were making proposals to the Federal Government. So, a lot of planning has already gone in. We have a highly skilled workforce not only out in metro areas but also in regional areas who know our network intimately, the points of connection and so on. More importantly, we are guaranteeing—and this is within the terms of tender—that this will be an open-access network. Our competitors will have equal access to this network. When I say "equal access", that is as Telstra retail. So, it is open access regardless of what you might hear.

If I may add a few concluding remarks on Internet usage. We have seen some phenomenal growth in Internet usage even in the last 12 months, let alone couple of years. There are now over 7 million Internet subscribers in Australia. About 73 per cent of those are on broadband. So, 73 per cent of 7 million is about 5 million or so. Broadband subscribers increased by about 33 per cent from September 2006 to December 2007. So, the take-up of broadband has been extremely rapid. There are a lot of good reasons for that. Basically, Australians are changing the way they use the Internet. About half of Internet users have joined a social network. A social network might be a site like facebook or myspace or YouTube where they share content.

These applications typically demand a lot more data, they are very data-hungry applications: 47 per cent of Internet users have uploaded photos, 27 per cent have uploaded videos—again we are getting into these data-rich applications. So you can see the need for bandwidth is substantial. In fact, YouTube serves over 3 billion videos every month and uses more bandwidth than the entire Internet did in 2000, and that is just one site. So you can see that the demands of the Internet are changing substantially. Nearly half of all broadband subscribers in Australia have connection speeds of better than 1.5 megabytes per second, and that is double the percentage back in September 2006. You can see a pretty dramatic move to high-speed plans. About 1.5 million subscribers connect at speeds greater than 8 megabytes per second. In fact, the Australian Bureau of Statistics did not even measure these high speeds back in September 2006: they just were not available.

So, building a high-speed national network not only will cater for our changing lifestyles, but also will enable a lot of the new applications that we are seeing in the field of telemedicine, education and business. The gigabyte age is here; we would like to make sure that all Australians have access to it as best they can. The National Broadband Network certainly is going to enable access to high-speed networks. Our most important point is that regardless of who builds the network, we do not want to see Australia fall behind the rest of the world. This is an important nation-building project. That is all I have to say by way of introduction. I am happy to take questions.

**CHAIR:** The CDMA network was closed finally. What was the reaction from the community once it was closed and turned off? How many users have moved across? Has there been an increase in numbers?

**Mr RILEY:** Since the switch-off date I would describe the aftermath as a deathly silence. I had all my staff ready to go and attend to customer issues the next day. Really we did not hear a peep. I think that is because a lot of the work was done and the extension allowed a lot of people to sort out their issues. I am not aware of a single case right now. I am sure someone will say, "What about so-and-so" but there is not one on our books that says we have a problem in a certain area. We had our coverage equivalence declared by a Federal Government independent committee. We have basically cleared up all the issues we have been going through in Telstra countrywide. So, we are not aware of any network equivalence issues at all. Really it has gone very quietly since we turned off the CDMA.

**CHAIR:** I asked the question because we have been pleasantly surprised as well. I do not know about other members, but I have not had people complain to me.

**Mr GERARD MARTIN:** We had one this morning. The Vice President of the New South Wales Farmers' Association has to climb onto the roof of his tractor at Tarcutta or somewhere.

**CHAIR:** He did admit he was one of the 1 per cent to 2 per cent.

**Mr RILEY:** He did with CDMA too.

**Mr ANDREW CONSTANCE:** Yes, nothing has changed there. In regard to ISDN and how CDMA will be potentially applicable to the withdrawal of ISDN, what are your key learnings from that?

**Mr RILEY:** I guess the key learning out of that is, firstly, ISDN is an outdated platform. The world really is moving away from it. We are in the process of migrating our customers over to better products. We found a lot of ISDN customers who actually now can get ADSL. They probably could not get ADSL when they went on to ISDN, but now they can. We are now serving 99 per cent of the population with Next G. So, the old ISDN at 128 kilobytes really is a service that is not meeting the needs of most of our customers.

**Mr ANDREW CONSTANCE:** How many people still would be in that boat?

**Mr RILEY:** I would not know off the top of my head. Even if I did, that is probably a commercial issue anyway.

**Mr STEVE WHAN:** New South Wales Farmers did express concern saying that they think there are still quite a lot of people on ISDN lines who might not be able to get ADSL or Next G coverage. How would you deal with those individuals, if you came across them?

**Mr RILEY:** We will take them one case at a time. There are still satellite solutions available to those people anyway at higher speeds than what ISDN operates at.

**Mr STEVE WHAN:** Yes, and I know it is fairly old.

**Mr RILEY:** Yes.

**CHAIR:** Will that then be a pricing problem?

**Mr RILEY:** Potentially, but do not forget that the satellite has a Federal Government subsidy, which actually makes it a comparable price to ISDN.

**Mr STEVE WHAN:** Are other retailers able to use the ADSL2+ in the exchanges you switched on? Was it made available to the competition at the same time or was that part of the deal with the Federal Government that it was not made available?

**Mr RILEY:** No. One of the reasons we enabled ADSL2+ in a lot of regional exchanges was that we had more confidence that we would not be forced to wholesale it at non-commercial rates. We upgraded so many exchanges because there was an economic business case to do so. There is nothing to stop any of our competitors installing their own DSLAMs in our exchanges and providing the same service. All DSLAMs being installed these days are ADSL2+ cable. No, it is not a service we are wholesaling.

**Mr STEVE WHAN:** So those 900 extra people can only get it through Telstra as a retailer?

**Mr RILEY:** Some of those also have our competitors in them.

**Mr STEVE WHAN:** I mean the ones you switched on. They might have a DSLAM for someone else's equipment?

**Mr RILEY:** Yes, quite a few have. Our competitors are putting DSLAMs out in our exchanges at a pretty rapid rate now too. You will probably find that they are putting them in band one and two exchanges, but because of the de-averaging of the unbundled local loop [ULL] rates the Australian Competition and Consumer Commission [ACCC] declared that there would be a different wholesale rate depending on which exchange. The metro exchanges have a cheaper wholesale rate than regional and rural exchanges. So, our competitors tend to go into the exchanges where there is a low wholesale rate. It is a key issue, because we argued that because the retail prices are averaged a wholesale rate should be averaged because you will limit the amount of competition in regional and rural areas, and that is exactly what has happened.

**CHAIR:** In your submission you make the interesting suggestion that the State Government could provide subsidies to rural and regional customers who do not have access to ADSL broadband. Can you explain how that would work?

**Mr RILEY:** I believe that was in relation to wireless broadband pricing. One of the issues that arose in your discussion paper was that wireless broadband is fine but it is more expensive than ADSL. That is because it is more expensive to deliver, so it is just the economics of delivering it. One of the ways—it is just one of the ways—you can bring people on to a similar pricing platform is to subsidise that to user level. If you need to take that service and there is so much a month available to bring the price into parity with ADSL, that is just one of the ways you can do it.

**CHAIR:** It is as simple as that?

**Mr RILEY:** Yes.

**Mr GERARD MARTIN:** It has been stated before the Committee that Australia has the highest prices and the slowest speeds of broadband internationally. Given that Telstra has been the predominant provider of this service, do you see that in moving to the new broadband network that the Federal Government is going to run out, and you may well be involved in that, do you agree with that scenario, for a start, and do you see that changing dramatically?

**Mr RILEY:** A National Broadband Network will definitely increase the speed available to most users, without a doubt. Between our ADSL and cable services we are pretty much equivalent with the rest of the world except where you start to compare fibre to the home—in some of the more densely populated Asian countries especially, where they have run fibre right to the premises. We do not compete in that regard. Australia has the fastest wireless network in the world. In price, you just cannot compare the cost of providing a service to 20 million Australians scattered over the landmass of Australia to providing a service to 100 million people in an area the size of Tasmania. They are just invalid comparisons. I do not buy that one. The three factors that determine the cost of infrastructure provision are distance, density and terrain. If you have long distances, tough terrain and low population density, the cost of providing services goes up. Amongst the top 20 OECD countries, Australia has about the worst in DDT—distance, density and terrain. So, I do not agree with that statement that Australia has the most expensive broadband. Other factors need to be taken into consideration.

**Mr ANDREW CONSTANCE:** Have you any views on the State Government's broadband network, how does that fare under the new arrangement, the national broadband project?

**Mr RILEY:** When you talk about the State Government's broadband network, the Soul broadband network, I am not going to make any comments about a competitor's network. They are not the only ones with a network out there either. Next Gen, Optus have all got optical fibre out to major centres in New South Wales. There are more than one or two networks out there. I would not like to say how Soul is going to integrate with a National Broadband Network. It is up to them.

**Mr STEVE WHAN:** There was a comment in your submission about not pursuing the longer ADSL, that the broadband network would basically take that over. Can you explain that a bit further? There was talk of ADSL being able to go a lot further than six kilometres at one stage.

**Mr RILEY:** ADSL extenders are technology you can put on to promote the strength of a signal. However, to deploy that you need a separate copper pair. I am not fully conversant with the technology, but the limiting factor in most rural exchanges is availability of spare copper pairs. If you think about all of the copper that runs out of an exchange, most of it is occupied by users at the other end. So, the economics fall down pretty rapidly. We have run a trial and found it to be extremely uneconomic to deploy. Especially when you compare it to other means of deploying broadband, like wireless, which is both faster and more economic to deploy.

**Mr STEVE WHAN:** Obviously you cannot give us a lot of details about your submission on the national project that is going on at the moment, but if we are talking about a fibre to the node rollout around Australia, how much easier is that going to make it for us to have new housing developments in rural areas that are fibre to the house, to the home? Are we going to have a gap anywhere?

**Mr RILEY:** It probably will not make too much difference, because any fibre to the home deployment, which is what we call a Telstra smart community, is an arrangement between us and the developer, which is available now. If a developer wants to open an estate with fibre to the premises, we do it on a commercial basis. They can contribute to the infrastructure costs and market it as a point of differentiation for their estate. That

would not change. In some cases it might bring the fibre closer to the estate but essentially that will not change too much.

**Mr STEVE WHAN:** What about in existing areas where, if people wanted to retrofit or maybe they want to get someone to put fibre down to the street from their house, how far away are they? Where is the node located in a rural area and in a town area? You talk about fibre to the node and I might imagine that as being a different spot.

**Mr RILEY:** It just depends. It is hard to generalise. A node will be more than just something buried in the ground. In most cases it will be a big green box about two metres long and about a metre wide, or so, a metre and a half. You may have seen some of them. If you imagine one per suburb or something like that.

**Mr STEVE WHAN:** So it would be closer to the home. How much closer to the home and the exchange, for example? The exchange services the whole town and then it might go further out. If you are rolling it out in an existing suburban area, how much is that going to help the people?

**Mr RILEY:** Let me try to give some context—say Orange. There is a single exchange in Orange but there is a lot of new housing development around North Orange. You would run out west, around Cargo Road and the Forbes Road, there is a lot of new development out there. That would be a separate node to North Orange. You would probably have another node out at Leewood on the eastern side of the railway lines. You have a number of nodes around the town. I cannot tell you how many because I have not done the plan for Orange, but that gives you some idea. It is kind of a spoke and hub sort of set up. It takes it out within 1½ kilometres of the outlying population of the town.

**CHAIR:** The node is restricted by distance or is there no restriction once you get a node in?

**Mr RILEY:** No, you run fibre from the exchange to the node. That is not restricted by distance.

**CHAIR:** What about from the node out or coming in?

**Mr RILEY:** Yes, because it will be copper serving the houses. To get back to your earlier question of fibre to the home in existing suburbs, that is a whole different proposition. It is a very expensive proposition indeed. You are now talking about going in and digging trenches through people's fences and rose beds and front yards and all that sort of thing.

**Mr STEVE WHAN:** In suburbs that have underground services, can they not slide it up through existing Telstra tubes or whatever?

**Mr RILEY:** Generally not.

**Mr GERARD MARTIN:** In relation to the OPEL contract that has now been cancelled, one of the criticisms of it was—in terms of what this Committee is looking at, country and regional areas—it was going to deliver basically a two-tier system and the Wimax system that would be looking after most of the regions we look at, was inferior to cable, and I think that was a criticism that came from a number of sources. Has anything changed in the past 12 months or so in technology that is likely to change so there would not be such a need to rely on the Wimax type of system? I know there are other bids that probably did not.

**Mr RILEY:** Just three points on that. Firstly, the OPEL proposal did nothing to provide new services to new areas that did not already have some kind of broadband available to them. It was complete duplication. We looked at it and said that this money was meant to be for new services but there was none. It was a pure duplication of our network. The second point was that the technology was not one we would choose to deploy because we regarded it to be inferior to the type of bandwidth we needed to deliver in the future. That was another point. Thirdly, in more regional areas the Wimax did not have the reach from the tower to provide the sort of services that we proposed. So, it had some issues with it. I am not sure if I have answered the question. Do you want to give us another run at it?

**CHAIR:** Is any new technology coming out?

**Mr STEVE WHAN:** Has Wimax changed?

**Mr RILEY:** No, not that I am aware of.

**Mr STEVE WHAN:** In regional areas where the fibre might get closer to a rural property, are you looking at wireless technology there or are you looking at Next G as how you would service a rural property, for example?

**Mr RILEY:** That is case by case. I cannot generalise about every farm but the National Broadband Network will reach 98 per cent of the population to meet the tender requirements.

**Mr STEVE WHAN:** It is how I am interested in?

**Mr RILEY:** Yes, and that 98 per cent are generally going to be in communities.

**Mr GERARD MARTIN:** Has there been much improvement in, say, satellite technology that might solve some of these problems?

**Mr RILEY:** You will always have a problem with satellite technology in the time it takes to bounce a signal from earth to a satellite to a base station, back to another user. It is all those hops that cause the latency in the signal. As a result, a lot of, say, business applications that rely on real-time connectivity, fibre-like connectivity, cannot operate. Citrix is one of those. It cannot operate properly with that kind of latency. So, you will always have some fallbacks. I have no doubt that satellite technology will improve in its speed but it is hard to see that it will be as fast as fibre-based technology, because fibre is running at the speed of light. It is difficult to improve on that.

**(The witnesses withdrew.)**

**(The Committee concluded at 3.12 p.m.)**