

REPORT OF PROCEEDINGS BEFORE

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

**INQUIRY INTO THE AVAILABILITY OF TELECOMMUNICATIONS,
BROADBAND SERVICES AND OTHER TECHNOLOGY FOR RURAL
AND REGIONAL COMMUNITIES**

**Incorporating additional information provided in correspondence from Dr
Alexander Zelinsky on 18 December 2009 and Ms Lucy Wicks on 29
January 2010.**

At Sydney on Monday 30 November 2009

The Committee met at 11.00 a.m.

PRESENT

Mr P. B. Gibson (Chair)

Mr A. J. Constance
Mr B. E. Besseling
Mr G. F. Martin
Mr G. K. Provest

ALEXANDER ZELINSKY, Director, Information and Communications Technologies Centre, CSIRO,

NARELLE LESLEY CLARK, Research Director, Networking, Information and Communications Technologies Centre, CSIRO, and

GARY DOHERTY, Manager, Strategy, Information and Communications Technologies Centre, CSIRO, affirmed and examined:

CHAIR: I thank you for your attendance today. It is a pleasure to have you here. Before commencing, if you are in possession of a mobile telephone would you please switch it off. I am advised you have been issued with a copy of the terms of reference of the Committee together with copies of Standing Orders Nos 291, 292 and 293 of the Legislative Assembly relating to the examination of witnesses, is that correct?

Dr ZELINSKY: Yes.

Ms CLARK: Yes.

Mr DOHERTY: Yes.

CHAIR: I also draw to your attention that your evidence today is covered by parliamentary privilege. Dr Zelinsky, would you like to make an opening statement?

Dr ZELINSKY: Yes, we welcome the opportunity of appearing before this Committee. I have a statement, which I will read. The CSIRO has a major role in the National Innovation System in addressing the issues of national importance. In recent times the CSIRO, through its National Research Flagships program, has successfully taken on the national challenges in the area of water, energy, health and climate change. Using large-scale multidisciplinary research partnerships, CSIRO has harnessed its world-class expertise to develop practical solutions to these real-world national priorities. The recently announced National Broadband Network [NBN] initiative can also be viewed as a national challenge. The five to eight year time frame for the rollout of the NBN creates the opportunity to science and innovation to play a role in the delivery of high-performance broadband services for Australia. There are particular challenges to be addressed in providing broadband to rural and regional communities.

CSIRO can assist in the challenge of the rollout of the NBN in four areas through: first, new wireless access technologies for the last 10 per cent of the NBN that are potentially as good as the 90 per cent fibre solutions, and gigabyte wireless backhaul solutions that can reduce network deployment costs. These technologies are particularly relevant in regional and rural areas where the cost per connection of current alternate technologies is uneconomical; second, as a trusted advisor, CSIRO can provide advice around network design and the optimisation of network topologies, possible ways to extend fibre spans by improving the efficiencies of optical repeaters, and the use of automated technologies for fibre installation by using robotics technologies; third, provide technologies and advice to ensure that NBN is a high performance network from the user perspective, which is secure and trusted, delivers quality of service and as a piece of critical network infrastructure is protected; and, fourth, develop new broadband applications for health, delivery of government services, mining and energy management. The electronic delivery of services can have a considerable beneficial impact on rural and regional communities.

CSIRO regards broadband as an important enabler for many areas of future scientific research and a key technology linking the 55 CSIRO sites across Australia and its partners in the Australian National Innovation System. CSIRO is ready to assist in the important endeavour of the rollout of the NBN. The potential benefits of CSIRO's technology and advice could create options in the NBN rollout. For example, improved rural broadband services could mean additional fibre is installed elsewhere in the system. It should be noted that the discussed CSIRO technologies, while having great potential, are still under development. A significant risk always exists with research and development that the intended benefits cannot be realised.

CSIRO with its world-class capabilities in information, communication, mathematical, material sciences and technologies, coupled with a significant track record in telecommunications, is well placed and ready to tackle the scientific challenges of helping Australia deploy its National Broadband Network.

CHAIR: Mr Doherty, would you like to add to that?

Mr DOHERTY: No, thank you.

CHAIR: The Committee has commenced an inquiry to investigate the ways in which new technologies can improve education, health, business and justice services in rural and regional areas. The Committee understands that the Information and Communication Technologies Centre of the CSIRO has been particularly involved in the advancement of telemedicine. Can you describe the sort of research that has been undertaken, such as the Virtual Critical Care Unit [ViCCU], Remote Immersive Diagnostic Examinations System [RIDES] and the EchoCardiographic Healthcare Online Networking Expertise in Tasmania [ECHONET]?

Dr ZELINSKY: Yes, we would be delighted to be able to talk about these technologies. These technologies have been under development for close to 10 years. We started the program in 2000 in partnership with the Federal Department of Communications, Information Technology and the Arts, back then—the department does not exist in that form now. We worked in partnership with that department for close to seven years, and since then we have done our own deployments with Queensland Health through our Australian e-Health Research Centre, working on some of the telemedicine operations. More recently we have recruited an Australian leader in e-Health solutions, Dr Yogesan Kanigasingam—

Mr DOHERTY: We refer to him as Yogi, and he is the chair of the Australian Telemedicine Association. He is a distinguished scientist particularly in tele-eyecare for rural and regional areas.

Dr ZELINSKY: I will shortly ask Narelle Clark to give an overview of the technologies. We did bring some information with us. We are not sure if that is appropriate to table?

CHAIR: Thank you.

Documents tabled.

CHAIR: Can I ask you a question before we do cross over? You say it has taken 10 years. The Russian five-year plan did not take 10 years. What have we been doing in those ten years?

Dr ZELINSKY: I should probably talk a little bit about that. That is when our research program started with the view to see if we could show what could be done with telemedicine applications using broadband? The challenge that was given to us was to imagine if band-width was unlimited and cost very little. We started from that premise. We did a very successful trial of ViCCU—and I will ask Narelle to talk about that in a moment—and we proved that it was a viable technology. What we did not have at that time, and why it has not been picked up quite frankly, was broadband to all the rural areas in Australia where you could deploy it. The network did require a high broadband width up to 150 megabits—

Mr DOHERTY: 100 megabits per second both ways, or full duplex.

Dr ZELINSKY: Currently that is not cost-effective to be deployed. This is why it was not deployed rather than because we had not completed the work. We have shown the efficacy of the approach. Now with the Government's announcement of the NBN it creates the potential for these sorts of technologies to be rolled out. Narelle will tell you more about ViCCU and the e-Health applications we have developed.

Ms CLARK: The ViCCU system is basically a trolley-based system, designed for use in emergency and critical care facilities. The concept is that you have a convenient trolley-based system that can take a number of camera feeds, sound feeds and document feeds, so a range of different types of input devices, which is broadcast back to a specialist at a remote hospital. In that way the local hospital can beam in the additional expertise that they do not have locally, yet it enables them to retain control over the local environment and maintain patient care at the centre of things but to bring in the additional expertise that they may not have.

CHAIR: Are operations performed under that sort of system as well? Or is it only advice from the specialist?

Dr ZELINSKY: Just to intervene for a second. This is in an emergency care situation. For example, there has been a car accident or something like that and rather than transporting the person from the regional area to the city they are actually treated at the hospital. The specific place where we did the trial was between Nepean Hospital and the Katoomba Hospital. Over the time of the trial we treated 492—

Ms CLARK: —503 activations.

Dr ZELINSKY: These are real treatments and interventions. It is not an operation. It is more or less bringing the emergency care specialist to the place. The trolleys were positioned at the heads of the beds and they were able to interact with the nurses and doctors who were there as if they were actually in the room.

CHAIR: Does that happen in the actual operation?

Ms CLARK: It is in the emergency care facility. Unfortunately, I am sure we have all seen the emergency care ward.

Mr DOHERTY: I was fairly directly involved with that, Chair. What happens in an emergency department is when someone is brought in, the emergency care specialist rarely touches the patient. They stand at the top of the bed. It is a bit dramatised on TV now, but they stand at the top of the bed and there are two people either side who administer care under direction. What we did is we created a sense of tele-presence so that the specialist, Dr Stuart Stapleton at Nepean Hospital, felt as though he was at the foot of the bed at the Blue Mountains Memorial Hospital in Katoomba. The idea is if they can provide triage in a timely way, because people in these remote locations do not see these conditions very often, you can do a lot of good in those first hours that will save patient time in hospital. The alternative is to throw them in an ambulance and come down the Blue Mountains, which is adding to the trauma.

CHAIR: If they need to operate on someone, with the tele-technology can the surgeon say, "Don't touch that"? Is that possible?

Mr DOHERTY: It is technically possible. It is not what we designed the system for; it was designed for triage. There have been a number of experiments into tele-mentoring for surgery. It is certainly feasible.

Dr ZELINSKY: Those have been mainly through a specialist performing an operation and our colleagues observing remotely and the person saying, "This is how I have conducted the operation. These are the procedures." So it is the other way around rather than a person controlling someone else who is not experienced. That is a slightly different situation.

Mr GERARD MARTIN: Is this a one-way process of information? In other words, can the machine at the bed transmit patient data?

Ms CLARK: Yes.

Mr GERARD MARTIN: Can it send an x-ray to the specialist?

Dr ZELINSKY: Absolutely, all the vital signs, pulse, heart rate.

Mr PETER BESSELING: In real time?

Dr ZELINSKY: In real time, yes.

Ms CLARK: Yes, the ECG is interfaced into the system.

Dr ZELINSKY: The idea is as if the triage specialist were in the room.

Mr GERARD MARTIN: The specialist does not have to rely on staff relaying the data? The specialist can read the data from the machine?

Dr ZELINSKY: Yes.

Mr PETER BESSELING: When did the trial occur? On the back of that, was there a need to have someone at Nepean Hospital specifically sitting in front of a computer for that period of time? How did that affect the operation of the hospital, effectively taking that person out of hospital staffing?

Mr DOHERTY: I can start the answer. The trial ran from 2003 to 2005.¹ The second question was?

Mr PETER BESSELING: The dedication of the person at Nepean Hospital.

Mr DOHERTY: The specialist was called to the Nepean Hospital end as required. So they were not sitting there all day; they were called to it when there was an event.

Mr PETER BESSELING: If there were a specific issue they would be called in, as they would if an event had occurred at Nepean hospital?

Mr DOHERTY: Yes. The sort of things they would be called in for would be the things that could not be handled by the normal team in the emergency department. That is why there is not a need for someone to be there all the time because not everything that comes in is that complicated.

Mr PETER BESSELING: Was it developed in partnership? Were you in partnership with anyone?

Mr DOHERTY: Yes, it was developed in partnership with the New South Wales Department of Health and also StateRail, who gave us access to the fibre connection to get us to the hospital. We would not have been able to do it without the assistance of what is now RailCorp and NSW Health.

Mr PETER BESSELING: We visited Telstra's offices in Sydney and they were running something similar.

Mr GERARD MARTIN: They gave us a demonstration.

Dr ZELINSKY: In fact, they have a licence for the technology from us. At the end of the day the CSIRO is not in a position to develop products. So we gave the licence to Telstra to roll out the ViCCU technology.

Mr PETER BESSELING: Did you lease the licence or give it to them?

Dr ZELINSKY: It is a technology transfer. It is very common for us to transfer our technology into the public and private sectors.

Mr GERARD MARTIN: I presume that the trial obviously showed that it works?

Dr ZELINSKY: Yes.

Mr GERARD MARTIN: In terms of information as to how it has been taken up by NSW Health, would we need to talk to Telstra?

Dr ZELINSKY: Probably NSW Health, I think, in the first instance. One of the stumbling blocks, I believe, was the negotiation over access to networks. I think your Government, the New South Wales Government, did a whole-of-government approach and was locked into a particular thing, which made it difficult for us. We had licensed the technology to Telstra. Obviously they are the only telecommunications company that had access to all of Australia and we believe that this technology is particularly—

Mr PETER BESSELING: That was an exclusive licence?

Dr ZELINSKY: I would have to take that on notice, Mr Besseling. I cannot recall the terms of that licence; it was about four or five years ago that we licensed the technology. I imagine it would have been exclusive because it required further investment in the technology and manufacturing had to be set up for the units, et cetera.

¹ The ViCCU evaluation period was from December 2003 to December 2005, i.e. 2 years. After that, the equipment continued to be used but not evaluated in a continuation of its use under trial conditions. It is still in use and has actually extended to a third hospital (Lithgow)- (further information provided by Dr Zelinsky in correspondence dated 18 December 2009).

Mr PETER BESSELING: It seems odd from my point of view that it would be licensed to a company that does not supply the broadband network to NSW Health if it is a partner in it.

Mr DOHERTY: It is a little more complicated in that we licensed the technology to an Australian company called Promin. Promin were the ones that built the equipment and entered into agreement with Telstra. The logic was that Telstra has the network, as Dr Zelinsky has mentioned. They were the best channel to supply that as a bundled service, as you have suggested, where they had the bandwidth and they also had the tools and could provide that as a turnkey service. We do not have a full understanding of what happened at the Telstra end. You would need to ask them, but we did not see the penetration of the market with the ViCCU system.²

Mr GEOFF PROVEST: As an overview, the CSIRO and your unit develop technology and go out to the public and private sectors and enter into partnership arrangements?

Dr ZELINSKY: That is true. I will describe the business model for CSIRO. We look to work in areas of national priority where there is a need. Then we enact partnerships that will deliver the impact. If the partnership is best with a private company, it might be for instance developing a new wireless technology, we would probably try to partner with SMEs [small to medium enterprises] or multinationals in that space. In other areas like water we partner with State and Federal government water authorities. It depends on what we are trying to do. At the end of the day it is not all technology push. There is also a market pull aspect to it. We work on areas that have been identified as challenges or problem areas.

Mr GEOFF PROVEST: With the e-medicine rollout, in my area up north in the Tweed I recently did a 10-hour shift in an ambulance. They are trialling a brand-new electronic version of patient records, monitoring and so on in order to get away from a Senate paper ballot sheet, a tablecloth-type document. Would what they are doing interface with this technology? I believe there are three ambulance areas in New South Wales.

Dr ZELINSKY: One of the big challenges with the health system is that there are many technologies, many systems, and many of them proprietary with their own standards. So there is a real issue of linking up the whole system. This is where there has been an initiative done on a national scale, which is the national health e-record transition, the National E-Health Transition Authority [NEHTA], which is trying to set up standards that allow different systems to work with each other and also messaging between those systems. The CSIRO is contributing to those standards and working with NEHTA and helping them to develop some of the tools. We have not in particular focused on, say, ambulance systems or such things.

Mr GEOFF PROVEST: It is a big thing in my area, the incompatibility between Queensland systems and New South Wales systems, whether it is police, whether it is education—you name it.

Dr ZELINSKY: That is where NEHTA is trying to set up a standard so New South Wales can still keep its system but there will be a way to translate or link it to the Queensland system or a way of translating or linking. So that it means you are going to have a health record, a health data stored in the New South Wales system and if for some reason you ended up being admitted in a Gold Coast hospital—which happens—you can get the records.

Mr GEOFF PROVEST: You have worked with the Queensland Government.

Dr ZELINSKY: Yes, we have been in a partnership now with the Queensland Government close to six years.

Mr DOHERTY: 2003.

Dr ZELINSKY: We have created an e-Health Research Centre there. Around 50 research scientists work there full-time in that centre. Even though it sounds like a lot of scientists, when you look at the magnitude of the health situation where we could work, we have chosen to work on three areas: one is in imaging technologies. Australians have issues with Alzheimer's disease and colorectal cancer. These are the two prime diseases the CSIRO has chosen to work with. We are doing work in those areas. We are doing work in the data-

² The CSIRO assigned its "ViCCU" intellectual property to Promin. The exclusive license between CSIRO and Telstra was novated to an SME Promin e.g. the license was thereafter between Promin and Telstra (further information provided by Dr Zelinsky in correspondence dated 18 December 2009).

linking problem of these aspects and working on tools for that. The third area is care assessment platforms, which is people carrying something similar to a mobile phone, which allows you to monitor people's movements, et cetera, and summarise down their activities and then transmit it back. They are the main three areas we have been working on.

Mr GEOFF PROVEST: Is Queensland more advanced than New South Wales in that area?

Dr ZELINSKY: We have taken a national approach. Each system has got its own health research agenda. New South Wales has its own e-health research agenda. We have not been engaged in that health agenda in New South Wales.

Mr GEOFF PROVEST: But you have got 50 scientists working in Queensland in the last three or four years.

Dr ZELINSKY: But we also have some scientists—the work that the ViCCU project did was done here in New South Wales. So we have been doing various projects in various States. Professor Yogi, as we call him, has come on and joined the CSIRO. He is based in Perth, so he will be working on other things there.

Mr GEOFF PROVEST: On this committee's travels around New South Wales e-health always came up as major and still does.

CHAIR: How many professors would we have working on it here, roughly, if we have got 50-odd in Queensland?

Dr ZELINSKY: That is how many scientists we have got. There are 120 scientists in the ICT Centre working in Marsfield here in Sydney and North Ryde.

Mr GEOFF PROVEST: But they would be covering a whole group there.

Dr ZELINSKY: They cover a whole gamut of work from wireless communications, networking technologies, some work in autonomous systems and information engineering. They are the four broad groups that are in Sydney. They work on various projects. Some of those projects touch on the health areas. For instance, that team recently worked on the ECHONET project, which was deployed in Tasmania last year.

Mr GERARD MARTIN: I think in your opening remarks, it might have been Mr Doherty said that in relation to telemedicine you needed 100 megabytes each way to make it effective?

Ms CLARK: Megabits per second.

Mr GERARD MARTIN: It would be fair to say that that sort of penetration is not widespread, is it?

Mr DOHERTY: At the moment yes, that is the case. You can get it but it would be very expensive.

Mr GERARD MARTIN: But once the NBN plan is adopted, I note you say in five to eight years, do you think that is a realistic time frame?

Dr ZELINSKY: It appears to be. It is possible. If you look at the scale of the rollout, we are talking about a continental rollout. I think it is clear that the cities will become potentially quicker than the rural and regional areas, and we believe that there is an opportunity in the rural and regional areas to look at some new technologies, which are wireless access solutions, which could actually give you the same speeds as the fibre solution. As Mr Doherty has mentioned, 100 megabits is a threshold that allows you to certainly create these rich interfaces. Interestingly, where you do need the band really in the regional areas is where you want the remote medicine to be potentially delivered, or other services of such kind.

CHAIR: The trials that you have done between the mountains and Penrith, have you tried any other parts of Australia? Have any other trials been conducted? Do they use the same technology overseas?

Dr ZELINSKY: There are many e-health or telemedicine systems being developed around the world. We could give you a list. Australia is not behind the ball here. We have got some things which are probably, I

would say, at the cutting edge. Narelle can tell you about the specific deployments we have done around Australia.

Ms CLARK: ECHONET was deployed in Tasmania between the Royal Hobart Hospital and Burnie. It was a nine-month clinical trial and had 84 activations at that time. So that system was similar to ViCCU in some ways but different in the sense that it was tailored for a cardiology setting. What happened was that you connected two sites inside the Royal Hobart Hospital, the cardiology unit and the intensive care unit, with a corresponding intensive care unit at Burnie Hospital. Again, it was a trolley-based system. Through it you could effectively beam in the cardiology specialists from the Royal Hobart Hospital and effectively incorporate on their rounds the Burnie Hospital beds as well.

Dr ZELINSKY: There was the other one. There was another deployment with RIDES.

Ms CLARK: RIDES was a system that was installed for a shorter period of time—I will check the length of time in a second—in Melbourne with a paediatric specialist, and in order to validate the technology we had a pseudo-clinic set up across the road from the main hospital. We wanted to test the fact that it worked with a genuine paediatric specialist. Instead of the patients going to the specialist's room they went to this little pseudo-clinic across the street and the specialist conducted the consult, effectively, across the road.

Mr GEOFF PROVEST: For all intents and purposes they were there?

Ms CLARK: Exactly. So in that case they validated the technology and wherever the specialist felt that they needed to conduct extra follow-up of patients they then came across the street and they did that then. They wanted to test it and prove that it would work without taking any risks with the patient.

CHAIR: How long ago was that?

Ms CLARK: That was completed fairly recently.

Dr ZELINSKY: Of the order of 18 months ago.

Mr GEOFF PROVEST: In terms of challenges for the direction the CSIRO is going—what you have done now and what you are about to do—what would be the top three challenges that you are facing, or issues?

Dr ZELINSKY: Issues around e-health?

Mr GEOFF PROVEST: Yes.

Dr ZELINSKY: I think there are many challenges in the health system, and even though CSIRO is a considerably large organisation we have chosen to focus in on a couple of the areas. CSIRO's broad approach to health is we are taking a preventative health approach. So the idea is looking at if people do not get sick in the first place then they will not use the hospital resources and the health system; its load will be reduced. There are two diseases that the CSIRO is focusing on: colorectal cancer and Alzheimer's—so basically trying to diagnose Alzheimer's at the early onset, and we appear to have already done some work that has made some significant breakthroughs there—and also colorectal cancer where Australians have among the highest incidences of colorectal cancer in the world relative to our population.

So that is the diseases that we are focusing on. We are also taking another approach to electronic data, and that is to support the National E-Health Transition Authority [NEHTA] to work on its standards that it is proposing to roll out, and we have developed tools with them. So we are going to be a partner to them. The other aspect we will continue to do work on is these telemedicine or telehealth solutions. But, again, they will be driven by our partners in the State health systems. We have shown what we can do. The announcement of the NBN has sparked some more activities. We are anticipating that we may be asked to help make some more telemedicine systems or get them deployed.

Mr GEOFF PROVEST: It is interesting, would you not say, that in any State in Australia its health budget is pretty stretched at the best of times?

Dr ZELINSKY: Yes.

Mr GEOFF PROVEST: So technically you are saying, "We want you to invest some money over here", and it will be a difficult role to say we will have to deflect it from somewhere else to go over there. But I take on board what you say: prevention. They can see more patients, technically, can they not?

Dr ZELINSKY: Yes, and we have been looking also at the resourcing problem. The patient admission prediction tool [PAPT] is basically a system that has studied all the health admission records in an area—this is for the Gold Coast Hospital area. It is quite interesting. Depending on the day and the year, time of day, day of the week, you can actually predict within 5 per cent how many people will present themselves at the emergency department.

Mr GEOFF PROVEST: I have heard about it. Some of the specialists up there have been telling me about it.

Dr ZELINSKY: It is now undergoing significant trials and we are trying to build it into their systems. What we would like to do with that system, if it works, is then obviously try to engineer a rollout across Australia. But that project was funded through the e-Health Research Centre in Queensland, and the investment that CSIRO makes there is matched by the State Government. So we are co-investing together in some long-term research. As part of that we developed that project. That is just in answer to your question about how resources sometimes can be liberated to invest in some of these new things. If that system works—and we believe it will—the impact for patient beds or managing the resources of patient beds could be considerable.

Mr PETER BESSELING: Just going back to the delivery of the trial—

Dr ZELINSKY: Which particular trial?

Mr PETER BESSELING: I will explain it throughout the question. Given we are talking about that extra 10 per cent, the 90 per cent delivery of broadband to the community is going to be reasonably easy compared with the last 10 per cent, and given that the 10 per cent to remote and regional communities is likely to be wireless, how many of the trials that have been done with e-health have been through a wireless delivery?

Dr ZELINSKY: They were all done with fibre. But we are proposing, though, I think, to do one with the wireless. Gary might want to talk about that?

Mr DOHERTY: We noticed that the committee had produced a report already and that we did not have an opportunity—we should have been more alert—to present the technology that Dr Zelinsky referred to in his opening remarks. We have come up with a system. This part of the CSIRO holds the core patent for wireless LAN. It is a global patent. Members may have seen something in the press about royalties coming back to the CSIRO. That is within Dr Zelinsky's group. He has invested further funding into the development of a wireless system that will provide 100 megabits per second full duplex, or both ways, into sparsely populated areas of Australia. We can do this in many cases using the existing broadcasting towers. The CSIRO's interest is in particular in these rural and regional areas is to give them the same quality of service as that delivered in a fibre-to-the-premises environment. This ranges over 40 kilometres to 50 kilometres.

We have also come up with another invention that provides a backhaul microwave. For instance, many microwave links are used in Bathurst and there is now fibre running to Dubbo. In the past much of that was done with microwave as well. Those systems work at 250 megabits per second. The system we have developed operates at 10 gigabits per second over the same range. These systems are still under development, but when we combine those two things it brings the cost of delivering 100 megabits per second down considerably in rural and regional areas. That will enable the delivery of these advanced telehealth technologies into rural and in some cases remote areas, but certainly into rural and regional areas.

Dr ZELINSKY: We are hoping to conduct a trial of this new technology next year in Tasmania, where the NBN is being rolled out.

Mr DOHERTY: We are in discussions with the NBN company to run a pilot of this technology in Smithton, which is in the north west of Tasmania, in June next year.

Dr ZELINSKY: We are hoping to run some of our demonstration technologies. It will not be simply to show data moving up and down the link; it will show a wireless broadband application running. We are not 100 per cent settled on the application.

Mr DOHERTY: The difference between a tethered application—that is, something that is connected by fibre—and a wireless application is the bit error rate. This part of the CSIRO understands those problems and knows how to make the application work in those environments. This part of the CSIRO built the compact array at Narrabri and Parkes. We were established during the Second World War, so we have a rich heritage in wireless capability. It is not trivial, but it is not really an issue for us to get those applications to work.

Dr ZELINSKY: I would like to correct a statement I made earlier that the technology will be ready for demonstration in June. We will do our first trials of the technology in June next year. In the 12 months after that we will be rolling out an application. We plan to put up the infrastructure by June and show it working and then move progressively over the next 12 months to demonstrate the technology, such as e-health. We have not decided on the final demonstration application; we have to do that in partnership with the Tasmanian NBN company.

Mr PETER BESSELING: So are we still in the development stage at the moment?

Dr ZELINSKY: Yes. The technology is demonstrated on bench tops. We have lodged a number of patents and we are working to a deployment timetable, but there are technical hurdles. There are always risks with research and development that you will not realise what you sought to do. However, as Mr Doherty said, we have a great track record of achievement in this area, so the risk of that is somewhat reduced.

Mr PAUL GIBSON: What is the medical feedback about this type of technology? I would imagine that it is very positive.

Dr ZELINSKY: Yes. We work closely with stakeholders. We have been working very closely with the Queensland Health Department in the development of those applications. It is not about the CSIRO working in a back room; we work in partnership with the doctors and specialists.

Mr GEOFF PROVEST: And the AMA?

Dr ZELINSKY: Yes. Likewise in New South Wales, when we worked with the ViCCU system, that was done in complete partnership. We could not do it without an internal champion. Dr Stuart Stapleton really wanted to make it happen and was very patient in the terms of getting the system going. That was the first system of its kind deployed at that time. We would not be able to do this without partnerships in the health system.

Mr GERARD MARTIN: One of the issues we see, particularly those of us representing rural and regional areas, is frustration about the time this takes, although we understand why. Telemedicine will be a great help in keeping doctors working in remote areas because they will have backup from specialists and will not feel as isolated. In terms of a good result for patients, it will help us to keep doctors working in remote areas. That is the push we want to give it.

Dr ZELINSKY: I would not disagree. These systems also mean that patients do not have to travel to the city, get accommodation and perhaps be away from their families. There is all that business that can actually be treated locally which has a significantly positive impact on the people.

Mr GEOFF PROVEST: Has the CSIRO any involvement with the electronic ambulance system that is being trialled at the moment?

Dr ZELINSKY: I would have to take that on notice. As far as I know we are not, but I will check that.

Mr GERARD MARTIN: In relation to medical records, each State was doing something in the area. I know the Prime Minister recently said it is a major challenge for the reform of the Health system, irrespective of who runs what. Are we going to run into that good Australian obstacle with different gauge railway lines along the way? Earlier you said that it would be easy to get more knowledge and we would be able to get interface if there were six different systems working in six different States and you could interface them.

Dr ZELINSKY: That is exactly what we do have. We are helping. It has been recognised nationally that this is a problem that the federal data systems does not talk to the States. Each State has its own data systems and then you have got the general practitioners with their individual implementations so what has

happened is that the National eHealth Transition Authority [NEHTA] is actually working on this very problem. It is trying to set up the standards which will allow health data from one State to be worked—

Mr GERARD MARTIN: You will work back that way?

Dr ZELINSKY: Yes, and the other aspects. The role of the CSIRO is to help NEHTA with some tools and techniques and methods that we have been developing and transferring to them. Again, working in partnership.

Mr PETER BESSELING: Is it only Health, not education?

Dr ZELINSKY: The CSIRO has a health group that focuses on health but these telemedicine or broadband applications have two other areas that I will point out. One is controlling mines from remote distances, there is that aspect, and the other one is SmartGrids and demand-side electricity management technology. The CSIRO has actually got work in that space as well. When you talk about broadband it is not just on health but we are talking about other advanced applications in the mining area and also in the demand-side energy side.

Mr PETER BESSELING: I meant a national approach to health that you are going through at the moment through NEHTA whether that will occur in other portfolio areas such as education and the like so that all the States are able to talk to each other and work from the platform.

Dr ZELINSKY: I misunderstood your question. Specifically in the education area we are not working there although we have done some work in the past in education for broadband. We did work with the Australian Film and Television Industry training school for actors, which was to deliver remote lessons using broadband. That has not been that we do not think there is a potential there but we have not put resources into that space.

Mr ANDREW CONSTANCE: Where are you up to in relation to a mobile version of the platform for, say, community nurses to carry the technology?

Dr ZELINSKY: For clarification, to which platform are you referring?

Mr ANDREW CONSTANCE: RIDES. Under "current activity" it says you are building a mobile version of the platform.

Dr ZELINSKY: What "mobile version" means is that mobile is like a cart, a fixed workstation, not like a mobile phone version. It is actually something that can be transported or transportable within a hospital so you can take it to a patient. Currently this was actually set up where people come to the particular installation. It was actually very specifically built.

Ms CLARK: We built this particular system around a horseshoe shaped table. On one side would be the specialist as in the top of the photograph, sitting on the other side of the horseshoe would be the local clinician, which could be a nurse, general practitioner or anyone, and the particular patient. When we talk about a mobile version we are talking about one that might go into a moving clinic rather than one that would connect to a mobile phone.

Mr ANDREW CONSTANCE: It is not technology that potentially could be similar to a Blackberry in terms of hardware? The brochure threw me a bit because it says "Health workers simply carry during house calls" and I am intrigued to know how that would work.

Ms CLARK: Yes, that is interesting.

Dr ZELINSKY: The idea was for some sort of mobile van where you go out into the regional areas and take the technology on the road, I think that is that. We apologise for the ambiguity but it is good that you have raised it.

Ms CLARK: The intent there is that perhaps there would be some element that could work in tandem with a mobile phone, maybe local photographs or things that could work with laptop that would connect into a mobile phone type of broadband system. As you can tell by the way I am talking, it is in a concept phase.

Mr ANDREW CONSTANCE: Yes, that is why I asked where it is up to.

Dr ZELINSKY: In answer to your question whether we use mobile phones, yes we use them. We have actually had a trial in our Australian eHealth Research Centre in Brisbane where we have actually been using phones for monitoring people who are recovering from strokes for cardiac rehabilitation.

Mr GEOFF PROVEST: So that is live time. Currently you are strapped on and walk about for a couple of days and give it back?

Dr ZELINSKY: We are working with Nokia using their latest handsets and we are able to get movement information because a lot of these things have accelerometers in them now and so basically we can track the exercise regime of the patients. We are finding that with that sort of support and some messaging they stick to their program. Most people do not finish the programs when they come out of hospital and in some cases they end up back there.

Mr ANDREW CONSTANCE: Are there any other applications for which it can be used?

Dr ZELINSKY: I am aware that you are the shadow Minister for Ageing and Disability Services. We do a lot of work in detection in previous years around aged care. There was a lot of potential in the National Broadband Network because you will have the backhaul for higher bit-rate mobile cons and be able to have richer applications on them. There certainly would be other applications. But we are focussed on cardiac rehabilitation because that is what our partners were interested in.

Mr PETER BESSELING: Have you done any work in the delivery of wireless to remote locations such as Lord Howe Island?

Dr ZELINSKY: In one word, no. Although I have got to say that one of the projects that we are trying to do, hopefully in Western Australia, is to deliver services from Perth to the Pilbara and give some intelligent tools some of which could be mobile-like, but also tools that actually allow remote diagnosis to be done and data gathered and then sent back to Perth. That is work that we are hoping to do in 2010.

Mr GERARD MARTIN: In your introductory remarks you referred to 10 per cent of areas that could be accessed by wireless under the National Broadband Network. You said that wireless technology is developing very quickly. Are you confident that that improvement in technology will be quite striking over the next few years?

Dr ZELINSKY: One of the challenges is that there are technologies available off-the-shelf; 3G/4G Solutions. However, the big problem is that you really need to roll out a lot of base stations and where the population density is low, it is very expensive. Our view is that we have an alternative technology, which is actually going to reuse the UHF and VHF analogue television channels. We are proposing to use that band, which will be freed up, and also reuse the broadcast towers that already exist. So you do not have to build new stations; you can actually reuse existing infrastructure, reuse the spectrum and then put these systems on these towers, which will allow you to then create 100 megabits connections into rural areas. I have a picture here and I can probably table it, if you are interested. I am happy to give you some briefings, if you would like.

Document tabled.

Mr GERARD MARTIN: Are you aware in the Canberra area of a gentleman named Anthony Goonan, who has a company called Yless4U? Has he had any work with the CSIRO that you are aware of?

Dr ZELINSKY: Not that I am aware of, but we will check up on that and take that on notice.

Mr DOHERTY: If the Committee would be interested in a tour and a further briefing on any of the wireless technologies, we are only at Marsfield, or we could come here, if you thought that was better.

CHAIR: We will take you up on that. I would like to thank you for your time this morning and expert evidence. Congratulations on the great work you have done. We look forward to more results in the near future.

Dr ZELINSKY: Thank you very much, Mr Gibson. It has been our pleasure to attend.

(The witnesses withdrew)

CHAIR: Welcome and thank you for appearing before the Committee this morning. We look forward to the evidence you are about to give. I understand that both of you appeared before the Committee at its hearing last year before I become Chair. I thank you for the support and advice your agency has provided to the Committee. The purpose of the hearing is to gather updated information about the State Government's efforts in relation to rural and regional communication services since the Committee reported in March 2009. I am advised that you have been issued with a copy of the Committee's terms of reference and also a copy of Legislative Assembly Standing Orders 291, 292 and 293 that relate to the examination of witnesses, is that correct?

Mr McCARTHY: Yes, it is.

CHAIR: I draw your attention to the fact that your evidence today is covered by parliamentary privilege

BEN XENOS McCARTHY, Manager, Strategic Industry Development, New South Wales Government Chief Information Office, Department of Services Technology and Administration, and

COLIN GRIFFITH, General Manager of Strategy, New South Wales Government Chief Information Office, Department of Services Technology and Administration, affirmed and examined:

CHAIR: In the Committee's report from March 2009, we recommended that the department continue to structure its information technology and services for government agencies to assist in promoting infrastructure extensions and opportunities for completion in rural and regional areas. Can you tell if any progress has been made to undertake this and, if so, what specific programs have been undertaken? Would you like to make an opening statement first before you answer that question?

Mr GRIFFITH: I am happy to respond and maybe I can expand on some of the activities of our department in the time period since then. The main development clearly is the Federal Government's national broadband network announcement; first, the request for proposals, which was for a fibre to the node network, which was terminated in January this year. The Federal Government announced that they would be embarking on a fibre to the home network—a national broadband network funded at \$43 billion. Approximately 90 per cent of premises would be connected via fibre, the remainder via wireless.

To a certain extent we had been working in response to Federal Government initiatives, initially around the fibre to the node but also now lately with the fibre-to-the-home network. The important part of the Federal Government's proposal now that it covers—in theory it is meant to cover 100 per cent of Australian premises—with rural and remote homes to be connected by wireless. The New South Wales Government has worked, and our department has been working, to identify opportunities to use the Federal Government's program to extend fibre and broadband connectivity throughout New South Wales. There were a number of submissions to the various Federal Government inquiries.

Earlier this year the New South Wales Government established a National Broadband Network task force to bring together a range of different agencies to look at those opportunities and how New South Wales can respond to supporting the national broadband network rollout, identify priorities, opportunities and requirements such as skills. The task force has been established, with Graham Head, the Director General of the Department of Commerce, now the Department of Services, Technology and Administration, as its head. The task force has representatives from New South Wales Treasury, Premier and Cabinet, New South Wales Planning, State and Regional Development—now Industry and Investment—and other external advisers from the CSIRO, National ICT Australia [NICTA], and the Australian Telecommunications User Group [ATUG], the industry association that represents the large corporate and government users of telecommunications.

We have been working with that task force to identify opportunities. Part of that work, of which Ben McCarthy is the coordinator for the work coming out of the task force, involves a number of streams of activity. Maybe Ben can talk through the details.

CHAIR: Is the public represented on that committee?

Mr McCARTHY: No. There is no general public representation on the task force. There are two other members, the director general of the Land and Property Management Authority, and a member of the Communications, Electrical and Plumbers Union.

Mr GRIFFITH: And Mary O'Kane, the Chief Scientist and the Government Chief Information Officer.

Mr McCarthy: The task force is made up of a mixture of government and different parts of industry, covering the telecommunications users through ATUG, research and development through the CSIRO and NICTA, and a union representative. The task force was established in May by the Premier. There are five different projects that the task force is working on. The first was around trying to secure the national broadband network [NBN] headquarters in New South Wales. The Committee would be aware that there has been some bidding between different States to secure that.

Secondly, we have conducted an audit of the State's assets to try to identify whether those assets might be able to facilitate the broadband rollout in New South Wales. The audit has been quite extensive and a database that includes a list of all assets has been compiled. Now the Government is considering how those assets might be used and whether they are of benefit for the rollout.

CHAIR: Is that the broadband fund you are talking about?

Mr McCARTHY: No, this is about existing assets that are owned by State Government agencies and utilities.

Mr PETER BESSELING: Only State Government, or is it broader?

Mr McCARTHY: There have been some discussions with local government, but primarily it is State-owned assets. The third is around ensuring that the planning processes in New South Wales will assist the rollout to proceed smoothly. The fourth is the promotion of the ICT industry and skills development. That is around trying to identify opportunities for New South Wales-based businesses to participate in the rollout and to benefit from the large amount of industry development that will occur. It is also around trying to identify any skills gaps, and working with the Department of Education and Training to develop some training programs to upskill the existing workforce for this project, which will cover every part of the State. The fifth is to investigate opportunities to establish some test beds in New South Wales, which is about potentially setting up some mini national broadband network environments, to then test not so much the network but what we would use it for. That is about partnering with industry and government to investigate how government service delivery might be provided in a national broadband network environment.

CHAIR: Are there any achievements of the task force so far?

Mr GRIFFITH: I think there are a number. For the first time, the New South Wales Government has a comprehensive analysis of all the telecommunications assets it holds. Those assets are intended to be used as part of the discussions with the National Broadband Network Company and the Federal Government regarding the assistance, in terms of their deployment. The National Broadband Network Company has indicated that that information is incredibly important and valuable to them. They see the role of utilities as being important in terms of connecting fibre, particularly at what we call the last mile, or the last couple of hundred metres into the home, because they will be using a lot of utility assets to get close to residential homes, for example. So that is quite an achievement.

Also, there is a good case for the advantages of locating infrastructure facilities, head offices, and other facilities in New South Wales. That information has also been provided. We also have a comprehensive analysis of skills and training requirements. So a lot of the leg work has been done. We also have a lot of information, which is still underway, regarding areas of demand or potential priority areas for future deployment.

CHAIR: You say this is the first time we have had that list. Why would that be?

Mr GRIFFITH: Those assets have been held primarily by State-Owned Corporations. Those corporations own those assets for their own specific purposes. Some of that information has been shared in the past, but up until now, particularly with the energy retailers, that information has not been available.

Mr GEOFF PROVEST: Like silos?

Mr GRIFFITH: Yes. There has not been a compelling need to bring the information together for a particular purpose, up until now.

Mr PETER BESSELING: With regard to the two points you have raised, the first is the location of head office. Can you give us an update of where we are at with that?

Mr McCARTHY: The discussions are continuing with the NBN Co., to try to identify the best opportunities to place jobs in New South Wales essentially. The NBN Company has indicated that jobs will be placed based on the availability of skills. We are working very closely with the NBN Company as the company grows, and at this stage the company has only 50 staff. They will have a substantial presence in Sydney and Melbourne, so we are continuing to work with them on that. As to the headquarters, it is unclear—

Mr PETER BESSELING: There has been no further decision in that regard?

Mr McCARTHY: No, there has not.

Mr PETER BESSELING: In the fifth point you talk about the test beds. How will that process proceed?

Mr GRIFFITH: I can talk to that. We have prepared a project proposal. The purpose of the project, as Ben said, is to look at: if we are going to put this \$43 billion worth of assets in the ground, what are the benefits to the economy and to the community? We are looking at what are the types of services, applications and content that would be of use to people or would provide some benefit. We have identified a project with a series of partners, working with the CSIRO, who has capabilities in a number of areas, and NICTA, the national ICT research organisation, to look at a number of research streams, such as health—how to deliver health monitoring devices for people with chronic diseases such as diabetes, and for post-operative care. We are also looking at a project for connecting smart meters to the NBN. This is one of the Federal Government's priorities: How do you connect basically a telecommunications network into smart meters and what would be some of the benefits around energy conservation and better management of energy demand? We are also looking at in-home monitoring of energy consumption. A third stream is looking at educational benefits of delivering high-capacity content and services into the home, and leveraging opportunities such as the student learning devices, including the use of the student laptops going home for every year 9 to 12 student.

We are also looking at what might be some of the other government services that could be delivered into the home, as well as some of the services operated through private sector organisations, including media-type services and video on-demand-type services, either through the ABC or other commercial providers.

Mr GEOFF PROVEST: You have a comprehensive asset list of all the State-owned entities. Has the task force put out a plan to either amalgamate those assets or create better use of those assets? We know they are there, but how will we be able to access them? I can see that certain government groups would not be too keen to let their assets be used by someone else, or part commercialisation, or whatever.

Mr McCARTHY: The first step for us has been to collect information and identify whether we think there are assets there that are of value to the NBN company. Now that that is complete, the task force will consider different options about how that interaction with the NBN company might occur.

Mr GEOFF PROVEST: You are nearly facing legislation changes, or regulation changes?

Mr McCARTHY: A lot of those assets—for example, telegraph poles—are owned by energy utilities and their primary use is to carry—

Mr GEOFF PROVEST: The same with train tracks, with the fibre-optic—

Mr McCARTHY: That is right. And they are covered under current legislation, or regulation.

Mr GEOFF PROVEST: But eventually a plan will come out, and there will be better use of the assets?

Mr McCARTHY: That is the objective.

Mr GEOFF PROVEST: With regard to the community broadband development fund, we have been tracking that.

Mr GRIFFITH: That is administered through the Land and Property Management Authority, through the Office of Rural Affairs. They have the management responsibility of that particular fund. We are aware of where they are up to, but it is probably better for you to—

Mr GEOFF PROVEST: Many of the questions related to the metro centres, but many of our people are in regional and remote areas. Is your task force specifically looking at that?

Mr McCARTHY: The task force is focused around how we can facilitate the national broadband network rollout. As Colin indicated, the new national broadband network will cover 100 per cent of the State. I guess for us it has changed our focus, whereas the previous national broadband network was only focused on 98 per cent of the population and left a 2 per cent gap. In that respect, it makes everyone's job easier, because 100 per cent of it will be covered.

Mr GEOFF PROVEST: But there will be even more focus on the regional and rural areas?

Mr GRIFFITH: Yes. There are a couple of things that I probably should update you on. Neither the Federal Government nor the National Broadband Network Company has clearly identified the exact boundaries of what the 90 per cent and 10 per cent will be. So we do not have a precise definition; but there are some approximates. I think Senator Conroy has indicated that towns down to about 1,000 people are likely to get fibre to the home. Again, we do not have the precise details so we are not able to determine whether this place will and this place will not get fibre. The Federal Government and the National Broadband Network Company are also looking through some of the technology choices for the wireless deployment and how much of that might be terrestrial wireless, such as when you put up a tower with technologies such as WiMAX that can reach out tens of kilometres potentially, or other emerging technologies, or they could use satellite delivery for some of the rural and remote population. These are some of the things the NBN Company and the Federal Government are currently examining.

Mr GEOFF PROVEST: Do you have much to do with your opposite numbers in Queensland? Obviously my electorate borders Queensland. Is there an interplay between States?

Mr GRIFFITH: There is a group called the National Broadband Development Group that has been established where the Federal, State and Territory government offices that have a responsibility for broadband development get together three or so times a year and discuss a range of these programs.

Mr GEOFF PROVEST: Is that you? Are you on that?

Mr McCARTHY: I have been a representative on that group in the past. The group reports through the Online and Communications Council, which is the Ministerial Council.

Mr PAUL GIBSON: What is the life expectancy of the task force?

Mr GRIFFITH: I do not think there is an explicit end date but I think the primary objective is to complete those key tasks around the assets, priorities and head office. They are probably the main priorities, and then there will be some ongoing work around skills, industry development and planning.

Mr GERARD MARTIN: One of the areas of interest to us as regional members is obviously telemedicine because of the benefits it can deliver. We have heard from the CSIRO earlier today about trials they have done in the Sydney West Area Health Service between Katoomba Hospital and Nepean Hospital. Are you aware of that?

Mr GRIFFITH: Yes, we participated and helped.

Mr GERARD MARTIN: What is your normal role in this respect as a government information office, given there is a great need for us to get this technology rolled out into country and regional areas to support doctors and to try to get more doctors to practise there with that backup and security? We know the technology

works although there are broadband capacity problems. Would you have a direct role with, say, NSW Health, in monitoring how they are following up the use of this system or does it just sort of sit there?

Mr GRIFFITH: The primary responsibility would be on an agency-by-agency basis. NSW Health would have the responsibility for monitoring how they are using broadband and what benefit they are deriving from it, although as I mentioned, on this test bed project we are working quite closely with NSW Health to identify some of the projects and locations where we could in a sense accelerate some of those initiatives.

Mr GERARD MARTIN: But if NSW Health were dragging the chain—I am not saying they are—do you have a role in the normal day-to-day operations to suggest to them that they should be a bit more proactive? Is there any sort of monitoring process of other government agencies? You say that part of your work is to develop programs to meet the needs of the people of New South Wales in this area. How do you implement that in day-to-day operations?

Mr GRIFFITH: There are no formal mechanisms for monitoring the progress of other agencies, but I think the whole purpose of establishing the task force was to create a forum where those issues could be discussed, and identify areas where the Government needs to give more attention. I think that has worked quite effectively to date with the task force. Planning is one of the areas where the Federal Government has announced it wants to put fibre into all greenfields estates. That is an area where every State and Territory now has to respond in a fairly active way to look at how best to do that in terms of State and Territory planning legislation and guidelines.

Mr PAUL GIBSON: Can you give us any more information about the fibre optic rollout to schools? How will that occur?

Mr GRIFFITH: With the New South Wales Department of Education? I can give you a high-level summary and the department can bring you up to date with the latest developments. They have gone to the market, issue requests for proposals and a number of companies respond. They have awarded contracts to a number of companies over recent years to establish fibre connections to the schools. I do not know the exact percentage but a large number of schools now have fibre and they use a number of service providers.

Mr GEOFF PROVEST: Following the question Mr Martin asked, you survey all their assets so you are aware of what they have got but is there no role for you in your professional opinion if they are not using those assets to the fullest or they are not sharing them with another agency?

Mr GRIFFITH: The purpose of the task force is to have for the first time a forum to discuss those issues. If there are assets that may be of potential value to the State above just a direct commercial value to a utility, we have a forum where those decisions could be made.

Mr GEOFF PROVEST: But there is no process to enforce that. You just make a recommendation. Is that correct?

Mr GRIFFITH: The recommendation would then go back to the respective Ministers and with the State-Owned Corporations it would be the shareholding Ministers that would be able to issue instructions to those agencies.

Mr ANDREW CONSTANCE: What assessment has been done of those assets?

Mr GRIFFITH: We have full identification of those assets and locations. That information, as has been indicated, is now available. There are two things: One is to make decisions about how the State proceeds in negotiations with the NBN Company; the second is the response from the NBN Company in terms of what assets they see as valuable and how they wish to use them. Some of that is still unclear because the NBN Company is still working out what assets it may use from existing carriers, such as Telstra or other telecommunications carriers.

Mr ANDREW CONSTANCE: Is it preferred that you maintain the assets and lease them to the NBN or is it likely that you could on-sell?

Mr GRIFFITH: We have not made any assumptions. We have identified a number of options but there have been no decisions as to what will be the preferred mechanism going forward.

Mr ANDREW CONSTANCE: In what time frame do you think that could occur?

Mr GRIFFITH: There is no set time frame but our information is probably between now and March next year. It is likely that the NBN Company will make its high-level strategic decisions around what types of assets it wishes to have access to and how it wishes to use those assets—whether it wants ownership or whether it is happy to lease.

Mr GERARD MARTIN: In relation to the Digital Regions Initiative, the \$60 million fund from the Federal Government, where is New South Wales up to? Can you give us a snapshot or a summary about applications and who is making them? Is it coming from government agencies?

Mr McCARTHY: We would have to take that question on notice. I know a number of agencies did submit bids for the Digital Regions Initiative.

Mr GERARD MARTIN: Could I ask you to do that? We would be interested in the information.

Mr McCARTHY: The Commonwealth Government posted a list of all the applications on its website.

Mr GERARD MARTIN: We can find that out ourselves.

Mr McCARTHY: We can send that through.

Mr GERARD MARTIN: The \$60 million is a national figure, not a State figure, isn't it?

Mr McCARTHY: Yes, it is a national figure over four years.

Mr ANDREW CONSTANCE: Coming back to the assets again, have they been valued?

Mr McCARTHY: At this stage, no. Analysis is being conducted on different methods of valuing them but no value has been assigned to them.

Mr ANDREW CONSTANCE: So no valuation has been attached?

Mr McCARTHY: No.

Mr ANDREW CONSTANCE: Would you envisage having that work complete before you entered discussions with the NBN?

Mr McCARTHY: You would expect so, yes.

Mr GRIFFITH: There are a number of ways to value those assets, whether it is just straight replacement value or opportunity cost. There are a number of approaches and they are currently examining those issues.

Mr ANDREW CONSTANCE: Do you have a ballpark figure in terms of what you are looking at?

Mr McCARTHY: No, not at this stage. The assets are wide-ranging in their scope—telegraph poles are one, rights of way on bridges are another. The range of assets and some of the issues about use and maintenance of those assets and existing regulations that control them mean there is still a bit of work to go on that.

Mr ANDREW CONSTANCE: Given the time frame of this, I would have thought you would be pretty pushed to have all that valuing done before March?

Mr GRIFFITH: Most of the actual physical information is, I think, pretty much complete now. So we actually have the physical stock take.

Mr GERARD MARTIN: Would there be any need to have an evaluation, in terms of what the NBN are doing?

Mr ANDREW CONSTANCE: Yes. It is a State taxpayer resource.

Mr GERARD MARTIN: I am asking the witness.

Mr GRIFFITH: Yes, we will have some information on different approaches to valuation, and I think some of that will be informed through the discussions with the NBN Company.

Mr GERARD MARTIN: But it is not going to hold up progress is it?

Mr GRIFFITH: No.

Mr ANDREW CONSTANCE: It has still got to be done in a way to ensure that the New South Wales taxpayer is not being ripped off?

Mr GRIFFITH: Exactly, yes.

Mr McCARTHY: If the assets are of interest to the NBN company at some stage there will be a commercial discussion around that.

Mr ANDREW CONSTANCE: The task force will decide potentially what will be leased and what will be sold?

Mr GRIFFITH: I think the task force will make recommendations but that decision would—

Mr ANDREW CONSTANCE: —ultimately be the Minister's.

Mr GRIFFITH: Would be the Minister's, yes.

Mr GEOFF PROVEST: Will the recommendations of the task force be made public?

Mr GRIFFITH: We can take that back to the task force. I do not think there is a decision on that, but we can take that request back to them.

Mr ANDREW CONSTANCE: I would have thought that any Minister would potentially be seeking the guidance of the task force, in terms of the valuation and whether to lease or whether to sell?

Mr GRIFFITH: Yes.

CHAIR: Broken Hill has been named as a regional black spot. Given priority under the NBN and opened to tenders, the latest the Committee heard was that as yet nothing has been done to improve services in the town. Has the department offered any assistance in Broken Hill for receiving services? Can you update the Committee on that at all?

Mr GRIFFITH: I am aware that Senator Conroy has stated that he is hoping to announce who has been successful in being awarded the contracts to provide that backhaul to those locations, including Broken Hill. We are hoping to hear that very soon.

CHAIR: The Committee was interested to learn that the ABC was given \$15.3 million over three years to set up regional broadband hubs in country areas.

Mr GRIFFITH: Yes.

CHAIR: Is your office discussing possible sites in New South Wales for these broadband hubs? Do you have any information about the timing of an announcement about these hubs?

Mr GRIFFITH: That program was announced in the Federal budget earlier this year—I think in May. We have had discussions with the ABC around what they are planning to do. They are sort of community online portals providing information via broadband to those communities. They will be based primarily around the ABC regional offices—I think there are about 52 across Australia. We can provide a list of where those regional

offices are in New South Wales. We have had specific discussions with the ABC about potentially working with them on our test bed project, where we may collaborate with them on one of their community online portals.

(The witnesses withdrew)

(Luncheon adjournment)

CHAIR: Before commencing this part of the Committee's inquiry I thank my fellow Committee members for being here today. On most days it is hard to get out of one's electorate, so I thank them sincerely for attending today. I also thank Vicki Buchbach and the Committee secretariat for organising this hearing and for all the hard work that they do.

PAUL MITCHELL, Group Manager New South Wales Government, Telstra Enterprise and Government

ANDREW COTTRILL, Area General Manager, Telstra Country Wide, and

LUCY WICKS, New South Wales Corporate Affairs Manager, Telstra, sworn and examined:

CHAIR: The Committee is extremely grateful to Telstra for its continued cooperation and submissions at these sorts of public hearings. I thank the delegation for attending the Committee meeting in Canberra in September this year when I was ill and not able to attend. Thank you for looking after the Committee in Canberra and for all your expert advice. I am also advised that you have been issued with a copy of the Committee's terms of reference and with a copy of Legislative Assembly Standing Orders 291, 292 and 293 which relate to the examination of witnesses. Is that correct?

Ms WICKS: That is correct.

CHAIR: I draw your attention to the fact that the evidence you will be giving today will be covered by parliamentary privilege. Telstra is regularly updating and improving its network. Can you provide any information on the work you have done to improve telecommunications services in non-metropolitan parts of New South Wales since you last appeared before this Committee?

Mr COTTRILL: I will give the Committee an update on the technology activities that Telstra has been undertaking in regional and rural Australia. I am the Area General Manager for the Riverina-Murray region, so I work and live in regional Australia and have a close connection to the work that is being undertaken in that area. In general there has been a continued rollout of new technologies. Telstra continues to invest in technology for rural and regional areas. We have invested significantly in expanding the coverage and capability of our ADSL2+ broadband network. Just to give you an idea, we now have of the order of 448 ADSL2+ exchanges, including 93 in New South Wales, providing in excess of 80 per cent of the population with access to that ADSL2+ technology.

Ms WICKS: In clarifying that, Andy means that since March this year we have upgraded an additional 448 exchanges, including 93 in New South Wales. That takes us to a total of over 1,800 exchanges across Australia that have been upgraded with ADSL2+.

Mr COTTRILL: ADSL2+ is a high-speed broadband Internet service that allows you to use your phone while being permanently connected to broadband. The speeds that ADSL2+ offers are up to 20 megabits per second, with about 50 per cent of customers able to access speeds of around 10 megabits per second or more. Obviously, impacts such as distance from the exchange tend to vary the speeds that are delivered, but the capability of the technology is up to 20 megabits per second. We have also made significant investments in expanding our NextG network coverage. Just to give you an idea, currently the network covers 99 per cent of Australia's population, with over 6,800 mobile base stations nationally. We are constantly reviewing the NextG network and we are working towards further expansion.

Let me give you an idea of how many base stations we have built. Over the past year we have built more than 35 new NextG base stations in regional New South Wales. More recently they have been located in Yetman, Toora Beach, Upper Bulga, Bungendore, Jenolan Caves, Pooncarie and Wollombi in New South Wales. We are continuing to expand new technologies and, in particular, we looking at wireless broadband and NextG coverage. We have made a significant investment in expanding our network of high-speed broadband through the ADSL2+ service.

Mr GEOFF PROVEST: Does the base station at Jenolan Caves service only the caves?

Mr COTTRILL: I am not sure about that particular site. In some cases we install base stations to provide a geographical location to cover things, for example, such as underground car parks and the like. Jenolan Caves base station could well service only the caves. In general we try to provide the broadest amount of coverage that we can provide for that investment. However, I am not sure of the location of that site and what it does. I can provide more information if it is needed.

Mr PETER BESSELING: We hear a lot about population coverage and the fact that the network covers only 98 per cent of the population. What does that mean? Does it refer to the area in which people are residing? Is that the area that you cover?

Mr COTTRILL: Yes, that is correct. If you look at the land mass you will see that it is of the order of 28 per cent of the land mass.³ We can provide the Committee with a coverage map of Australian or New South Wales to show you what it looks like. Australia is a big and geographically challenging country and there is very little population on huge tracts of inland Australia. Obviously the mobile coverage has tended to be in areas where the population is now located. At present we are covering of the order of 99 per cent of the areas in which people live. So of the order of 99 per cent of the population have NextG network coverage.

CHAIR: Has mobile phone and wireless broadband coverage been improved?

Mr COTTRILL: Yes.

CHAIR: Will it also be improved in the short term to cover these black spots?

Mr COTTRILL: I will refer to a couple of areas. We have worked hard to continue to expand the coverage. I referred earlier to the new base stations. Recently we upgraded the network to provide a much higher speed capability. The maximum peak speed of the network is 21 megabits per second for broadband. However, those sorts of speeds are impacted depending on where a person is located, the type of antenna that is being used, a person's proximity to the base station, and the level of coverage, et cetera.⁴

Mr PETER BESSELING: Or too many people using it at the same time?

Mr COTTRILL: Absolutely. There has been a significant growth in the use of data. Using NextG compatible devices provides typical of up to eight-megabit downlinks. Between 550 kilobits per second and eight-megabit downlink speeds are typically achieved. In selective regional and rural areas there are speeds of between 300 kilobits per second and three megabits per second. Generally the network has seen significant improvements. We are looking at improving network speeds further in the coming 12 months. We are looking at further upgrades taking the peak network speed of the network up to 42 megabits per second.⁵ There have been significant improvements. Those living in regional and rural Australia test this and see it quite regularly. We are getting significant good news stories from customers who are using this in remote locations.

Mr GERARD MARTIN: I was reminded as a result of the question asked by my friend from the Tweed that Jenolan Caves and the Abercrombie Caves are located in my electorate. The Bathurst electorate is the caves capital of Australia. I refer to the decisions that are made about where to locate towers to improve mobile phone service. I believe that the tower at Jenolan Caves was located there specifically because Caves House is in such an enclosed space, and the location of the tower was based on its 300,000 visitors a year.

³ The percentage of the landmass of Australia covered by the Next GTM network is in excess of 28 per cent. (Further information provided by Ms Lucy Wicks, Telstra in correspondence dated 29 January 2010).

⁴ While the peak network downlink speed of the the Next GTM network is 21Mbps, actual customer download speeds are always lower than this, and with a compatible wireless broadband device the Next GTM network delivers typical customer speeds of between 550kbps and 8Mbps in capitals and selected regional areas, and between 550kbps and 3Mbps in other coverage areas (Further information provided by Ms Lucy Wicks, Telstra in correspondence dated 29 January 2010).

⁵ Telstra has already started to deploy HSPA+ Dual Carrier technology into the Next GTM network to increase the peak network downlink speed to 42Mbps. Although customers will not experience enhanced speeds from this deployment until devices become available later in 2010, the upgrade is allowing Telstra to undertake detailed testing and optimisation of the new functionality ahead of commercial launch. Actual customer download speeds will always be less than 42Mbps, however once compatible devices do come to market we expect the upgrade to deliver meaningful download speed increases for many customers in selected areas (Further information provided by Ms Lucy Wicks, Telstra in correspondence dated 29 January 2010).

The Abercrombie Road that travels from Oberon down to Goulburn has been sealed and has become an extremely popular tourist road. It has a number of black spots. It is now linked through the Bylong Valley north of Kandos into the Hunter Valley, and the route is actively marketed by the councils along the Tablelands Way. We have received complaints from people that once they leave Goulburn and come up through Taralga to Oberon they are out of contact. The road is now much busier. Do you use specific locations such as villages and towns as your barometer or do you look at roads that have a sudden increase in traffic?

Mr COTTRILL: It is a combination of all those factors. We have a model that looks at the number of people that would benefit from the coverage, the likely traffic, the populations that are permanently there, the sort of traffic that would flow on roads and obviously tourism and the like that flow from that. That road you are talking about has some particular geographic challenges, which tends to be one of the most difficult things we have to deal with. In flat terrain it is very easy to provide mobile coverage and typically you could get 30, 40, perhaps even 50 kilometres radius from a base station for coverage using external antennae and like. But when you get into very hilly country, in and out of valleys, turning through valleys, it is very difficult to provide mobile coverage. It is a combination of things. We would look at populations and traffic on the particular route, the likely numbers of tourists that would gather and also the cost and challenges of putting mobile coverage into such a location. It is a combination.

Mr GERARD MARTIN: So it is unlikely to be high on your priorities?

Mr COTTRILL: I would not say unlikely but we work constantly to review the coverage of the network. Obviously, with the available capital to invest, we take investment decisions on the next best options. As we work our way down into smaller populations and new coverage areas and changing populations we are constantly considering new sites. I certainly would not say it is low on the priority but we would be looking at all sites nationally within our capital budget program.

Mr PETER BESSELING: When Telstra looks at the provision of the service to a community, is it purely based on profit incentives or is there a community obligation on Telstra for the provision of those services?

Mr COTTRILL: It would be based on the likely traffic versus the cost and anything that might be done to offset the cost. We have certainly worked in cases where it would not be financially viable for us to continue to implement a mobile coverage solution for a small community but there might be some outside capital input, such as, from a mining company or a large business in the town or often government programs have been available to assist in expanding coverage. Usually it is just the capital upfront cost. Once that is covered it is a much simpler proposition to maintain a working service. But the big costs are upfront—the cost of putting a tower up, the cost of the equipment, which is very expensive equipment, and the backhaul fibre to bring the signal back to the network. They are generally the big costs. It is a combination, I suppose, of any external inputs that are available plus a business case to justify the investment.

Mr GEOFF PROVEST: In relation to Telstra's involvement with the ICT Centre of the CSIRO—we know they have partnerships—from a New South Wales perspective could you refer to Telstra's involvement in any of the e-health systems or proposals? Could you give us an update on Telstra's involvement?

Mr MITCHELL: Certainly we will take that on notice. We have worked previously with the CSIRO on some tele-health applications.

Mr GEOFF PROVEST: There was a trial at Katoomba.

Mr MITCHELL: Yes, correct. We can give you more information and get an update on that going forward.

Mr GEOFF PROVEST: In relation to regional health provision, e-health is a way to retain doctors and transfer information, digital or otherwise. Recently I saw rollouts of the new medical records being carried by the New South Wales Ambulance Service. Tweed is one and Nowra another where it is being tested. There are three test beds. I am interested in Telstra's involvement in that area, particularly with the CSIRO.

Mr MITCHELL: Yes, we can take that on notice. From a connectivity perspective we have high-speed broadband connectivity with obviously a number of agencies, including NSW Health and NSW

Ambulance. They include fibre-based services but also wireless broadband as well. We are happy to take that on notice and provide additional details around the CSIRO.

Mr GEOFF PROVEST: Do you have much involvement with the Government's Chief Information Office [GCIO]?

Mr MITCHELL: We do, yes, absolutely. From a procurement perspective, Telstra is one of the telecommunications providers listed on the Government's panel. We are regularly engaged in ensuring we are on those panels and sharing telecommunications strategies and directions with the GCIO going forward. As part of that all of the CIOs [Chief Information Offices] of the major agencies are part of the GCIO forum.

Mr GEOFF PROVEST: What is Telstra's view of that forum and that task force? Is it working in the right direction?

Mr MITCHELL: Yes. I think the representation from the key agency CIOs is working well and it is a good strategy to get the cross-agency input. Certainly Telstra is engaged at that level and also is working with the CIOs at an agency level.

Mr GERARD MARTIN: In relation to tele-medicine, we are keen to see a rollout in regional areas, for health and social reasons. The technology is proven. We have seen a demonstration in your Sydney office. What is the take-up? I presume it is still restricted by the broadband capacity?

Mr COTTRILL: I cannot give you a figure on the take-up. It is an evolving technology. I suppose we are at the peak of working with the providers. Certainly the capacity of the Next G network is capable of carrying the data that would operate that. I am aware of some other programs that are operating in Victoria, for example, where they are using breast screen technologies and the like and tele-health. I do not believe that there is an issue with backhaul capacity, broadband speed or availability to operate those technologies. It is really just a matter of the various authorities taking them up as they evolve.

Mr GERARD MARTIN: How does it fit cost-wise—reasonable, prohibitive, expensive?

Mr COTTRILL: Again I really would not have the detail. We could follow up on that. The Telstra Experience Centre is a lab where technology developers can bring their ideas and evolve them. I think the tele-health monitoring presentation you saw was the home monitoring technology where you can take your blood pressure and monitor vital signs and the like and doctors can access it remotely. I think that is technology that is available but I do not have any concept of what the cost would be.

Mr GERARD MARTIN: We are looking at a trial that was done between the Nepean and Blue Mountains hospitals. Could Telstra also give information about its widespread use now and what are the limiting factors? Perhaps we could ask the same questions of NSW Health. That is the sort of information we should get hold of.

Ms WICKS: We are happy to take that question on notice.

Mr GERARD MARTIN: We went to Canberra and met with Peter Taylor at the top of Black Mountain.

Mr GERARD MARTIN: He said that many smaller wireless technologies could be used that would be innovative and helpful. He mentioned a trial at Cumnock, which is close to my area. How has that progressed? Is it likely to help some of our small and remote communities?

Mr COTTRILL: Quite a bit of work has been done in looking at more cost-effective solutions to provide coverage into smaller communities. The Cumnock example is a trial of one of those technologies. I can come back to you with further detail on the success or not or the likelihood of that technology being rolled out further. The ultimate aim is to find a much lower cost upfront solution where we can provide perhaps spot coverage for a small community. I have been closely involved in the past in looking at how we might do that. Cumnock is one of the first of those trials to be in place. As well as that, we are working on developing devices that are much more sensitive with the mobile manufacturing base: things like our Blue Tick program that seeks that developers of technology build extra sensitivity into their devices, external antennas and the like, so that we can get coverage at more distant locations from the base stations and in weaker coverage cells. That is another

part of the program that looks to expand the availability of the network because again it is distanced from the base station. The sensitivity of the device and use of external antennas could mean possibly doubling coverage by having quality external antennas on a vehicle. It does make a lot of difference.

Mr GEOFF PROVEST: Could you update us with your involvement with the Department of Education and Training and the classrooms rollout?

Mr MITCHELL: Certainly. Everyone would be aware that the Minister just recently made an announcement about the rollout of broadband to schools. That rollout is across 2,400-plus schools delivering fibre directly into those schools. It is a fibre-based service versus ADSL, which is delivered over our copper-network. This will support the Digital Education Revolution and the Connected Classrooms project that the New South Wales Government is delivering; it will support electronic whiteboards and videoconferencing. A fibre-based service was the best way to deliver the bandwidth that schools require. That is what we will be rolling out. That project has been announced as a four-year contract for \$280 million and will be completed by September next year. That will be across all of New South Wales for metropolitan, regional and rural schools.

Mr GERARD MARTIN: Will that pick up every school or will some still be too remote?

Mr MITCHELL: There will be a remainder, but the department is working through how to address that last lot.

Mr PETER BESSELING: I would imagine that Lord Howe Island is one of those?

Mr MITCHELL: Yes, I would imagine it is.

Mr PETER BESSELING: Are there any plans? What sort of technologies are you looking at to deliver that opportunity for Lord Howe Island?

Mr MITCHELL: Obviously, you would be aware that the rollout for the Department of Education and Training is fibre based. Obviously, today the difficulty in getting the fibre across to Lord Howe Island is one of the challenges as well as the cost. The department is looking at how it gets to the remaining schools. Lord Howe Island would be one of those schools on that list as well.

Mr PETER BESSELING: Given that there is an opportunity for the broader general community, firstly, are you contracted to deliver to Lord Howe Island? Do you have to come up with a solution?

Mr MITCHELL: No, we do not.

Mr PETER BESSELING: Is it a possibility that it will be just too hard and it cannot be delivered?

Mr MITCHELL: Are we contracted to deliver broadband there? No. Certainly we would be happy to take on notice what the current broadband solutions could be for Lord Howe Island. I am not aware of the current broadband availability on Lord Howe Island.

Mr PETER BESSELING: It is very limited.

Mr MITCHELL: We could take that on notice and come back to the Committee.

Mr GEOFF PROVEST: I believe the contract for Soul contract providers ends next year, is that right?

Mr MITCHELL: I am not sure.

Mr GEOFF PROVEST: Would Telstra be looking at that?

Mr MITCHELL: I think probably the Government through the GCIO today has a number of panel providers on their panel. Telstra certainly is one of those panel providers. We have recently signed up to all of the recent panels going forward. Certainly, we look forward to supplying competitive value-based solutions across all of the agencies. What that means is that any agency can go to any of those approved panel members and seek a quotation for any of the telecommunications services.

Mr GEOFF PROVEST: You mentioned that the schools project will be finished by September next year?

Mr MITCHELL: Yes.

Mr GEOFF PROVEST: Is it possible to get an updated list of which schools are involved? Has that been done already?

Mr GERARD MARTIN: Ask our Minister.

Mr MITCHELL: I think that would be available through the Minister. That would probably be the best place to get that rollout schedule and the list of schools.

CHAIR: Have you had any feedback about customer satisfaction with the Next G network?

Mr COTTRILL: Levels of customer satisfaction?

CHAIR: Yes?

Mr COTTRILL: I do not have a number. I certainly would say that since the closure of CDMA and, I suppose, the migration to the Next G network we have certainly seen a very stable network. Obviously, through that transition period we had the odd issues, but we have certainly seen that stabilise very much and our feedback is generally good. But I do not have a number to say. The performance has improved, but certainly we are not seeing any significant levels of complaint on the network for coverage, performance or reliability.

Mr GEOFF PROVEST: It slipped from my top 20 complained-about items. It is off the top-20 list at the moment.

Mr GERARD MARTIN: The New South Wales Government last year set up the community development fund and honoured 11 or 13 communities in the first round of applications. Obviously, Telstra would be involved somewhere along the line with that. Hill End is one area in my electorate. What involvement have you had in that process? Can you tell us where it is up to? The fund is when the Government makes money available to those communities that will not be viable under the normal business model. Do you have a role in that?

Ms WICKS: Our understanding of that particular fund is that applications are made through and by communities. Telstra certainly has been happy to work with communities to support or provide information that may assist communities to apply for such grants. We are always reviewing our coverage on the Next G network. We are also willing to look for opportunities where, for example, if a site may be commercial unviable and not something we can build, but if there is a grant from a government or interest from a business organisation, as Andrew Cottrill referred to earlier, we are certainly willing to consider those sorts of opportunities where they meet our business requirements.

Mr PETER BESSELING: Have you any suggestions on how communities could access ADSL broadband where it is not commercially viable for businesses like Telstra to move forward past a junction point and put in place that network or ADSL? Have you any suggestions how they go about that or do those communities simply need to wait until the national broadband network gets rolled out or technologies move forward to a point where it is commercially viable?

Mr COTTRILL: Are you asking specifically about ADSL broadband or just broadband generally?

Mr PETER BESSELING: No, access to broadband.

Mr COTTRILL: In essence, the Next G network provides a wireless broadband service that sits right across the coverage of the network and perhaps even beyond with the use of external high-gain antennas. We continue to work with small communities on not only identifying where they can perhaps use that wireless broadband service where people perhaps do not believe they would get coverage, but also in working with co-funding opportunities, such as Lucy just discussed, where we might have some available capital to assist in expanding the coverage. To answer the question how communities could go about accessing that funding, I suppose it would depend on where the funding was coming from and what the intent of the funding was and

whether it could be applied to such an expansion. I imagine it would be reliant on the community going through a grant application and also having discussions with Telstra about the possibility of using those sorts of funds to expand a broadband availability.

Mr PETER BESSELING: I am not talking about a remote community as such, I am talking about a community such as mine in Port Macquarie where broadband is available to a point, particularly in rural areas where the wireless service is not of significant strength and coverage to access that, so those people—and without a doubt it is not unique to my area—find themselves in a bit of a black spot.

Mr COTTRILL: Again, we have a planning area that looks at expanding populations and plans infrastructure rollout in association with what our likely populations are expected to be. The future of broadband, for example for new estates, working with developers we have a fibre rollout program called Smart Communities and that is a partnership with a developer where we roll out fibre to the premises to provide high-capacity broadband. Obviously there are a number of satellite broadband options available that are both directly and under government subsidised programs for people who do not have access to available wireline or wireless broadband. I suppose it would be a matter of communities speaking with their local Telstra Country Wide representative to ask about what plans are in place to expand broadband for that particular community.

Mr GEOFF PROVEST: So that is the point of contact? If we get an inquiry about a certain area it is our local Telstra Country Wide?

Mr COTTRILL: Yes, that would be the best point to understand if there are any plans to expand broadband into those communities. But there are many options, such as satellite, available that would cover it off immediately—and wireless.

CHAIR: You mentioned antennas a couple of times. How do you overcome the problem, say with Summer Hill at the moment, when the public is saying "not in my backyard"? How do you resolve it? Do you just say, "It is going in there. It is the best place for it"?

Mr COTTRILL: It is a difficult one. We comply with all the relevant standards that are set by the Australian Government, so obviously we are very confident that we are compliant with installing base stations. It is a mobile base station that you are particularly talking about. Just to clarify: an antenna, to me, means the receiving antenna would be on an external antenna on a car or a pull-up antenna on a phone. A base station itself—that is the example you spoke of—there is a consultation process that takes place with the local council and with the relevant planning authority and the community. Consultation that takes place, and there is a set of rules and guidelines that we work within and then we take that feedback from communities, obviously look at alternate sites, come up with a recommended site and then go through that process.⁶ Really, it is an iterative process that ultimately guides our decision there.

CHAIR: You do not need council permission, do you? You do not need a development application to put it up?

Mr COTTRILL: It depends on the impact of the site. If it is a low impact site, for example, if it is going on an existing building and we are not building a specific tower to put that base station, there may be situations where it does not require a development application.⁷ If it is a new tower⁸ that may have some impact on visual amenity or the like, then we have to go through that process, and it is a case-by-case situation.

⁶ There is a consultation process set out in the Deployment of Mobile Phone Network Infrastructure Code (ACIF C564:2004) that involves consultation with the local council, relevant planning authority and the community. As part of that process we consider the feedback received and review suggested alternate sites prior to coming to our final decision (Further information provided by Ms Lucy Wicks, Telstra in correspondence dated 29 January 2010).

⁷ It depends on the type of facility and the area it is to be installed. If it is a low impact facility under the Telecommunications (Low Impact Facilities) Determination 1997, for example, certain types of antennas installed on an existing building and the site is not within an "Area of Environmental Significance" (as per the Determination) it will not require a development application (Further information provided by Ms Lucy Wicks, Telstra in correspondence dated 29 January 2010).

⁸ If it is a new tower that is not a low impact facility under the determination then we have to go through that development application process, and it is a case by case situation (Further information provided by Ms Lucy Wicks, Telstra in correspondence dated 29 January 2010).

CHAIR: What percentage would you change? A small percentage? The reason I ask that is that I can remember a few years ago being in the protest group where you were putting them through Londonderry, which used to be in my electorate, and the protests were long and hard and the council was against it, yet you still went ahead and put them up.

Ms WICKS: Probably two things. Firstly, if you would like further details on what constitutes low impact and the process thereby we are certainly happy to provide that and we will undertake to get that back to you. In terms of Summer Hill specifically, I can advise that the consultation process was in terms of public submissions and I believe the deadline for that was Friday 20 November. That consultation process was extended by two weeks in response to the community and Telstra is currently considering responses from that consultation process. That is underway at the moment.

Mr PETER BESSELING: Who is running that consultation process? Telstra not council, is that correct?

Ms WICKS: Correct, yes.

Mr GEOFF PROVEST: You guys were very good when I had a drama about two towers. Your team came up and went like lions into the Colosseum. It ended up okay and those towers are up and functioning. But you went to a great deal of effort to put oil on the water.

Ms WICKS: We do try wherever possible to educate the community about the facts surrounding our mobile communication facilities, why they are going up. We have photomontages available so that people can see what they are going to look like when they are built. We provide information about radiofrequency and some of those other issues that are sometimes raised by members of the community, and we do try at all times to address concerns and, where necessary, individual concerns as well.

Mr GEOFF PROVEST: There was some concern about putting towers in national parks and other Crown land reserves and different things like that. I remember hearing about how National Parks flatly said no phone towers and yet it would have saved some of the angst when the national park is adjacent to residential areas. Has there been any progress between Telstra and National Parks? In other words, are national parks still a no-go zone?

Ms WICKS: I think we should take that question on notice. I do not think any of us here are sufficiently qualified in that area to comment.

Mr GEOFF PROVEST: There were just a couple of cases I was aware of where there was a national park with a hill here and a town here and no-one wanted the tower right against it. You could have put it just on the hill and fixed everyone but National Parks just had a blanket on it.

Ms WICKS: We will come back to you on that one if that is okay. I just do not think we have the relevant expertise here today.

Mr GERARD MARTIN: In relation to the perceived health problems with the towers, if it is right or wrong—and it is a perception, I think—irrespective of whether it is a purpose-built tower or you are attaching it to a building, that is no different, is it, but it seems that there seems to be something emotional about building a tower, which builds up that problem about a health issue.

Ms WICKS: In terms of that, Telstra relies on the World Health Organization for its advice and we are also guided by ARPANSA, the Federal Government's own body, in terms of the maximum EME levels those levels are usually substantially below—many, many, many times below—that particular standard. I do not have the exact figures in front of me but, again, I would be happy to provide them on notice as a response to the Summer Hill question in particular, just to give you an example of how that usually sits on a tower such as Summer Hill.

Mr PETER BESSELING: Just staying on the theme of towers and of the legislation associated with allowing towers or not allowing towers, what legislation do those towers come under? Is it a State legislation or a Commonwealth?

Ms WICKS: It is Federal legislation—the *Telecommunications Act 1997*.⁹

Mr PETER BESSELING: That is what I thought.

Mr COTTRILL: As Ms Wicks mentioned, the world health standards that apply to EME and the like. There are a number of standards that we need to abide by.

Mr GEOFF PROVEST: We have an interesting problem up there with cross border issues. Blackberries and any of the other devices, because they will pick up the tower in Coolangatta intermittently with the tower in Tweed Heads they will jump time zones. I know you cannot fix that, but it is an interesting thing. It just continually flicks back and forwards.

Mr COTTRILL: You need to negotiate a common time zone. Unfortunately you cannot set up the device. The devices cannot interpret the State. You could be impacting someone else if you change it to lock on to New South Wales time.

Mr GEOFF PROVEST: There was a problem there before because we had the issue of different billing in different times. Telstra fixed the landlines, but I would say because it jumps from one tower to the other it would be near impossible to keep a handle on it.

Mr COTTRILL: I do not believe there would be any way to overcome that unless we were able to have a common time zone.

CHAIR: Or supplier. Everyone can have two watches.

Mr PETER BESSELING: Does that mean that if you make a call that lasts a minute sometimes you get charged for an hour and a minute?

Mr GEOFF PROVEST: Yes. Technically, I suppose it could work like that. With the national broadband rollout, what do you perceive to be the top three issues or challenges associated with that?

Ms WICKS: On the national broadband network, I think it is fair to say that we certainly support the Federal Government's NBN vision. We believe it will be a critical national infrastructure investment. We believe it will be an important milestone to developing Australia's digital economy. It will provide a foundation for economic growth, for international competitiveness and for innovation across all sectors. At the moment we are continuing our constructive discussions with the Government to find a mutually acceptable outcome that we believe we can achieve in the best interests of our shareholders, our customers, our staff and of course the nation. In terms of current discussions around the NBN, the Minister has publicly indicated that he wants to see progress on these discussions by Christmas, and that is the timetable that we are working towards.

Mr GEOFF PROVEST: It is not far away.

CHAIR: Have you made any headway? That is the main thing.

Ms WICKS: As I said before, we are continuing our constructive discussions with the Government.

Mr GEOFF PROVEST: What would be the challenge? Is it the delivery of the service or is it more of a commercially based decision?

Ms WICKS: I think what we can say at this point is that we are continuing constructive discussions with the Government, and we are hoping to be able to follow that mutually.

CHAIR: Thank you for your time today and your expert evidence.

Mr GERARD MARTIN: Just to clarify, you will be able to give us some detail of that trial?

⁹ Commonwealth *Telecommunications Act 1997*, specifically Schedule 3 of that Act (Further information provided by Ms Lucy Wicks, Telstra in correspondence dated 29 January 2010).

Ms WICKS: We would be happy to provide you with further information on any of the questions that have been raised today.

CHAIR: Thank you. Is it your intention to table evidence today?

Ms WICKS: Yes, we would like to table that document, which gives you some interesting facts and figures about Telstra and Telstra's history. If I could just make one final comment, we have talked a lot about the Next G network. I just wanted to place on record that it is important that customers understand that as with any mobile network the coverage on our Next G network depends on a range of factors. These include a person's location, the handset that is being used and whether that handset has an external aerial attached. That is important information that we feel should be included as part of any discussion about the Next G network. We advise our customers that they can maximise their coverage with the use of an external antennae on their handset or their car kit or other things that Mr Cottrill referred to before. But continuous coverage cannot be guaranteed.

(The witnesses withdrew)

ANTHONY GOONAN, Chief Executive Officer, Yless4U Pty Ltd, sworn and examined:

CHAIR: Thank you for appearing today. 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 291, 292 and 293 relating to the examination of witnesses. Is that correct?

Mr GOONAN: That is correct.

CHAIR: Your evidence today is covered by parliamentary privilege. The rest of the Committee was pleased to hear from the members who attended the meeting in September with you and Robin Eckerman about how small rural and regional operators can use low-cost solutions to bring twenty-first century communications to rural and regional communities. Have there been any developments in your operation since that meeting?

Mr GOONAN: Yes. We are still evaluating what we wished to do going forward. I would like to make an opening statement.

CHAIR: Yes. Forgive me—I should have asked you that.

Mr GOONAN: Thank you for the invitation to attend today's Committee hearing. Yless4U is a telecommunications carrier which commenced operations in 2005. Its name derives from the play on words: Just because you live 20 kilometres from Canberra central, why less for you?, with the answer being wireless for you. We install and maintain a telecommunications carrier grade fixed wireless access broadband service in regional, rural and remote areas, primarily in the Australian Capital Territory border areas of New South Wales.

Our primary objective in 2005 was to provide a broadband service to our community because these areas had nothing but dial up, despite the fact that we are only 20 minutes from Federal Parliament House, and we were deemed to be beyond the commercial reach of the major telecommunications incumbents. We designed and built our own backhaul and wireless local loop infrastructure in some of the harshest geographic, topographic and climatic conditions in Australia. We took the step of commissioning all backhaul links in house because of the prohibitive cost of obtaining high-speed interconnect bandwidth from the incumbent carriers. This has insulated us from the vagaries of market directions by the major carriers over the past four years.

High-speed 300 megabits per second backhaul radio bearers provide our interconnectivity to the global internet and other carriers and terminate directly in Canberra at a major cross-connect point. We have constructed some 30 sites, towers or masts—as you will—across the region with power supplied either by the grid or solar facilities. The large number of sites was required to reach into isolated populated rural valleys nestled between high mountains. Several of our major trunking backhaul sites are located within 100 metres of major interstate microwave radio bearer sites. However, it is cost prohibitive to access those facilities at those sites.

While our customer base is relatively small, we serve a unique population demographically in that amongst our customers are senior public servants, Federal ministerial advisers, defence and scientific personnel, tertiary students and academics, as well as traditional large-scale farmers, paraprofessionals and trades personnel. Wherever we are able to assist our local community and residents we do so. I will provide a couple of examples. We provided high-speed broadband services as a community service free to several bushfire brigades and control centres, community halls and State Emergency Services throughout the region. We have worked with international telecommunications specialists in providing demonstration, high-definition medical operating services between rural Vietnam and Melbourne. This latter example was coordinated from a remote property near Mount Fairy in southern New South Wales and required the use of international high-speed bearers between the two locations and the respotting of six satellite beams.

We also provide a high-speed five megabit per second proof of concept bearer to the Molonglo Observatory synthesis telescope [MOST], which some members of the Committee have seen. While the MOST has been retrofitted as the prototype to assist in Australia's \$1 billion bid for the square kilometre array, it has suffered from a lack of broadband facilities to move the four terabytes that they collect from the universe each evening to the global scientific community. Prior to 2007, magnetic tape was used to transport data to Sydney. In 2007, MOST installed two ADSL circuits 12 kilometres from the local Bungendore telephone exchange and the maximum speed they could get from that was 512 kilobits per second. We have installed five megabits per second and work is progressing on upgrading that to a 20-megabit or 45-megabit per second circuit to

commence on 1 January. We have also equipped the local medical teaching practice in Bungendore in south eastern New South Wales with two distinct high-speed broadband services. The first is for the medical practice and the second is for out-posted medical students from the Australian National University undergoing rural fieldwork as part of their undergraduate studies.

Although we have not received any Federal, State or local government support for infrastructure and no connection-based incentives under the Federal Government initiatives—Broadband Connect and the Australian Broadband Guarantee [ABG]—since March 2007, we have continued to provide services and our network now covers more than 6,000 square kilometres in south eastern New South Wales. The Yless4U network as it currently stands is capable of supporting an end customer connection of greater than 12 megabits per second, which is above what the NBN is anticipated to do within eight years in rural and remote areas. However, the primary limiting factor in providing these speeds to customers is the recurring cost of interconnection to the Canberra regional cross-connect facility.

CHAIR: Has any progress been made with the Molonglo telescope since the Committee visited?

Mr GOONAN: We have had three international suppliers go through and they all think there is a possible marketing opportunity. But in the end they did not come forward so we are doing it ourselves.

Mr GEOFF PROVEST: Is it operational now?

Mr GOONAN: We have been running a five megabit circuit since about July. I have it suspended until probably next week. That is when we will move it to 20 megabits per second. We are doing it at our cost.

CHAIR: How are you surviving without Federal or State government funding?

Mr GOONAN: Because we are a charity.

CHAIR: Have you applied for funding lately?

Mr GOONAN: There is no funding. The agency responsible for the ABG has not announced another round. The ABG Minister announced last Friday that another \$29 million has been brought forward into this financial year, but they have not announced another round.

Mr GERARD MARTIN: Why would you not have access to that?

Mr GOONAN: We have applied three times and failed. Why do we fail? It is because we are considered not financial enough.

Mr GERARD MARTIN: Is that about your business plan?

Mr GOONAN: Yes.

Mr GERARD MARTIN: What do they judge that on?

Mr GOONAN: We are not sure.

Mr PETER BESSELING: Viability.

Mr GEOFF PROVEST: But you have been in the business now for four years.

Mr GOONAN: Nearly five years.

Mr GEOFF PROVEST: And you are continuing to sign up customers.

Mr GOONAN: We have chosen to increase our connection to above the ABG threshold metro rate, so we now compete against subsidised satellite in our region. They get \$2,750. We have people fleeing from satellite and connecting with us and we charge \$1,500 for a connection because we do not get any subsidy.

CHAIR: When you appeared before the Senate select committee were the other witnesses financed by the Federal or State governments?

Mr GERARD MARTIN: Do you mean the Federal broadband committee?

CHAIR: Yes.

Mr GOONAN: I do not know the answer to that. They were probably financed by their own company. I do not know. There are about 16 ABG providers. When it was originally Hibis and then Broadband Connect there were about 35. The rules were progressively tightened over two years and we were deemed not suitable, as were many others. The majority of the ABG providers are satellite providers. We get pamphlets from satellite providers in our rural letterboxes all the time.

Mr GEOFF PROVEST: Do you have problems placing your towers?

Mr GOONAN: On New South Wales land we do, so we do not use it.

Mr GEOFF PROVEST: Do you mean Crown land?

Mr GOONAN: We decided three years ago not to use Crown land, especially New South Wales Crown land, because of the imposts.

Mr PETER BESSELING: You discussed microwave sites when we met you previously. You said that the cost of accessing them is prohibitive. Who owns and controls those microwave receivers?

Mr GOONAN: Collector is a good example. It is halfway between Goulburn and Canberra. It is on what I call interstate microwave bearer lines. Historically microwave bearer sites were placed on high locations on Crown land for interstate transmission of voice, television, relay circuits et cetera. For us to mount an antenna on one of those sites would cost \$5,000 to \$8,000 per annum per antenna and we would have to install an equipment shelter. We move to the local farmer next door and work out a suitable arrangement and thus avoid both New South Wales Department of Lands costs and having to lease space on a tower. We just build our own.

Mr PETER BESSELING: If you had access to that tower you would get a much better signal?

Mr GOONAN: The answer to that is in most cases, yes because the Crown lands are rural areas and old abandoned trigonometric stations, so they are often in the middle of nowhere and they are the highest point because that is what the surveyors used to use 100 years ago.

Mr GERARD MARTIN: So the cost issue, I think you quoted a figure to me when we were down there of about \$8,000 a year?

Mr GOONAN: That is per annum. There are two sets of cost. The first cost is from the New South Wales lands department that would charge you a fee for using the Crown land and the second fee would be if you used the facility that was there, that is the tower, and it is understandable; governments prefer not to have another tower 10 metres away. Those costs can be quite prohibitive, around about \$5,000 per annum.

Mr PETER BESSELING: Who is that costs associated with? Is it a government department?

Mr GOONAN: It depends on who put the original tower up there. It could be Telstra; it could be Optus, although Optus tends to use another company, Crown Castle. Crown Castle does that on an international basis.

Mr GERARD MARTIN: Perhaps, Mr Chairman, that is something we can follow up. I have had some discussions, since we had the tour with you, with the Minister's office and they were talking about \$350 a year rental on a Crown reserve, but the other costs are associated with accessing whatever facility might be there?

Mr GOONAN: Yes.

Mr GERARD MARTIN: Which could be a tower?

Mr GOONAN: Up until recently there was no differentiation between whether you were a micro minnow Telco carrier like us or you were the major incumbent. You just have to do the mathematics. If you are trying to service 10 people on large farms in a rural area in an isolated valley and you have already put a high-speed back wall link into there, you can never get your money back. We were okay when we had the HiBi's' broadband connect subsidies because we do it at orders of magnitude lower than the major incumbents.

If I may, I would like to digress, but it is very closely related to it. I think I advised the Committee when I spoke in Bungendore—and Robin Eckerman was with me—we were in the midst of a large business case development for a Victorian local government area.

Mr GERARD MARTIN: That was Towong, was it?

Mr GOONAN: Yes. That is now completed and it is doing the rounds of Victoria and Federal agencies. Exactly the same issues hit down there. They have a population of around 6,500 people over 6,000 square kilometres with a geographic terrain very similar. The report has been well received, but with the same risk return issues, the same accessing of sites. I heard the words "national parks" before, just as I walked into the room—exactly the same issues. We are talking about 24 sites to be built down there. We will not know the outcome of that; it is doing the funding rounds in the respective governments at present, but I see this issue as a national issue.

Mr GERARD MARTIN: Did you have any connections, discussions or any joint venture with the CSIRO ICT Group?

Mr GOONAN: No. I am aware of their recent announcement, which may have been discussed this morning on high-speed radio. I think Alex Zelinsky comes from Canberra as well. I probably will have a discussion, or attempt to have a discussion with him when I go back. What I find difficult in all of this, because I seem to get up at these committees, whether it is State, national or local, and I try and be positive but it is very difficult. The Committee has seen directly some of what we do. We are well respected internationally. People are usually gobsmacked when they see what we do but there is no money; no money flows. We are about to spend \$43 billion at a national level.

The Senate committee report was released Friday, I think. In the national Senate committee I talked about some of these issues because they were questioning again, "Well, how come you can't access ABG or these funds?" Senator Lundy raised it. After a bit of discussion I said, "Isn't that the base question; \$43 billion is about to be spent. If this was a commercial viability for the larger carriers, they would have done this already." We tend to go where the major incumbent carriers do not go. If you overload the map of New South Wales with the major microwave areas and the major fibre routes, we tend to be in the triangles between the highways, where the villages and the hamlets are, but not on the major routes.

If there was a business case to construct a mobile tower in the middle of nowhere to service 20 people, that would have already been done. It does not matter who it is, whether it is Yless4U, Telstra, Optus, Vodafone, some assistance is needed to balance or redress that digital divide between the city and the rural areas. For four years we have shown that. The first question asked of me today was: What are you going to do going forward? We often think about that. We have more infrastructure out there in that region than Telstra has. But no-one seems to want to understand that. We are quite happy to be used as a model. I think we do some pretty spectacular things. We can deliver the 12 megabits per second but if someone wants 50 megabits per second and they are prepared to pay for it, I will do it, and yet nothing happens.

Mr GERARD MARTIN: We had some information this morning from some of the people about using smarter, smaller wireless technologies?

Mr GOONAN: Yes, probably picocells or nanocells or something. In some ways that is what we do. Why would I spend \$500,000 on constructing a monolithic tower to service 10 people? So we do—small is beautiful.

Mr GERARD MARTIN: It is just not being recognised by the decision-makers that this is a cost-effective way to do it?

Mr GOONAN: Absolutely.

Mr GERARD MARTIN: Is it because some of them just do not think that the wireless part is sexy compared to the cable delivery of broadband?

Mr GOONAN: I think there is still a dilemma at the national level on how you are going to do the last 10 per cent. I have no problems with the NBN initiative. I think it is good; I do not mind paying my taxes to have it come to fruition, and the first 80 to 90 per cent, from my perspective, is fairly easy. You have the density of population, whether it is cable, fibre or whatever. It is the last 10 per cent, which probably occupies 50 to 60 per cent of the geography of Australia, and at a Federal level NBN will only hit towns of 1,000 people and above. There are a lot of towns, villages, hamlets, coastal areas, inland areas of less than 1,000 people and wireless can do it. There is no doubt that wireless can do it.

Mr GERARD MARTIN: In relation to our little fund, the Community Broadband Development Fund, I know you have told us that it is not worth the hassle to do it with \$50,000—

Mr GOONAN: I looked at it again last night.

Mr GERARD MARTIN: If you can just put aside the paperwork that you have to do to access, would you see that a \$50,000 grant in some of those small communities that you are working with that you could make a real impact?

Mr GOONAN: No, I do not think that \$50,000—I checked actually the specifications. Is Enabling the Country the New South Wales one?

Mr GERARD MARTIN: Building the Country?

Mr GOONAN: I looked at it last night. Yless4U, as a commercial organisation, is ineligible to apply.

Mr GERARD MARTIN: But you can interact with a local community to provide them with land quality and expertise?

Mr GOONAN: How far will \$50,000 go?

Mr GERARD MARTIN: That is what I am asking you; I do not know?

Mr GOONAN: It is just not worth it. I will give you an example with Towong. I cannot say more than what was on the original tender, but the Victorian multimedia is much more aggressive in terms of attempting to do things in rural and remote areas, so we are talking about a potential input into that of around about \$1 million.

Mr GERARD MARTIN: Into the project you have just done the feasibility study on?

Mr GOONAN: Yes. And even then, it is a small business case. But the population density is not there. So \$50,000—if you think of it from my perspective, a small business perspective—I have to find a council or a local government area that wants to work, that is inclined to do so. Let us say you are trying to do it over 2,000 or 3,000 square kilometres. You might need 10 microstations, because it is pretty undulating, et cetera. They are not going to have the money, and it just is not worth it. The feasibility study alone should be \$50,000 to \$70,000.

CHAIR: Eventually, the Government has to subsidise it to get coverage all the way through, surely?

Mr GOONAN: In terms of getting the quality, yes—whether that is State or Federal incentives. I would say that probably most of that is Federal incentives.

CHAIR: Have you spoken to the Minister at all?

Mr GOONAN: I have met with the previous Minister and the previous Government. I have not met personally with the current Minister. Yless4U received an order of merit for innovation in rural telecommunications at ATUG 2009, so I have met the Minister there. But I have not—

CHAIR: My point is that someone has to do it eventually.

Mr GOONAN: Absolutely.

CHAIR: If you are geared up for it, why should you not—?

Mr GOONAN: We are too far ahead. It is as simple as that.

Mr PETER BESSELING: You have been in discussions with NBNCo?

Mr GOONAN: I personally have not, no. But NBNCo does have the report that we recently completed in Victoria—

CHAIR: I think you need a good public relations man. If you have the best product to sell—

Mr GOONAN: We are making more money now by doing consultancies to governments, whether that be State or Federal governments.

CHAIR: If you are making more money, you are laughing.

Mr GOONAN: No, I am not laughing. I actually think it is a shame. But I think we were probably too far ahead. We will not let our existing customers down. We do specialised circuits. There is a growing awareness that wireless is developing rapidly.

Mr GERARD MARTIN: Are you aware of a New South Wales Government Chief Information Office?

Mr GOONAN: Yes. I was going to try to catch up with Colin at some stage. I do not know him personally. We have met at conferences I have presented in my former life with the organisation that has just presented.

Mr GERARD MARTIN: It seems to me there would be some value in your making some contact there.

Mr GOONAN: It is pretty hard for us to sit down—I do not mean to be negative—

CHAIR: Keep knocking on the doors.

Mr GOONAN: Yes. It is very small. I think we have other things in life to do, besides continuing to do this. I am talking about consultancy, whether it is domestically or internationally. We get people coming in from overseas countries. We have more infrastructure in some of these areas than the major incumbents do. You can be used as a model. I am quite happy to trial new things; that is what we do. That is what we have done. I am quite happy to do that with the CSIRO, or whatever. Otherwise, do I decide to take the infrastructure away?

CHAIR: I do not know whether the powers that be know that you have more infrastructure there than Telstra or anybody else. But if they do not know, somebody should be telling them, surely?

Mr GOONAN: There is no innovation in Australia in this area. There are no grants. There is money being spent—there is lots of money being spent—but there is no innovation.

Mr GERARD MARTIN: That Federal Government \$60 million digital regional initiative—?

Mr GOONAN: Yes. I do not know whether New South Wales put it in, but I was a consultant for Victoria for a major project there. I am sorry, I just cannot talk any more about that.

Mr GERARD MARTIN: I simply saw some value in your talking to Colin Griffith or Ben McCarthy, because what they have tried to do through their task force is to marry up people who could deliver some solutions—

Mr GOONAN: I am quite happy to follow up with Colin. I have seen him present, and he is good. I think he, personally, is good.

Mr GERARD MARTIN: Mr Chair, I had a long discussion with Tony on the day that he took Vicki and me to the top of Eaglehawk, and I can certainly see the value in what he is doing. But I can understand his frustration—

CHAIR: And you can see the frustration, too. That is the worst part of it. But if we as a Committee can do anything, we are only too prepared to try. If we have the expertise there, and that is the expertise that we are looking for, next year or the year after or whatever why would we not look at your expertise and use you?

Mr GOONAN: I do not understand why, either. I mean, look at the tenders that have come out from the New South Wales Government. There is no way we can apply for any of those. There is no way the New South Wales telecommunications central body would take on us to provide services in regional and rural areas. We just do not qualify—we are too small; we are too much of a risk. Four or five years ago AAPT got a large grant to equip the hospitals et cetera in regional areas. I could not do it. In some places we did it, and we did not get any funding for it, because they basically used the major towers in the microwave areas, which is not where the hospitals were.

Mr GERARD MARTIN: For instance, with regard to the four-year contract for \$280 million we have let to Telstra to hook up our schools, would a project of that size be within your price to do?

Mr GOONAN: No way, no. But could we do it in specific areas? The answer is yes. But is that the way the tender was written? Probably not. I have not even read the tender.

CHAIR: If you can think of any way that we might be able to solve our problem and your problem, please put something forward to us.

Mr GOONAN: I actually made a phone call before I came into the Committee room today. I said, "Can I mention Towong?" The answer was, "Yes." As I was travelling up by bus, I thought, "What am I going to say today that is different, and what do they want to know?" I thought: If you think of Towong, it is right along the Murray River; it starts at Albury and goes down to Cann Cove, and whatever. There are mountains all over the place. Just over the border is a State called New South Wales. We dismissed in our early evaluation using several mountains in New South Wales because it was going to be too hard to have the Victorian Government talk to the New South Wales Government, and then for Fred to talk to Joe, or whatever it was. So I purposely did not put in the business case anything on the New South Wales side of the river. To me, it is a perfect opportunity for interstate cooperation. I am not trying to get into politics here between Victoria and New South Wales. But it really is a possibility. May be the Committee could directly write—

Mr GERARD MARTIN: Through Colin Griffith's organisation, they are doing that through cross-border negotiation, and trying to unscramble those things and get that cooperation. Once again, I think there might be some value in that.

(The witness withdrew)

(The Committee adjourned at 2.18 p.m.)