COMMONWEALTH OF AUSTRALIA

Official Committee Hansard

SENATE

ENVIRONMENT, COMMUNICATIONS, INFORMATION TECHNOLOGY AND THE ARTS REFERENCES COMMITTEE

Reference: Australian telecommunications network

WEDNESDAY, 23 APRIL 2003

MILDURA

Members: Senator Cherry *(Chair)*, Senator Tierney *(Deputy Chair)*, Senators Lundy, Mackay, Tchen and Wong

Substitute members: Senator Moore to replace Senator Wong for the committee's inquiries into the Australian telecommunications network and the role of libraries as providers of public information in the online environment

Participating members: Senators Abetz, Allison, Bolkus, Boswell, Brown, Buckland, George Campbell, Carr, Chapman, Conroy, Coonan, Eggleston, Chris Evans, Faulkner, Ferguson, Ferris, Harradine, Harris, Knowles, Lees, Mason, McGauran, Murphy, Nettle, Payne and Watson

Senator Greig for matters relating to the Information Technology portfolio

Senator Ridgeway for matters relating to the Arts portfolio

Senator Nettle for the committee's inquiry into environmental performance at the Ranger, Jabiluka, Beverley and Honeymoon uranium operations

Senator Wong for the committee's inquiry into the Australian telecommunications network

Senators in attendance: Senators Cherry, Lundy, Moore, Tchen and Tierney

Terms of reference for the inquiry:

To inquire into and report on:

(a)   the capacity of the Australian telecommunications network, including the public switched telephone network, to deliver adequate services to all Australians, particularly in rural and regional areas;

(b)   the capacity of the Australian telecommunications network, including the public switched telephone network, to provide all Australians with reasonable, comparable and equitable access to broadband services;

(c)   current investment patterns and future investment requirements to achieve adequacy of services in the Australian telecommunications network;

(d)   regulatory or other measures which might be required to bring the Australian telecommunications network up to an adequate level to ensure that all Australians may obtain access to adequate telecommunications services; and

(e)   any other matters, including international comparisons, which are deemed relevant to these issues by the Committee.

WITNESSES

[10.00 a.m.]

CLARKE, Mr David, Director Business Services, Mildura Rural City Council

PEARCE, Mr Philip, Chief Executive Officer, Mildura Rural City Council

VALE, Mr Peter, Manager Information Technology and Telecommunications, Mildura Rural City Council

CHAIR—I declare open this public hearing of the Senate Environment, Communications, Information Technology and the Arts References Committee and welcome all those present here today. We are very pleased to be here in Mildura as it will give us an opportunity to hear first hand the experiences of people living in this region in relation to our inquiries on the Australian telecommunications network and the role of libraries in the online environment. I welcome our first witnesses. Thank you for giving us your time here today. It is very much appreciated by the committee. The committee prefers all evidence to be given in public, but should you at any stage wish to give your evidence, part of your evidence or answers to any specific questions in private you may ask to do so and we will consider that request. You are reminded that the evidence given to the committee is protected by parliamentary privilege. I also inform you that the giving of false or misleading evidence to the committee may constitute a contempt of the Senate. I invite you to make an opening statement before we move to questions.

Mr Vale—On behalf of the Mildura Rural City Council, I thank you for giving us the opportunity to present two items to you here today. The first item relates to our new voice over IP telephone system, which has been quite a challenge for both us and our supplier. The second item relates to a number of community concerns about mobile phone coverage and STD charges. Regarding our IP telephone system, I will give you a bit of history. In 1999, our telephone system consisted of a number of independent PABX systems, one for each building. A number of those were at capacity and in need of a major overhaul. For example, we had the situation where we could not transfer a call to someone in another building. We would have to either give the caller the number or ask them to look it up in the White Pages and ring again. We also could not ring any specific people in the building. We would have to ring the White Pages number and get the receptionist to transfer it through. Our calls to our Ouyen office were at STD rates. As a result, in 2000 we decided to go out for a full tender on council's entire telephone system. During the expression of interest and tender process, we received three very good responses and had an exhaustive evaluation. We decided that Neighborhood Cable was the preferred bidder.

In 2000, voice over IP was still in its infancy and this proposal was considered to be leading edge. It was considered with scepticism by a number of critics. Indeed, there are a number of risks involved with it both technically and organisationally, and the project as it was implemented had a number of problems to deal with. As a result, we now have a fully integrated network that shares both voice and data traffic over a combination of fibre-optic cable, hybrid fibre and coaxial cable—which it also shares with pay TV and the Internet—and ISDN, and now we are looking at implementing microwave connectivity. The sites go as far down as Ouyen, which is over 100 kilometres away. As a result, customer calls can be transferred to any phone in council, we can ring any extension directly from any phone within council, call our Ouyen office at no extra charge and call other Ouyen numbers at the local call rate. The new phones also link with PCs as well as share the network, so we can move phones around from

office to office—we just take the phone out of the wall socket and plug it back in elsewhere. That is all quite transparent. There are also all the usual PABX type functions that we use, such as voicemail, calls on hold and transferring calls. We also have software that runs on the PC that interacts with and controls the phone. For example, from Microsoft Outlook we can look up our contacts list, click dial and that particular person's number—be it a land line, a mobile or whatever—is dialled. It has been quite a challenge for us.

I want to go through a couple of those challenges. Firstly, when we went through the process, we recognised that cost savings were a major component of what we were trying to achieve. However, because we have a lot of existing wiring, we probably will not get a significant benefit until we put in new wiring, when we will only need one wire to run both the PC and telephone. We estimated this saving at about 4 percent. Secondly, we are still dependent on the PSTN network for noninternal calls, and this attracts the usual STD toll rates and charges. We believe that Telstra still holds the monopoly on connectivity to that infrastructure. It is great to have an IP phone. It is new technology. But, if all we can do is ring a standard phone with it, we are not really getting the benefit of the higher quality that it purports to have. Even if other phones that we ring are IP, there has to be conversion across the PSTN network and then back at the calling end into the IP network. Therefore, we really need to see a parallel network that gives you total IP from one end through to the other, and that includes the ability to have call directory services.

The successful tenderer, Neighborhood Cable, is a relatively small company. The initial vision was to extend the cable network all the way down to Ouyen for community use. This may not now happen, as the infrastructure costs appear to be quite high. Even leasing space on Telstra towers to get down there is quite expensive. When you do a Return on Investment, you see that Ouyen is too small a community to return a profitable return on investment in isolation.

The philosophy we engaged in at Mildura City Council was to have a facility management approach. Thereby, we could maximise the cost sharing opportunities with the infrastructure that we would commission as part of the tender. For example, we would have, say, only 270 phones, but the capabilities of the server that services all of those phones would be up to 2,000, so we would be using only 10 per cent of the infrastructure. That would then enable opportunities for other telephone customers to connect as well.

We have not seen any of those other telephone customers come in because the costs for small to medium enterprises are much higher per handset. They are certainly out of the range of domestic customers. So, in summary, there are now quite a number of companies that can implement voice-over IP systems, basically using fibre-optic technology and virtual private networks as their traffic flow. We have extended this to include multiple delivery technologies, so that we can provide a scalable model for smaller organisations to adopt. The issue is the cost of the units. Over time we believe that the cost will come down, but the inter-regional city infrastructure needs to be built to make it effective.

My second area of comment this morning is community concerns. Council is currently doing community consultation sessions with our ratepayers, and a number of concerns have been raised. Firstly, mobile phone coverage off the main highways is lacking. Secondly, mobile phone service on the Sturt Highway is lacking, especially around Lake Cullulleraine. STD tolls apply for Ouyen residents who wish to talk with any Mildura area phone. Lastly, Internet speeds are still minimal for most of our municipality. The Neighborhood Cable network and Telstra

ADSL connectivity provide reasonable price and connectivity, but this only covers a small area of Mildura. Areas such as Merbein, the irrigation district and other centres have to pay for more expensive satellite services.

CHAIR—You mentioned ADSL. Being in town, does Neighborhood Cable provide a superior product to ADSL for this area?

Mr Vale—It provides a comparable product. Basically, it can deliver three megabits to any particular point with a cable modem.

CHAIR—You spoke about the need for intercity regional infrastructure to be made more effective. What sort of specific measures would be needed to improve intercity issues in this sort of area?

Mr Vale—An analogy I can use is major corporations. They would have a Sydney office, a Melbourne office and probably some regional offices. They would set up dedicated IP infrastructure for data communication between each of those sites and buildings. It just needs to be upscaled to include multiple customers and allow them to come in and out of the infrastructure, so that it is all IP traffic to IP traffic, which is using the Internet. At the moment it has to convert over to the PSTN network, go through the whole PSTN and then convert back out again, so it is using a conversion that is not necessary. I understand that there are some trials in Australia looking at how to do that, but it is a major strategy to get it so that it is not fragmented. It has to be systematically organised so that it means something to the whole Australian community.

CHAIR—How significant is Neighborhood Cable as a regional development tool for the Mildura area?

Mr Vale—It has been quite strategic here in Mildura. Back in 1995 they approached council with a proposal to connect up Mildura with pay TV and Internet services. That has been very well received and absorbed, and they actually have quite a significant infrastructure here in Mildura itself. They have a number of customers who use Internet services and pay TV as well. They have not really extended into the telephone service component of that at this point.

Senator TCHEN—I should probably be asking Neighborhood Cable this question, but do they have any strategy to aggressively market to the local community?

Mr Vale—I have seen a few television ads, but I am not aware of any strategy.

Senator TCHEN—They claim that they are trying to provide this sort of community based service to Geelong and Ballarat. With the foundation that they have built with the council service, I was wondering whether they were doing the same thing with the Mildura community.

Mr Vale—As far as I am aware, they are using the television medium to advertise their product.

Senator TCHEN—Would that include telephony?

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Mr Vale—No, they are not pushing telephones. I am not aware of other customers. They have responded to tenders, but their major focus is a media company—pay TV and an Internet service at broadband rates. Certainly one of the issues we have with residential use of these services would be the cost of the units, and that is currently being looked at.

Senator TCHEN—You mentioned at the beginning that the council received three very good tenders. Did that include Telstra?

Mr Vale—Yes.

Senator TCHEN—Yesterday we received evidence from the Bendigo Community Telco, which is actually not a telco as such, I see it as actually a community based organisation. It is really a marketing process where they seek out community needs and then go out to the providers and try to get the best deal. Has Mildura council looked into that possibility? I understand that, in Bendigo, the initiator was actually the council and they involved the communities. Has the Mildura City Council looked into that aspect?

Mr Vale—As far as a community based organisation, we have involvement with Western Murray Development, which is more a regional area.

Mr Pearce—I think it is safe to say at this stage that the council has not taken a strategic direction to form any sort of a telco and has not had any consultation in relation to that. Having come from where I have—I was involved with the Goulburn Murray Telco—I think it is something that the council would certainly be willing to have a look at. But at this stage there has been no firm decision.

Senator TCHEN—The reason I asked that is that I was wondering whether, since you have developed this network with Neighborhood Cable, you have had any response from Telstra? Has there been any interest from Telstra in trying to boost their business presence or improve their service in Mildura? For example, you were saying that, with calls outside your system you still have to pay STD call rates. Have you negotiated with Telstra to see whether you can improve your situation? Have they shown any interest?

Mr Pearce—I think there are a couple of issues there. One, council is bound to contractual arrangements with Neighborhood Cable, and they run for another 40 months. Therefore, I think that any negotiations in the context of those contractual arrangements would be out of place. Having said that, we still rely on Telstra to provide a number of services to council. We in fact met with Telstra yesterday. We had general discussions with them as to where we might be able to go in a partnership arrangement in the future—as we would do with Neighborhood Cable. Whatever we do has to be aimed at giving the best output to the community.

Senator TCHEN—What I was getting at is that, as far as I understand, technically there is no reason why you cannot transfer data fairly quickly or fairly easily between the different types of networks. Obviously Telstra's infrastructure is quite capable of handling whatever you need—except you do not have a contract with them; you have a contract with Neighborhood Cable. It seems to me that, if Telstra were prepared to cooperate and they were interested in that particular market, you should be able to negotiate something better than STD rates when you call outside of your telephone network system. Has that been tried?

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Mr Vale—At this point it would be out of place with the current contract. We currently have dealings with Neighborhood Cable as the provider of those services, and I think it would be inappropriate for us to step outside that contract at this point and renegotiate with Telstra.

Senator TCHEN—From your observation, what is Telstra's attitude to all this? Are they just saying, 'Alright, we're big enough; we don't care' or are they saying, 'yes, we can compete and we can provide a better service'?

Mr Pearce—I think it is safe to say that Telstra would be looking to increase their market share wherever they are. I do not think that there is any doubt that Telstra would like to pick up additional business irrespective of where it came from.

Senator TCHEN—But they have not come to you with any proposal?

Mr Pearce—As I said, we had a meeting yesterday where we certainly explored a number of options, not necessarily in relation to Neighborhood Cable but where they might be able to expand other services they are providing to us.

Senator LUNDY—I would like to go back to your original comment, Mr Vale. You described a pretty archaic phone situation leading up to your putting the voice contract out to tender. Obviously, you did not have upgraded exchanges that allow some digital services like call waiting, transfer and so on. Was that the case? Where you living in Mildura in 1995 without any upgraded exchanges?

Mr Vale—We did have a couple of tie lines between some of buildings which had a lot of traffic.

Senator LUNDY—What is a tie line?

Mr Vale—A line is a dedicated phone connection between one building and another so that the operator could do a transfer to a specific high-volume type of end user.

Senator LUNDY—It sounds really sophisticated!

Mr Vale—Yes.

Senator LUNDY—You were living in the dark ages.

Mr Vale—We pretty much were.

Senator LUNDY—Were you across Telstra's justification or reasoning for not having upgraded Midlura's exchanges in accordance with future mode of operation?

Mr Vale—I only started in 1998 so this is pretty much a trigger point for me.

Senator LUNDY—I am always amazed, when I travel in regional areas, that the situation is never as it is conveyed by Telstra in a lot of their PR. I just wanted to draw that point out: that you were operating in an environment without digitally enhanced exchanges at that point and

that was obviously a factor in putting it out to tender. Are you aware whether Telstra provides any voice over IP service in the market, here or elsewhere?

Mr Vale—In their tender response they submitted a proposal for voice over IP.

Senator LUNDY—That is very interesting. Did all of the tenders come back with a VoIP proposal?

Mr Vale—Yes.

Senator LUNDY—Was that because that is what you were looking for?

Mr Vale—We asked for two things: we asked for the standard PABX type of connectivity with an option for voice over IP, because we were not even sure that it was commercially available back in 2000.

Senator LUNDY—It was pretty groundbreaking.

Mr Vale—That is what we thought too. We thought, 'Well let's put it as an option; that way at least we can get something.'

Senator LUNDY—What prompted you to do that?

Mr Vale—We just kept our ears to the market and we heard that people were using webcams over the Internet and that the quality was not there. But I wonder whether commercial quality was there, especially with the quality of service algorithms that are out now. They were just coming onto the market in terms of commercial products.

Senator LUNDY—It is terrific to see such initiative taken. You mentioned that when you got your voice over IP network operating one of the challenges was the cost per unit for the actual phone. What is the cost for a voice over IP phone unit?

Mr Vale—It looks like a phone but it is more than a phone.

Senator LUNDY—It is a computer.

Mr Vale—It acts as a switch for your computer, as well. So that has to be built in as well. I am not sure what current prices are but they would be into the thousand dollar range.

Senator LUNDY—Did the cost-benefit for the council, notwithstanding the high cost of individual units, far outweigh what you were having to deal with previously, if you took into account the quality enhancement as well as the overall cost?

Mr Vale—Yes, it was an overwhelming case for us.

Senator LUNDY—Really? A financial case?

Mr Vale—No, not the financial case, but we still estimated about 4 per cent benefit with that. That was mainly due to the fact that we would not have to pay local calls to ring someone within our own organisation and STD rated calls to Ouyen. That was a major cost saving factor: we could ring as many people as we liked internally for no extra charge.

Senator LUNDY—In terms of finances I do not want to know too many details of the business case but with the present model do you tend to pay more upfront but far less for ongoing call traffic?

Mr Vale—It gets complicated because the bandwidth that you use to go to a particular site is used for data in normal applications but when the phone kicks in it uses the quality of service algorithm to a dedicated part of that bandwidth for the phone call.

Senator LUNDY—Yes.

Mr Pearce—So it is as if I have a continuous data stream that gets chewed up by the number of phones that are used. So asking how much is the phone and how much is the data gets complicated, because it is all data.

Senator LUNDY—And you are paying data volume charges?

Mr Vale—We are paying data as well to these sites. With the ISDN sites we had to basically increase the available bandwidth—which was good to do anyway.

Senator LUNDY—So effectively the billing mechanism is data volume on that IP network.

Mr Vale—We have a fixed price allocation within council, but when we go off net it is individually charged per call.

Senator LUNDY—As far as Telstra's conduct in the market and the infrastructure they have here, are you across what Telstra have got in their exchanges here—for example, the ADSL capability of local exchanges and what technology they actually have in their exchanges here?

Mr Vale—We are abreast of major announcements and those sorts of things; but in terms of the detail I have never been into one of the exchange sites to have a look or to know the details of it.

Senator LUNDY—Are you able to tell me whether or not the local exchanges here—at least some of them—are ADSL enabled?

Mr Vale—I believe there is an ADSL service within Mildura. I heard of announcements in Redcliffs and Irymple, but that is about as far as I know.

Senator LUNDY—The issue of STD calls between here and Ouyen: are you familiar with the arguments of Telstra or others as to why that is the case and what justification there is for STD or long distance rates between here and Ouyen?

Mr Vale—I do not know what their justification is.

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Senator LUNDY—Neither do I. We are still working on that one. I do not know if you have had any negotiations with Telstra about changing that—

Mr Vale—They made an announcement recently to increase the range for the zones, and it is just a couple of kilometres short of Redcliffs. Basically our community stops at Redcliffs and then you have got about 85 kilometres to Ouyen. We just missed out.

Senator LUNDY—That was after the rezoning?

Mr Vale—Yes.

Senator LUNDY—How convenient. I will make a note of that. As far as the existence of Neighborhood Cable and the services they provide to local businesses and local residents, combined with innovations like a VoIP network for local council: are you able to describe a more general social and perhaps economic benefit that those innovations have provided for Mildura and the region? I know it is very difficult to quantify, but has it made a difference? Has it made everyone just a little bit more conscious of technology and what they can make it do for them as businesses or as residents in the area?

Mr Vale—From a resident's perspective, at a personal level I do not live in an area where I am serviced by Neighborhood Cable, but my niece does. She is able to connect up, get pay TV and broadband Internet speeds; and all I am doing is dial-up speeds.

Senator LUNDY—What dial-up speed can you get?

Mr Vale—I can get 56. In terms of the impact, their children are able to do things that we cannot do because of the delays that are involved. There are things like chat, downloaded websites and all sorts of things. It does have a cultural impact for them. For the youth it is a major centre of communication. I am forever telling my daughters to get off the Internet because I want to hop on. It has become an online community for them—which is a bit of a worry as a parent, too, because I would like them to get out and do more sport.

Senator LUNDY—You have got to have a balance.

Mr Vale—You certainly do.

Mr Pearce—The other social benefit that comes from anything along those lines by other organisations is that it does put competition in the marketplace and therefore you do get a better product and a cheaper price in general terms. I think that is the extension of the social benefit.

Senator LUNDY—Thank you. Mr Pearce, you mentioned that you come from the Goulburn-Murray area. In terms of developments there, are you aware of recent events concerning GMTel?

Mr Pearce—Yes, I am, but I left that organisation so it would probably be improper of me to make any further comment.

Senator LUNDY—Okay, I will not ask you questions about GMTel. It is a very interesting scenario.

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Mr Pearce—I would be happy to talk to you off the record later.

Senator LUNDY—Sure. I have just a few more questions about Telstra. Did Telstra have a CountryWide office in Mildura?

Mr Vale—They do now.

Senator LUNDY—When did they set that up?

Mr Vale—A couple of years ago.

Senator LUNDY—Was that after you as a council got involved with—

Mr Vale—It was about the same time.

Senator LUNDY—About the same time?

Mr Vale—It all happened after the tender, actually.

Senator LUNDY—So they started paying you a little more attention once there was a bit of competition in the market?

Mr Vale—I cannot make that connection.

Senator LUNDY—Is that a fair comment, though?

Mr Vale—It is just a coincidence, maybe.

Senator LUNDY—You give them way too much credit! As far as responding to complaints and issues, have you as a council found Telstra responsive generally?

Mr Vale—Yes.

Senator LUNDY—Going to the mobile phone coverage issue, you obviously have some black spots. Are you aware of a strategy or a program to resolve those black spots in mobile coverage?

Mr Vale—One of the frustrations we have is that the Sturt Highway and all of the major highways in Australia are now covered by Vodafone, which is not a Telstra based phone system. I have both CDMA and GSM, so sometimes I get it on one and sometimes I get it on the other. It depends on the handset you have as to whether or not there is a black spot.

Senator MOORE—Sometimes neither.

Mr Vale—Sometimes neither.

Senator LUNDY—Are you as a local council satisfied that those issues are being addressed, albeit perhaps slowly? Have you had any federal funding to help with those problems?

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Mr Vale—We have had some NTN funding for the Mallee Highway, which is west of Ouyen, to put in some CDMA sites down there. That is only happening now. I think one of them went on line just last week. There are certainly some improvements to the network, but they are all focused on the main highways. A lot of the irrigation districts are off the highway, outside the range, and do not receive the service. Then there are some quite expensive alternatives, but they are not cost effective.

CHAIR—Is the Sturt Highway picked up by the Vodafone contract?

Mr Vale—I believe it is.

Senator LUNDY—As far as a general strategy by Telstra to respond to local complaints and faults goes, do you have a lot of faults or problems with the network here?

Mr Vale—No. We have had an outage every now and then maybe, but I do not notice anything unusual compared to, say, five years ago.

Senator LUNDY—So there are no glaring issues, such as an inadequate response time?

Mr Vale—Certainly not from the council's perspective. We have asked to get things fixed and—

Senator LUNDY—Chances are that you would know about it wouldn't you, though, if there was a big problem there?

Mr Vale—We have services in buildings all around the municipality, so if it affects one site it usually affects the other customers in that area as well.

Senator LUNDY—Are you a reasonable point of complaint for local residents if they are having problems with their phones?

Mr Vale—No, we do not tend to get complaints about Telstra. I presume they take them up directly with Telstra. When we go out and do our community surveys, we often hear if there are frustrations and that sort of thing, but that is not a reactive thing; that is just us asking.

Senator LUNDY—My final question is on the voice-over IP network. What are your comments on how it is generally working and the quality of the experience on the VoIP phone?

Mr Vale—At the start, we had a lot of issues with echo. In fact, it was quite a contention organisationally. It required a lot of tuning and, because of the multiple technologies, you would tune one bit but untune another—so there was a lot of balancing to be done. Now that it has settled down, it is actually quite good and it is very difficult to tell whether or not you are on an IP phone. You just cannot tell. The quality between IP to IP internally is excellent. It is only when we went out onto the other network that we had the experience with the echoes. With respect to quality, it is a base from which we can launch into new technologies quite easily. Because it is a shared bandwidth, it is easy to put videophones on the desktop. You just have to increase the bandwidth to cope with it, but that technology is not available commercially at this point—cheaply enough, anyway.

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Senator LUNDY—I heard that the State Revenue Office in Ballarat now have a VoIP network that links them with their office in Melbourne and that is working well.

Mr Vale—The take-up rate is really starting to increase. I think what we have done up here has been a bit of a confidence boost for what has been able to happen or has been a model to say that you can do it not only with fibre.

Senator LUNDY—You have attracted a lot of interest in that regard, haven't you?

Mr Vale—Yes, I have even been approached by overseas magazines and things like that for comment. So we are getting quite a bit of publicity, which is great for Mildura.

Senator LUNDY—Fantastic. It has certainly put you on the map, from a techie point of view. I know you were on the map before for lots of other reasons!

CHAIR—I will go back to the community surveys you mentioned. How often do you do community surveys on issues such as infrastructure needs?

Mr Pearce—It is more of a community consultation process than a survey. We are in the process now of developing our strategic plan for the future, so we have gone around to each of the communities and had meetings, and councillors have actually communicated directly with the community. They are done on an annual basis.

CHAIR—I do not know whether it would be possible, even on notice, to give the committee a flavour of some of the comments you have received on infrastructure and telecommunications needs in this area.

Mr Pearce—It was very much along the lines of what Peter was saying in relation to the lack of mobile coverage in certain areas, particularly when you get off the highways. It was in relation to the lack of Internet speed available in the rural areas, particularly in the farms and in areas where they have business applications and would expect to have the same sort of access as a business in a larger centre. They tend to form around those areas.

Senator TIERNEY—In an article in the *Sunraysia Daily* last year reporting on the set-up that you have adopted, it said:

> Telephone calls between council's offices, spread across the vast north-west Victorian municipality …

I note also that there were about 12 centres. What is the furthest point that this new operation extends to?

Mr Vale—From here we go down to Ouyen, which is 100 kilometres. We have a service centre in Ouyen.

Senator TIERNEY—So that is the furthest point?

Mr Vale—Yes.

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Senator TIERNEY—What opportunities are there for other businesses to piggyback on this service, or is it exclusively an in-house arrangement?

Mr Vale—Part of it is exclusive—namely, the fibre-optic component. Because it is dedicated fibre for us Neighborhood Cable holds the head end of all the gear. There is another component which is sharable and uses their generic cable modem network around Mildura. For example, we connect up a lot of local sites here at depots, family day care centres, the youth centre and those types of places. That is totally sharable and is virtually a private network, security wise, with encryption to protect our traffic, but it is totally open for any other customer to have access to.

Senator TIERNEY—So your library is good?

Mr Vale—Yes, our libraries are being connected at this point. That is where we are using Neighborhood Cable's microwave technology.

Senator TIERNEY—I am just trying to tease out how that works, given that they have set this up for you and obviously they would, I assume, want to generate extra business from those links, and you might too.

Mr Vale—The contract is pretty much for Neighborhood Cable to service us. There is a community benefit component but that is very general.

Mr Pearce—The extension of that is that it is no good Council making a decision as to where they want to market their product. I think that is what the other senator was getting at earlier on. That is not our role. Our role is to put something up and provide something that resolves our issues and perhaps brings some competition in. It is then up to the organisation to take that further into the community to get a return on their investment.

Senator TIERNEY—Are you aware of them doing this? Are they actively out there getting business? I know you mentioned the TV ads, but apart from that. Is it working as an add-on for them?

Mr Vale—They are not totally adding on in the overhead power areas—they pretty much have total coverage—but in the underground areas they are now taking a more economic rational approach in determining their customer connectivity before they actually dig and connect. Economic rationalism has entered into the equation at this point.

Senator TIERNEY—As you indicated, this was a fairly bold step, given the state of the technology and, I suppose, the precedents for doing this. But, since you have done it and it is now up and operating, have any other district areas in Victoria taken it up or look like they will? Are other councils interested in what you are doing?

Mr Vale—The local TAFE office has now set up a voice-over IP network. As for other councils, I think there are some examples in South Australia: the state library and the state parliament. It is starting to expand as the credibility of the commercial quality is becoming more accepted as an alternative. But, like most infrastructure—for instance, you have a PABX and you will want to get your full money's worth out of it before you replace it but it is going to change over time. I do not see it as an option.

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Senator TIERNEY—You are not through a full year with this yet, are you?

Mr Vale—Yes, we have been operating for a year.

Senator TIERNEY—So what does that show in terms of your bottom line after one year?

Mr Vale—Customer service has improved significantly. That is the biggest benefit. We are able to have the public ring anybody and be put to anybody's phone, which before could never happen.

Senator TIERNEY—So what about the dollar bottom line?

Mr Vale—The dollar bottom line is that we are still pretty much within a small percentage benefit.

Senator TIERNEY—But you have had a huge customer benefit?

Mr Vale—Yes, a huge customer benefit.

Senator TIERNEY—The article mentioned customer service improvement, although mainly in terms of these links that you have been talking about. Are there any other customer benefits in having a higher state technology like this? Are you able to do more than you could before? Have you been able to expand services?

Mr Vale—We are looking at setting up a pilot video conference between here and our Ouyen office to ascertain how that type of facility would be used, so not only could you speak with an officer up here in Mildura but you could actually see them as well. That is currently on our books to have a look at. I think that whole area of visual communication is now open to us and it is only an issue of bandwidth. As the products come on line, we believe that will be a growth area.

Senator TIERNEY—You mentioned you still needed Telstra services for some things. Could you just explain why, having set up such a comprehensive system right across your area for your own needs, you still need to use Telstra?

Mr Vale—We chose to connect buildings using the Neighborhood Cable network that also have a PC, because with the one connection we could do both. Normally, we would need to have either a dial-up connection just for that PC—which really does not give satisfactory bandwidth—and a normal telephone is quite cheap on its own, just a single dialling telephone. It is just like a normal residential type call level, and that provides cost effective communication for that site. A lot of our sites are not manned all the time. We have family day care centres where the nurses periodically travel around, so the utilisation rates are not that high. So we made a call as to which ones were put in and which ones were not. It does cost to put in a connection, even if it is a lot cheaper.

Senator TIERNEY—Thank you.

Senator MOORE—I have only a couple of questions. One question goes back to the point of the community consultation. I am interested in how the questions are asked. Do you give some

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guidance about what issues affect you, or do people spontaneously come forward with their comments?

Mr Pearce—Basically, what we have been doing for this particular process is that we are out to create a strategic vision, so you have to keep that in mind. We have actually asked people: what has changed over the last 10 years, good and bad? We then look at what they would like to have changed in the future, good and bad. And then we come down to smaller actions from there into more quantifiable terms. A lot of it is coming out in what has changed or what has not changed over the past 10 years and what they would like to see changing over the next 10 years. So it is very broad guidance as far as that goes as a specific question in relation to how they find telecommunications.

Senator MOORE—There is a specific question?

Mr Pearce—No. I am saying it is a very broad direction as opposed to a specific question along those lines.

Senator MOORE—So how many people got the surveys?

Mr Pearce—No. They were not surveys; it was a consultation process face-to-face.

Senator MOORE—So you invited them in?

Mr Pearce—We invited them in.

Senator MOORE—And you got a good turn out?

Mr Pearce—In each of the sessions we have run—we have run four in our rural areas to date—we have had an average of 25 to 30 people. So, yes, it has been a good response.

Senator MOORE—In your assessment, how seriously was the telecommunication issue viewed by the community?

Mr Pearce—I think there is no doubt that in the rural communities they are concerned about their access to Internet facilities, given the growth in that capacity in the urban areas, and also frustration with mobile phones. That frustration is shared I think by those people who transit to more rural areas—when they go out of a well-serviced area into a less well-serviced area.

Senator MOORE—Are you aware of any other kinds of public forums that have been formed to have these discussions?

Mr Pearce—In relation to telecommunications?

Senator MOORE—Yes.

Mr Pearce—I do not from my knowledge. David or Peter might have some further knowledge.

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Senator MOORE—I am just wondering whether the chambers of commerce or even Telstra themselves were doing this kind of thing. It is the model being used now, to ask people to come in and talk about what concerns them.

Mr Pearce—I cannot comment. I have only been here for a short time, but I would be very surprised if businesses had a problem and they were not talking to their chamber and other areas about it. So it is probably a question better directed to them.

Senator MOORE—The other issue, which Senator Tierney touched on as well, was the issue of other councils and organisations sharing knowledge about what works and what does not work. As a council, you have invested a significant amount of your resources in this new system. Through local government associations at the state and national level, is there any discussion amongst similar councils about whether this was a good thing and how it might translate, that kind of thing?

Mr Pearce—I can talk from previous experience. We certainly went out to tender and we looked at other options that were available and structured a specification around what we had seen in other areas. I am sure that other councils that are going out for similar services are looking at what is best practice in communications and structuring their specifications around that. Do you have anything to add, Peter?

Mr Vale—The IT managers of councils in the north-west region meet every quarter. We have had one up here and we have shown them all—

Senator MOORE—What works and what does not work.

Mr Vale—We cover a number of issues that we all share in common.

Senator MOORE—Has there been interest in the Mildura experience?

Mr Vale—Yes. We have had councils from Melbourne up to have a look. There is a lot of interest out there.

Senator MOORE—That is what I would have thought—that when you as a group have obviously planned and worked on something and made a big investment, people would be looking to see how it is going. I was interested in how that knowledge is shared—instead of always re-creating. Everyone seems to start from scratch instead of sharing knowledge.

CHAIR—I want to ask you a quick question about Telstra Country Wide. Does the council have a formal consultative process with Telstra Country Wide on infrastructure needs or issues coming out of your community consultations?

Mr Pearce—Again, I cannot comment on what has happened in the past. As I said, we met with Telstra yesterday and there was a commitment given by Telstra to meet on a regular basis to talk about those issues.

CHAIR—Was that broader issues, or council specific issues?

Mr Pearce—Broader community issues.

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Senator LUNDY—Have you ever experienced any predatory pricing activities by Telstra in the Mildura area?

Mr Vale—I do not believe I can comment on that, sorry.

Senator LUNDY—It is just that they have been known to suddenly pull a lower price out of the bottom drawer when confronted with competition. I was curious to see whether you had benefited from such an activity.

Mr Vale—No, we took Neighborhood Cable.

Senator LUNDY—No worries. Thanks.

CHAIR—Coming back to Commonwealth initiatives and the design of Networking the Nation and so forth, have there been any discussions with the Commonwealth department of communications about program design or delivery of programs et cetera in this area?

Mr Vale—No, but it would be great to actually make those connections. We have not had it so far.

Senator MOORE—So the answer is no. Mr Clarke, no-one has asked you a question.

Mr Clarke—No, I am very quiet. Peter is into IT—and, if you can understand all the technology, you are doing really well.

Senator MOORE—I have one more question.

CHAIR—For Mr Clarke?

Senator MOORE—No, for everybody. You have just gone through a year with the new system and you have said that customer service has increased greatly. Have customers noticed? Has your client base noticed the improvement in customer service? Have they told you that things are working better?

Mr Vale—No—but I am only the IT guy.

Senator MOORE—But you made a decision to change the system and you have done that. Have your customers noticed that there has been a change and are they happy?

Mr Pearce—There has been an improvement in the customer survey, but I do not have enough knowledge of it to quantify it. If you would like some further information, I would be happy to get back to you on that.

Senator MOORE—Yes, I would like to find out. People are pretty direct in giving feedback to councils when they are not happy, but I was wondering about whether there is a way of measuring whether the customers are happy with the service.

Mr Pearce—Yes, there is. We do annual customer surveys, as does the Office of Local Government on councils' behalf. There are annual customer surveys conducted which measure that sort of information—normally through just customer satisfaction in the general sense.

Senator TCHEN—I have a question for Mr Clarke—thank you, Senator Moore, for reminding me. Mr Clarke, is your area of service business service within the council or business service for the whole community on behalf of the council?

Mr Clarke—Within the council itself.

Senator TCHEN—So you do not deal with business in the community?

Mr Clarke—No.

Senator TCHEN—Has your better connection network improved your working environment and efficiency within the council?

Mr Clarke—I think the biggest change is that all calls coming we can now refer. One thing that was not mentioned is that we have been able to implement our electronic documentation. That has been rolled out and, of course, that is fully accessible across the organisation, whereas before it was all paper based and we sent paper around. Our internal customers have certainly benefited greatly with the voice over IP.

Senator TCHEN—Yes. Mr Vale did say that, in terms of financial returns, there is a marginal improvement, but customer satisfaction is presumably much greater, although it is hard to measure. I wonder whether the improvement within the council's business services is reflected in what Mr Vale was talking about in terms of financial returns.

Mr Clarke—Originally, all our equipment was basically out of date—all the PABXs were out of date—so we had to look for a solution. As we said, we had a customer service person in each of our locations taking the phone calls and transferring them. With the roll-out of technology, we now have electronic documents. That created a lot of paperwork and a lot of transfer of papers. What has happened is that all the electronics—the introduction of voice over IP and everything else—have enabled us to keep our staffing at a reasonable level, rather than having to provide for receptions in each location or chasing paper around. It has certainly helped us maintain our cost levels.

Senator TCHEN—In my earlier life I worked for a council, in a particular department. In our department we knew other departments existed, but they were on a different planet. If someone came to us and needed some service, we would provide the service. Sometimes we could not provide the service and another department would handle it. We would say, 'Go down the street and around the corner, and they will look after you,' and that sort of thing—separate silos. Has the improvement in the communication infrastructure within the council been able to help you overcome that type of barrier?

Mr Clarke—I think it has brought everybody closer. With the roll-out of electronics we are able to talk to each other better. They can access all our information better; we can have more financial control; we are able to roll out a lot of other systems; and they have a central user point that they are able to access. That has certainly made everybody feel more a part of council

rather than being a lot more isolated. We have outlying depots. They have been able to access all our information and we are able to talk to them a lot better. I think it has made a more involved council.

Mr Pearce—In all fairness, the improvements initiative that you are talking about is probably where this will take us now. As Peter said, this gives us a great deal of flexibility as new products, such as visual communications, come online. I think we could then undertake a lot of the activities you were talking about. That is what Peter was saying in relation to visual communication with Ouyen or visual communication between buildings which may be geographically separated. Mildura can certainly overcome a lot of those issues.

CHAIR—I thank the witnesses for the evidence they presented today. It was very helpful and quite exciting.

[10.50 a.m.]

CIRILLO, Mr Cosimo Ilario, Director/Network Engineer, In-House Integrated Systems Support Pty Ltd

CHAIR—Welcome. Thank you for giving us your time here this morning; it is much appreciated. The committee does prefer that all evidence be given in public but, should you at any stage wish to give your evidence, part of your evidence or answers to any specific questions in private, you may ask to do so and the committee will consider that request. You are reminded that evidence given to the committee is protected by parliamentary privilege. I also inform you that the giving of false or misleading information to the committee may constitute a contempt of the Senate. I now invite you to make an opening statement before we move to questions.

Mr Cirillo—Thank you for asking me to appear before this inquiry. Firstly, I would like to give you some background on what we do. In-House Integrated Support Services basically specialise in network management and support, including integration involving network and Internet technologies. We provide our clients with solutions that encompass both well-established and emerging technologies in an attempt to achieve simple, cost-effective and reliable outcomes. An important aspect of what we do is an initial evaluation process to investigate our clients' communication requirements. We primarily use Internet access to meet their requirements.

The sorts of projects that we have undertaken in the past include work I have personally done for the Wentworth Shire Council, which was a wireless network to connect their library services between three centres: Wentworth, Dareton and Buronga. Previously, this was all provided by PSTN infrastructure, which was very unreliable, and ISDN or on-ramp services were very expensive. It was a fairly cost-intensive installation, but the long-term benefit basically meant that there were no running costs from the initial installation.

I also carried out major works for a company called Tandou Ltd, which are a diverse organisation primarily involved in cotton production and horticulture. I implemented one-way and two-way satellite communications with terrestrial back channels to allow communications between their remote locations, which encompass a couple of sites near Menindee and also at Lake Cullulleraine and at Monash in South Australia. I have also carried out some work and been involved with Sunbeam Foods for a substantial period of time and we are in the process of redeveloping a terrestrial based VPN solution for them for their main office here in Irymple and offices that they have in Melbourne and Sydney.

I have been in the industry here in Mildura since 1988. I started as an apprentice and started my own organisation about seven years ago. I have largely been working with these sorts of entities since then. While we work with larger entities, we also work with smaller businesses and individuals.

I would like to make reference to each of the points in your terms of reference and the infrastructure we have currently in Mildura. At the moment, the Mildura CBD is quite well serviced by, as you have heard, Neighborhood Cable and ADSL services. Recently, the ADSL service has been expanded to Irymple and Red Cliffs. It is actually available now to those

communities. Unfortunately, Neighborhood Cable, which was intending to cover those areas, pulled out as its funding not so much dried up but was diverted to other areas. It was also looking at covering other townships not too far away from Mildura.

The only other options for our smaller towns, such as across the river at Wentworth or Buronga, Dareton and Merbein, which are smaller horticultural communities, are basically PSTN or ISDN services. PSTN, as we have all heard, is quite slow. ISDN or on-ramp options are quite expensive to install and to keep running. They are only a half broadband solution: they are better than a PSTN but they are not all the way there.

There are also a number of other private wireless solutions that I have been involved in implementing in the district for private enterprise, and there is a small community group that has set up their own broadband wireless community, if you like. They are sharing Internet access and performing a little bit of community activity that way.

With regard to point (b)—comparable and equitable access to broadband services—as we all know, satellite services are available to basically every Australian citizen. Unfortunately, one-way satellite is not everything it is cracked up to be. It is a good service but it really is suitable only for a single user or entity. Two-way satellite, while providing a much better service—and we have an example of that with Tandou at their Lake Tandou cotton farm—is very expensive to install if you are not in a specially zoned or special circumstances area. I see the issue with equitability as being basically the last mile infrastructure. We have exchanges that are capable of carrying as much data as is required, almost, but it is that last mile solution—getting from the exchange to the end user—that is the problem. There are a number of possibilities as far as that goes.

Point (c) in the terms of reference is current investment patterns to achieve adequacy. With respect to that I would say that we need to put more money into it—whether it be Telstra or other providers. Neighborhood Cable and Telstra have increased their coverage; Neighborhood Cable have done what is economically viable for them to cover here in Mildura. They have passed something like 7,500 homes, but now they are looking at a return on that investment. I think they have invested well over $10 million, which is quite a substantial amount of capital.

The only other comment I have is that, as I have just said with Neighborhood Cable, for a new player to come into the market it does require a huge capital investment. It is very hard for somebody to come along and be competitive with a company like Telstra, basically because they have been running telecommunications in Australia for such a long period of time, and they do have the cable in the ground. It seems illogical to duplicate that cable or to try to dig it up and put new cable in. I think that it should be complementary services.

Point (d), regulatory measures to provide an adequate level of services: I see regulation as part of the solution. Obviously you need to keep people on the straight and narrow, but I think that full utilisation of the infrastructure that we do have is probably the key. I believe we do have a substantial amount of infrastructure that is probably not being utilised to its full potential. That infrastructure could be upgraded to provide new services quite simply, but it would require a great deal of investment.

I do have a concern that opening up Telstra's infrastructure to other providers is fraught with danger. I know from experiences in dealing with other organisations that if you put something in

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place and set it up in a certain way, you know how it works and how it runs, and you keep your finger on the pulse, other people come in and think there are different or better ways of doing it and all that happens is that you both lose in the end and the outcome is not as you would have expected. You lose stability and continuity of service.

One area that I have had comments on from customers and people that I deal with—which is mainly business, as I said—is the range of services that are available. There are basically too many to choose from. People do not know which one to pick or why, so most of our time is spent giving people options and trying to provide them with the correct information or best effort information so that they can make an informed decision as to which way they should go in terms of cost and provision of service.

To that end, I would suggest something like an end user advocate—somebody that they can actually go to and say, 'I'm in this region. I require these services. What's available?' That person should have some technical knowledge obviously, but also be totally independent of any other organisation. It would be absolutely essentially that that person was totally independent.

Access for broadband solutions in rural areas is another issue—just like the two-way satellite installations that did go in for special circumstance areas where there were no other services, such as on-ramp and what not. If we are really serious about getting broadband services out there, then we need to either subsidise a provider to be able to install that equipment and provide it to the rural customer or provide some sort of subsidy to the end user to say, 'You have a business case for using this service.' The provider has to make a certain amount of income from that service to make it viable, otherwise they will just go out of business, which has happened with numerous people. Players have come into the industry and then basically disappeared because they have not been able to make a return on the investment. Obviously, that would have to be closely monitored. It is fraught with danger in itself.

My last point is about other alternative last mile solutions. Wireless technology seems to be the key there, but it also has problems. One of the issues we have is that last mile solutions require some sort of government regulation or you require a licence to be able to use non-public spectrum. Unfortunately, public spectrum is very limited. Some answers may be whether there is another set of spectrum set aside specifically for the broadband provisions of services, whether it is policed in another respect or policed by the ACA and looked at in a different view purely for public use. That is all. Thank you.

CHAIR—That was very interesting. You spoke a bit about spectrum towards the end. I would be interested in your views on the potential for the development of wireless networks as an alternative for rural broadband. Would you see that as an area that could or should be developed further?

Mr Cirillo—I think it could and should be developed further. It is a real option, just like we use mobile phones which are, basically, a wireless solution for telephony. We know that there are issues with that sort of technology, but most of the problems that we have had with telephony or with mobile phones have been and are being overcome. As the technology develops and becomes more advanced, we are finding better ways to deal with the situations that do arise.

I use that as an example, particularly for the experiences I have had with wireless solutions—they have purely been in the public spectrum and they do, from time to time, have interference. There are limits on power outputs, so there are limits on distances you can actually travel. The issue with rural areas is that, with ADSL, it has a limited radius from the exchange that you can provide an ADSL service, depending on cabling, the location and also what sort of cabling is in the ground. A wireless solution could provide that in between step between the ADSL and the two-way satellite solution. As I understand it, the two-way satellite is only for people who cannot access on-ramp services outside a certain 50 kilometre area from an exchange.

Senator LUNDY—Continuing on from that, you are quite right that the extended zones contract is a subsidy to the carrier; Telstra won that one. You mentioned the local community broadband initiative. Are they using public spectrum?

Mr Cirillo—They are using public spectrum as well.

Senator LUNDY—Is it 802.11B standard?

Mr Cirillo—Yes. It is a very small group. There are only half a dozen technically minded young guys, I suppose is the best way to explain it, who have set up this group. Basically, it is just so they can swap information and play online games. It is totally disconnected from the Internet at this stage.

Senator LUNDY—I was going to ask you that—whether or not they had an ISP style connection with the net as well.

Mr Cirillo—Unfortunately, as far as I am aware—and I do not know whether the situation has changed—no, they do not have an ISP that is willing to provide them with Internet access.

Senator LUNDY—Say no more! There are initiatives like that popping up all over the place. Some are connected to the Internet; some are not. The issue is that there is a user community out there that is just doing it for themselves in the environment where there is no commercial solution.

Mr Cirillo—Or where the commercial solution is quite expensive.

Senator LUNDY—That is right. Where do I start? Thank you for your evidence. In terms of your general knowledge about the local PSTN network and Telstra's exchange, did Telstra use pair gain technology extensively in this region?

Mr Cirillo—There are some areas that use pair gain technology, but they are fairly limited. It is quite interesting. There are some situations within or very close to the CBD where there are not actually pairs available and they use microwave telephony technology, but—

Senator LUNDY—Telstra do?

Mr Cirillo—Telstra do, but that is extremely rare.

Senator LUNDY—Is that because they are at capacity in the exchanges?

Mr Cirillo—I would suggest it would be not so much capacity in the exchange as in cable in the ground, basically. They have provided services, which, I suppose, is the most important part of it. These people actually do have services.

Senator LUNDY—Are Telstra providing an ISDN home product now?

Mr Cirillo—Yes.

Senator LUNDY—Do they price it comparative to ADSL?

Mr Cirillo—ADSL is still the most cost-effective means of getting broadband, basically because there is no line rental on top of your normal phone line and, with the on-ramp or ISDN service, there is also an hourly charge along with your Internet charge. I think it is something like 30c a channel if it is a 64K link. That is if you are with Telstra as an Internet service provider.

Senator LUNDY—Are Telstra promoting their ISDN home product lately?

Mr Cirillo—I must admit, I do have a fair bit to do with Telstra Country Wide here in Mildura, and I am well aware of the products that they have. I have also had a great deal to do with Neighborhood Cable. I was involved in Neighborhood Cable at the onset and worked quite closely with them in a lot of respects. Yes, they do promote that product. I mainly deal in the business arena, so most of the businesses that I deal with come to me for advice. I go either to the Neighborhood Cable or Telstra people and ask them what is available in a certain area. Unfortunately, some of my clients are just outside the ADSL area, whether it be because of pair gain technology, insufficient cabling for it or whatever. They just miss out, so they use the on-ramp service, and that provides a very good service for a single user or a very low number of Internet users.

Senator LUNDY—What about the quality of ADSL? I have heard lots of stories about down time on the service. What is it like in this region?

Mr Cirillo—Initially it was pretty bad when it was introduced, and that is being honest. Certainly, in the last six months, it has improved out of sight. Very rarely do I hear of problems with the ADSL service. I have a number of clients that are on ADSL or that I work for that use ADSL product, and now they have very little trouble. If there is a glitch, it is probably for a few minutes. Telstra do have their guarantee of service now, so if it does go out for a while—

Senator LUNDY—People can make money out of it. As far as that ADSL service goes, do you know any details about provisioning of the exchanges? Telstra have a general policy of provisioning their exchanges up to 25 per cent of the line capacity of a given exchange—

Mr Cirillo—I am not too sure in terms of the percentages. Certainly with the guys I have dealt with at Telstra Country Wide, it has usually been on the amount of interest. If they get enough interest in an area, they will then go to whoever they need to speak to to say, 'Look, we need to commission this exchange because we have X number of people.'

What has happened in the past, as I said before, is that they commissioned and installed ADSL in Irymple because there were a number of key businesses there that would take up the

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service. They were waiting for Neighborhood Cable to run cable through those areas, but that unfortunately has not eventuated. Most of them are either in the process of or will be very shortly connecting to the service. But what has also happened is that other players that provide ADSL services have seen that that has been commissioned, and connections from other service providers have already been made in those areas. So, while Telstra itself may not have many services there, other providers have taken advantage of the exchange being commissioned and have provided services to other people.

Senator LUNDY—They have installed their DSLAMs and they are selling ADSL?

Mr Cirillo—Yes. They have basically purchased ports or leased ports from Telstra and away they have gone.

Senator LUNDY—Are there any RIMs in Mildura?

Mr Cirillo—There are; I am not sure of their location. I have been told that there are, yes.

Senator LUNDY—They, of course, stop ADSL as well.

Mr Cirillo—Yes. I may be speaking out of turn here, and I am not 100 per cent sure, but I think the Mildura airport is on a RIM. Tandou Ltd, the company I do a substantial amount of work for, have an office at the airport because they fly their employees to and from different locations. It is the chief means of transport for them. They are unable to get ADSL. They are on a non-ramp service, so that is a limiting factor for them. That exchange, a Mildura south exchange, needs to be upgraded. Again, if that were upgraded to provide ADSL, I would suggest that a number of people would take up that service quite quickly.

Senator LUNDY—They are doing miniMUX trials at the moment—

Mr Cirillo—Yes.

Senator LUNDY—with limited success.

Mr Cirillo—With limited success, yes.

Senator LUNDY—You were involved in setting up the Wentworth Shire Council library microwave network?

Mr Cirillo—Yes. I was commissioned by the company that supplied the equipment, a company called ADE Networks in Melbourne, to do the site evaluations. I followed up with assisting the gentleman who did the installation of the towers and the siting, and then I commissioned the equipment and got that up and running. It was probably a couple of months before we ironed out all the bugs in the system. We had issues with drop-outs of links and whatnot from time to time, depending on atmospheric conditions. That is one of the issues with the technology, because we are only using public spectrum technology.

Senator LUNDY—What spectrum is it at? What is the wavelength?

Mr Cirillo—It is 2.4 gigahertz—similar to your microwave but not the same.

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Senator LUNDY—Don't get cooked!

Mr Cirillo—But it is very low power, and that is the key thing.

Senator LUNDY—What is the bandwidth that you are able to achieve on that network?

Mr Cirillo—Initially, we set it at a floating bandwidth so the system would pick its best bandwidth, which usually hovered around two to 5.5 megabits. It is now hard-set at one megabit. They are providing a one megabit service. It is a shared service, not a dedicated service to each point, so there is one megabit shared across the whole infrastructure. The system itself covers something like 25 kilometres. The technology really is not designed to do that, but we are using fairly high gain and directional antennae to achieve that and fairly high towers to get the line of sight.

Senator LUNDY—What about the connection to the Internet? How does that work on the end of the microwave network?

Mr Cirillo—They are currently evaluating new Internet connectivity, but presently they are using—as far as I am aware—a 64K or 128K ISDN link from the Wentworth Shire Council end. There is Internet provided to the shire and then the shire taps off onto that.

Senator LUNDY—So, even though they have a one megabit network, they are not able to pull one megabit off the Internet?

Mr Cirillo—No, unfortunately.

Senator LUNDY—The committee is also concurrently inquiring into public libraries in the online environment, so I am just taking the opportunity to do a bit of backgrounding. That is very interesting as well.

Senator TIERNEY—You mentioned that there is a lot of infrastructure around that is not being utilised. Could you expand on that as to exactly where this infrastructure is, what it is and how you feel it could be utilised?

Mr Cirillo—Basically, what I mean by that is that there are a lot of exchanges here that could be upgraded to provide ADSL—whether with a little bit of investment or with more investment—but that is based on the return on investment that whoever the provider is going to be could get from the service.

As far as infrastructure goes, to my knowledge there is fibre-optic cable that runs to basically every exchange. So as far as being able to provide services such as ISDN or ADSL it is a matter of installing the right equipment—CMUX or whatever it might be—to provide that ADSL service. I suppose Ouyen would be a key example. The council spoke about Ouyen previously. ADSL services, to my knowledge, could go in there quite quickly, but a substantial investment is required to upgrade the exchange there. It would not only advantage them in terms of broadband access, it would also provide them with on-ramp services and possibly better telephony services.

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Senator TIERNEY—You also mentioned that your spectrum was limited. That surprised me out here. I mean in Sydney and the Hunter Valley I can understand why spectrum is limited, but given the range of uses out here I am just wondering why you are finding that?

Mr Cirillo—I have commissioned probably about six different wireless networks with different organisations, the Wentworth Shire Council being one of them, and you have to be very careful that these networks do not overlap and that you are not broadcasting a signal through another network. The reason I mentioned spectrum is that, if it is provided as a wireless solution long term, it is going to become very cluttered very quickly. Basically we need to think ahead about what we are looking at doing, to make sure that there is an available bit of spectrum there to allow people to utilise it properly.

Senator TIERNEY—But you were saying that yours was low powered.

Mr Cirillo—It is very low powered.

Senator TIERNEY—But you still see long-term problems, even with low power?

Mr Cirillo—To cover the sorts of distances that we are looking at, which would be five kilometres to probably 40 or 50 kilometres, you would need to increase the power output of the units. You could not provide that sort of wireless connectivity over those sorts of distances with the current technology that is available.

Senator TIERNEY—Could you explain how that works in the Wentworth area? You have a huge area and you have about 8,000 people. They are mainly in towns, so that is easy, but then there are the ones out beyond that. If you only have a range of up 50 kilometres and you want to move beyond that, how does that work in terms of the technology?

Mr Cirillo—There will be other exchanges that will be located outside those areas. Obviously, cable can only run a certain distance in the ground. One of the solutions would be to provide some sort of interconnect mechanism from an exchange, put up a tower and provide a wireless solution as required at each of the exchange locations. As an example, we have a town called Merbein, which is not too far away from Mildura: it does not have ADSL; it only provides on-ramp services. There is a little suburb of Merbein called Merbein South, for obvious reasons: it has a much smaller population, but it has its own exchange. The solution I propose is to put up a small wireless tower and, if it was not a Telstra initiative to provide ADSL, it could be another service provider using Telstra's infrastructure.

Senator TIERNEY—If you did that in the Wentworth Shire Council area, which is 26,000 square kilometres, and if at each exchange point you put up a tower what sort of coverage of Wentworth shire would you then get on a 50 kilometre range?

Mr Cirillo—I have not looked at a map, but I would say that you would probably get blanket coverage.

Senator TIERNEY—You would actually be able to cover it in a fairly remote, sparse area?

Mr Cirillo—There would be pretty much blanket coverage in every exchange, but that would be something you would have to sit down and look at. There would be huge pockets, I suppose,

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where there was no population, so there would be no exchange there, and it would be quite a distance to a local exchange there—or there might be a RIM or a miniMUX or something of that nature.

Senator TIERNEY—So what can you do with that wireless technology in Wentworth? If someone is within the 50 kilometre radius, on a farm, describe what they could access, with the right gear?

Mr Cirillo—It would depend on what services were provided on the wireless backbone, if you like. You could provide Internet access. You could provide community services, as we have done with—

Senator TIERNEY—Internet at reasonable speeds?

Mr Cirillo—At reasonable speed. We are looking at a one-megabit shared bandwidth. ADSL is a 1.5-megabit bandwidth, so it is more or less comparable. ADSL is point-to-point, so that connection is for use by one person, whereas the one-megabit system is for use by many people. Obviously there would be problems with a lot of users utilising the infrastructure. That is part of the reason for using different spectrum—increasing power to provide more bandwidth. So, rather than being locked down to a one-megabit stream, you may be able to boost that to a five-megabit stream.

Senator TIERNEY—Neighborhood networks are obviously using a technology that is far more expensive in terms of putting cables in the ground.

Mr Cirillo—Yes.

Senator TIERNEY—But there would be some expense with setting up wireless points and interfacing with the existing exchange technologies.

Mr Cirillo—There certainly would be.

Senator TIERNEY—How do you finance the capital for that in an operation like Wentworth?

Mr Cirillo—As with anything, we would either have to put our hand out to the government—I suppose that would be one option—or look at other service providers and see whether they would be interested in providing those sorts of services. Again, it would come back to return on investment. They would have to have a good business case to roll out this sort of technology in such areas—as I mentioned before, some sort of subsidy to assist them to provide the broadband technology and provide broadband access to these rural communities. It is not a simple task, I must admit. I have only put it up as a possible suggestion as to which way we can pursue it.

Senator TIERNEY—What is Wentworth's reaction to this? Do they look like they are hot to trot on this?

Mr Cirillo—I have not actually spoken to the Wentworth Shire Council. This is something that I have discussed with a number of people. I have discussed it with Neighborhood Cable,

and I have had discussions with the Telstra Country Wide guys, to say, 'What has Telstra got in terms of wireless technology; do they have anything in that sort of area?' There is commercial grade product out there, but it is a matter of doing some research and development and testing how well it works in these sorts of situations.

Senator TIERNEY—Do you have any competitors in this area of the world?

Mr Cirillo—No.

Senator TIERNEY—Are you really the only one out there suggesting wireless solutions?

Mr Cirillo—There is a small community group. They are very strong towards some sort of wireless solution. There was an Internet service provider here that did provide a wireless solution product for Internet access before ADSL became available. They were called Ruralnet, and they have recently been taken over by a company called IINet. They did provide a wireless solution to some businesses around town.

Senator TIERNEY—But your limit is 50 kilometres from an exchange—that is as far as you can go?

Mr Cirillo—It could be, yes. There are some unknowns in there. It depends on the type of equipment that is utilised to perform the task.

Senator TIERNEY—If you wanted to go further, would you have to set up some sort of microwave link?

Mr Cirillo—Yes, you would either have to have some sort of repeater—a tower to tower repeater.

Senator TIERNEY—And then go out from there?

Mr Cirillo—Yes. It is similar to the mobile network in some respects. You would have cells dotted all over the place.

Senator TIERNEY—And not dotted in some places.

Mr Cirillo—Yes, exactly.

Senator MOORE—At the end of your paper you said that you have experienced both the positive and the negative aspects of the telecommunications industry.

Mr Cirillo—Yes.

Senator MOORE—It is a great statement. Can you give me a bit of detail? You have obviously worked in this industry, and you love it.

Mr Cirillo—Yes.

Senator MOORE—When you say the positive and negative aspects of the industry, how do you define those?

Mr Cirillo—The positive aspects include working with an organisation like Neighborhood Cable and seeing the sort of technology and the development that they are rolling out. For example, the technology of the roll-outs that they have done for the council, as you are all probably well aware and as you have said yourselves, is leading edge. Neighborhood Cable were one of the first to take the bit in the teeth, if you like, and go with something that was a bit 'out there'—it is now becoming more commonplace.

Another positive is dealing with an organisation like Telstra Country Wide. I must admit, after working with Telstra on a number of projects, it has become a lot less of a heartache and a headache, because I can contact the local people and sit down with them and say, 'I need a solution to provide this.' I do not look at one or the other as being the ultimate solution. I have to evaluate both and see whether Neighborhood Cable or Telstra can fulfil the requirements.

They are probably the positive aspects of it. The amount of technology we have available here in Mildura itself is astounding for a regional centre. I speak to counterparts in other areas and say, 'We have cable, we have ADSL, we have X,Y,Z services,' and they are just astounded to think that Mildura has those sorts of resources available for business—and a lot of businesses have come to rely on that.

With respect to the negative aspects, probably one of the issues that I find with dealing with any service provider—be it Neighborhood Cable or Telstra—is the runaround you sometimes get when you are trying to find some information. If you do not know the right person to speak to, you can get handballed. Again that has become a lot simpler for me personally because I usually contact the local Telstra Country Wide people and ask, 'Who do I need to speak to about getting this problem resolved?' and they can point me in the right direction—and it is a similar situation with Neighborhood Cable.

I am not at the consumer, end user—the sort of home user, consumer level—end of the scope, I am more at the business end, and I have found that having contacts within those organisations certainly makes a big difference. But there is still frustration in not being able to get services at the locations where they are required, especially, as a key example, at an organisation I deal with called Tandou Ltd and the Mildura airport. Being our airport, it is probably a very important location for Mildura, and yet we cannot have adequate broadband services there without paying huge investment dollars. I know that organisations—for example, when QantasLink had their offices here—pay a huge amount of money for Telstra services, because there is no-one else using those broadband services. There are other options if the technology is upgraded or implemented.

Senator MOORE—Simplistically, the run-around that you get is what your clients pay you to get, rather than them getting it?

Mr Cirillo—Basically, yes.

Senator MOORE—That is why you are in business?

Mr Cirillo—That is exactly right. Basically, we provide a service. We try to make it as painless as possible for our end users—our business partners, if you like—to deal with Telstra, Neighborhood Cable or any provider that they have issues with. We do not only do telecommunications; obviously we do network infrastructure and look at all sorts of different technologies and try to leverage those technologies for the best gain that we can get for their business. So we act as the meat in the sandwich sometimes, I suppose.

Senator MOORE—Do you have a network of people doing the same kind of work you are doing in other places?

Mr Cirillo—Unfortunately, no. There are other people that I know who do similar sorts of tasks, but they do one aspect or another aspect. Mildura has been isolated—it is becoming less isolated, I must admit—for quite a while and we have been left to our own devices to find the best means to carry out tasks. You become a jack of all trades, to a certain extent.

CHAIR—I have a couple of quick questions before I hand over to Senator Chen. In your submission you spoke about the need for an end user advocate to independently assess options: does Telstra Country Wide provide part of that role?

Mr Cirillo—They certainly do that, but while not a lot of people are unaware of them sometimes they are a little bit apprehensive, maybe, to approach Telstra Country Wide—being part of Telstra. Telstra Country Wide has certainly made it a lot easier to speak to Telstra as such, as an entity, but there are still a lot of people who are apprehensive or do not have the technical knowledge to talk on the same level. But I must say—and I am going to sound as if I am giving the guys here a rap—the people I deal with in Telstra Country Wide here talk at any level. They are very easy to talk to, they usually provide you with an adequate solution and, if there is a problem or they cannot provide a service, they will fill you in as to why the service cannot be provided or, if there is a timeframe, when the service could be provided, and those sorts of things. I know they have petitioned to get ADSL installed in a number of additional exchanges around here, but they were not successful just recently. They have done that in consultation with community groups in the area as well. Obviously, from their point of view they would love to see everyone have ADSL, and that would obviously introduce more competition as well, so it would not only be Telstra that would be getting the benefit but other service providers outside the region as well.

CHAIR—Are you familiar with the work of the Bendigo Community Telco?

Mr Cirillo—I only know that they exist. I am not very familiar with their—

CHAIR—I just wonder whether that is a possible model of an end user advocate, in terms of packaging demand?

Mr Cirillo—Quite possibly. From what I understand of the Bendigo model, they gather together a number of users.

CHAIR—A bunch of clients.

Mr Cirillo—And they say, 'Okay, who can provide the best service for these people?' Unfortunately, if those people are not located in similar settings or do not have the same sort of

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infrastructure available, it can be quite difficult. A provider may be able to provide 60, 70 or 80 per cent of the service, but then that 40, 30 or 20 per cent still miss out. We sort of deal on an individual basis: that is the way I foresee it.

CHAIR—With the last mile issue that we have been talking about a fair bit in your evidence today, from a cost effectiveness point of view is ADSL, RIMS, miniMUX or wireless the best answer do you think?

Mr Cirillo—I am going to backtrack here. Two-way satellite is a very straightforward technology to install and get up and running, and it works quite well for a single user. I really think that if most people could afford that technology it would be the answer. It is just the affordability of the actual equipment.

Senator MOORE—How much is it?

Mr Cirillo—I think it is in the vicinity of about $2,500 to $4,000 or something like that—with the equipment, installation and all those sorts of things, whereas on the rebate set-up that they had—

Senator LUNDY—The extended zones contract?

Mr Cirillo—Yes, the extended zones contract.

Senator LUNDY—That was effectively fully subsidised.

Mr Cirillo—Yes, you basically just paid a stock standard installation fee, and the equipment was subsidised and away you went. As far as the cost of satellite, there are no landline costs or any of those sorts of things associated with it, and price wise it is quite competitive with ADSL in terms of cost per megabit download.

Senator LUNDY—Do you have any views about the impact of download caps in the various broadband products in the local market?

Mr Cirillo—It is quite frustrating that they keep shrinking.

Senator LUNDY—It just means people pay more, so the cost effectiveness starts to be undermined with download caps, doesn't it?

Mr Cirillo—That is exactly right. I look at it from a business point of view. I understand why organisations like Telstra or Neighborhood Cable—or any other providers—have to put those download caps in place, because it does cost them money to provide the infrastructure. But it also costs them money to provide the support.

Senator LUNDY—But it does not actually cost them to provide the bits across the pipe. It is really a subsidy, isn't it, of the infrastructure costs rather than a cost relating to the task at hand?

Mr Cirillo—Regarding the bits across the pipe, as you say, most of that data originates from overseas, so it has to come across in some sort of media. It has to be carried in some way, and there is a cost in installing those cables between continents and renting space on those cables.

Whether Telstra use their own infrastructure, I do not know—if Telstra have paid for their cable, if they are still paying it off or what is happening—but the way I look at it is obviously—

Senator MOORE—No-one knows.

Mr Cirillo—No. You have made an investment, and you have to get a return on that investment. I do agree: it is high, and we are paying for it. Then again, I think our speed of service is quite good, for people who do have broadband access. We really cannot complain about the quality of service that we have, although a lot of people do say that it is very poor and it is not always there and those sorts of things. Some information that I have read with regard to overseas experiences suggests that, yes, they pay a much lower rate and, yes, it is free for all, but if they have an issue with their service they can be waiting weeks to get it fixed. So there is that side of it. Okay, they are paying less for it, but they can be without it for a week or two. If it is a business critical, they have to be prepared to pay for it. Most of those experiences are end user experiences. I find that with business, which is the main area that I deal with, problems are pretty readily resolved within 24 or 48 hours, if possible. They are resolved fairly quickly.

Senator TCHEN—What is one-way satellite?

Mr Cirillo—Basically, you receive your data with a dish that looks something like an Austar satellite dish.

Senator TCHEN—How do you send anything back?

Mr Cirillo—The information goes back to the network cooperation centre through a terrestrial line like a modem or an on-ramp service or an ISDN service. I have set up both situations with a back channel just being a modem—a normal dial-up PSDN modem—or with an on-ramp or an ISDN service as the back channel, which is a much faster back channel solution.

Senator TCHEN—So you download—

Mr Cirillo—You download through the set.

Senator TCHEN—That is very fast?

Mr Cirillo—That is very fast, yes. It is 400 kilobits per second.

Senator TCHEN—Then you send it out through the terrestrial network, which can be very slow because it is just an ordinary telephone line?

Mr Cirillo—Yes. If you have a one meg email that you need to send out it will take 10 minutes, whereas if you download that one meg email it will take 10 seconds. The one-way satellite is a good solution for certain types of applications. If you are a farmer looking for weather reports and not sending too much information out, it is a solution. Again, I doubt whether a lot of farmers would have even looked into that sort of thing—whether they would be aware that that product exists.

Senator TCHEN—So it is a partial solution, which in a lot of cases would work quite well?

Mr Cirillo—It could work quite well, if that is the sort of broadband solution that they are after. It is not really a full broadband solution: it is not a two-way solution; it is a one-way solution.

Senator TCHEN—Is it expensive to install?

Mr Cirillo—No, it is fairly straightforward. There is no active equipment as such. There is usually a card or a device that plugs into your computer. The dish is a fairly straightforward one—a couple of hundred dollars worth. I think it is about $500, or something like that, to install. Depending on the length of your contract, it can come down to quite a small amount. There are numerous providers offering the one-way satellite service.

Senator TCHEN—Most of the other questions I wished to ask have already been asked. The area I was particularly interested in relates to community interests aspects, and both Senator Tierney and the chair have asked you about those. I think you were responding to one of the other senators, talking about Telstra, and one of the things you said was that, if there was enough interest then the provider would come in. I think that might be the key point. But before I ask you to expand a little on that could I say, Mr Cirillo, that you are a very unusual witness to come before this committee, because normally people either volunteer their services or, if we know about them, we ask them to come; in your case you were volunteered by one of your clients.

Mr Cirillo—Yes.

Senator TCHEN—That is very unusual.

Mr Cirillo—I was dobbed in.

Senator TCHEN—Obviously you have a very satisfied client. Having listened to you, your expertise and knowledge has been a great help to the committee. I go back to the point I was talking about. Bendigo is a better placed community than Mildura in that a lot of infrastructure is in place already, which can be utilised as long as you can draw out the community interest. I wonder about the same sort of model in a place like Mildura, which is more remote. You also indicated that there is quite a variety of infrastructure in place, but it is not being used. If you think about expanding a bit further beyond the Mildura township—urban areas, where the infrastructure will be in place—to look at the region as a whole, is the same comment applicable elsewhere? If there is enough community interest will providers then be interested. Is that a fair comment?

Mr Cirillo—Certainly. I was speaking to one of the Telstra Country Wide gentlemen a couple of days ago, as Telstra do their roadshows and whatnot, and he indicated to me that there was substantial interest from a very small township out past Ouyen. Basically, they had 15 or 20 people who said, 'If you could provide us with an ADSL or broadband service, we would be on it straightaway.' To my knowledge and from the information that I received, that is basically just an upgrade to the exchange, but you are looking at $40,000 or $50,000 worth of investment required to upgrade that exchange, for 20 users. The return on that will take 10 or 20 years—to recoup those sorts of costs.

Senator LUNDY—Telstra have put on the public record their unwillingness to make those investments, because they cannot build a business case around them. But it took us a long time to get that information. You are absolutely right—they look at those costs and how they get their return, and they choose not to do it, despite the demand.

Mr Cirillo—Yes, but any other provider would do the same thing. Why don't we have other people, like Optus and whatnot, rolling out cable in Mildura? We just do not have it. Fortunately enough, we had somebody like Neighborhood Cable, with the tenacity, I suppose, in one respect, to just go ahead and do it—and somebody who had the support of the shire to roll that—

Senator TCHEN—That is the point, isn't it? Neighborhood Cable have made an in-the-ground investment in Mildura in the order of $10 million, and they are looking for a return in 10, 20 or 30 years, which is the same sort of time span that Telstra should be looking at.

Mr Cirillo—Yes. I suppose the other aspect is to look at the performance of Neighborhood Cable. While what they are doing is very groundbreaking and extremely worthwhile to the local community, you have got to look at it as a business—how they are performing, where their long-term future is, and so on. They are obviously gaining direction now, but for a little while they lost the way they were heading. That is the other aspect: you want these guys to be around for the 10 to 20 years time. You do not want them to invest all this money and then disappear. With Telstra, they have been here for that long already.

Senator TCHEN—I suppose that is another question. Given the quick changes in technology, you have to look at whether, in five years time, the technology that you invest in now will still be viable.

Mr Cirillo—With the sort of technology that Neighborhood Cable has put in place, there is a future growth path for that, because it is a hybrid fibre coaxial network. The basis of Telstra's infrastructure is fibre-optic cable. Basically it is a matter of bolting bigger, better boxes on the end, at the exchange, to give you the fast technology.

Senator LUNDY—Could I follow up a point there. What about the copper in the ground? The pair gain issue is very real; 800,000 customers around Australia are affected by that. So it is not just about bigger, better boxes, it is about the copper in the ground.

Mr Cirillo—That is certainly right. That is why one of the things that I brought up was the wireless last mile solution.

Senator LUNDY—Yes. I want to follow up on that. Is there any business with a commercial wireless offering that would, in your view, suit this market?

Mr Cirillo—The only businesses that I am aware of are city based, and they are offering wireless ISP access. That is basically all they are offering—

Senator LUNDY—What sort of bandwidth?

Mr Cirillo—They are still offering only over the public spectrum, so they are offering radiuses of five kilometres from a transceiver and shared bandwidth of 11 megabits, so if you have 100 users you get—

Senator LUNDY—You get a bit.

Mr Cirillo—Exactly—every now and then.

Senator LUNDY—Is that the Unwired model?

Mr Cirillo—Yes, basically.

Senator LUNDY—There is not anyone in the market that can get the big fat pipe to the exchange and then put it out over a wireless network in a cost-effective, affordable way?

Mr Cirillo—Not that I am aware of; there may be. I would certainly suggest that there would be overseas. I have read information and seen reports about wireless infrastructure being set up in the United States, but I have not experienced it myself so I cannot comment on it.

Senator LUNDY—Drawing on your technology knowledge, what scope and potential is there for the 802.11B standard—given that it uses public spectrum—in creating a commercial product?

Mr Cirillo—802.11 was never designed as a commercial grade product. That is one of the issues. That is why I brought up the issue of additional spectrum or a different section of spectrum that could be used for commercial grade products. Basically at the moment you have to pay if you want to use a commercial grade product in a different spectrum and that device is configured for your particular use. I think they call them wireless local loops, to handle local areas. They are configured at a frequency and you pay for that frequency.

Senator LUNDY—I think Cooma had one. Snowy.net had a 3.4 gigahertz wireless local loop, but Telstra were charging too much for the back-end fibre to Canberra so they went bust.

Mr Cirillo—That is the issue. I suppose there has to be a balance there. You have to get these guys off the ground but also provide some cost-effective means of giving them access to the Internet.

Senator TCHEN—Is there any reason why this wireless last mile cannot utilise the same concept that you are talking about—a one-way satellite link? You should be able to download very quickly using a wireless connection and then feed out whatever, using the existing infrastructure. In most environments that should provide some very good connections.

Mr Cirillo—If I remember correctly, Austar launched a service that was similar to that. They broadcast their pay TV service using wireless technology, microwave technology, and they started introducing a download facility with a back channel similar to the one-way satellite. The issue that they faced was that it was very complicated to set up and operate effectively. That was one of the major issues. It was not so much a technical issue in that the technology did not work; it was an issue of getting the technology to function in a user's computer system.

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Senator TCHEN—It was a software problem.

Mr Cirillo—Software, hardware—a combination of things. It is like opening Pandora's box to some extent. Basically, you design a piece of hardware to carry out a particular task, but you cannot test that hardware in every possible variety of computer system. That is where it fell down. But I think they were trialling that sort of product.

CHAIR—Thank you for your evidence today. It was incredibly informative and I understood at least 70 per cent of it, so I am very pleased with that. Your evidence was very helpful, and I am very pleased that you were dobbed in, because it has helped us enormously in understanding the issues in this area.

[11.46 a.m.]

JARDINE, Mr Robert John, Secretary/Treasurer, Ouyen Incorporated

CHAIR—Welcome. Thank you for making your time available this morning. It is much appreciated. The committee prefers all evidence to be given in public, but should you at any stage wish to give your evidence, part of your evidence or any answers to specific questions in private you may ask to do so and we will consider your request. You are reminded that the evidence given to the committee is protected by parliamentary privilege. I also inform you that the giving of false or misleading evidence to the committee may constitute a contempt of the Senate. I invite you to make an opening statement before we move to questions.

Mr Jardine—I represent the community of Ouyen and probably the surrounding areas as well. My involvement in the community of Ouyen has been fairly strong for the last 20 years, I suppose, and I have been involved in the Internet infrastructure for the last six or seven years. I have used the Internet for both education purposes and normal purposes and I have also provided a lot of advice in relation to Internet services to people in the area of Ouyen. Do you want me to give you a bit of background on that?

CHAIR—Yes.

Mr Jardine—We set up an education centre in Ouyen approximately six years ago through Sunraysia TAFE in Mildura and MADEC, which is a Job Network agency. One of the things that we looked at was being able to provide Internet services for ourselves as an organisation. At that time, there was an Internet service provider in the town with a PoP of eight modems, and we needed to access something that was going to give us a bit of service. With a bit of negotiation, we ended up getting the PoP, with the eight modems, in our building in Ouyen, and we had access to the ISDN line. That provided us with reasonable access.

Senator LUNDY—Could you explain for committee's benefit what a PoP is?

Mr Jardine—It is a point of presence.

Senator LUNDY—It is where the Internet joins the network.

Mr Jardine—Yes. Part of the deal we made with that service provider was that we provided a help desk situation for people in the region. Six years ago about 60 people were using the Internet in the Ouyen region, and that was an area extending out to Murrayville and probably 20 or 30 kilometres south of Ouyen as well. So not a lot of people were using the Internet, but it was at that point that people started to get interested in the Internet, so people were constantly making inquiries about what they should do and how they should do it.

Then, of course, there were the problems associated with the Internet. A lot of the people initially going onto the Internet were based in rural and more remote areas and consequently were facing a lot of problems with drop-outs and slow connection speeds. We did a lot of investigating into why drop-outs occurred. It was mainly looping problems, distance from

exchanges, inadequacy of old technology in those exchanges to deal with data surges and stuff like that. I am not very technical, so you can probably understand 100 per cent of this!

I probably averaged 10 or 20 calls a week from people asking, 'Why are we dropping out so much?' We had people ringing up and saying, 'We've been trying to get onto the Internet and it keeps dropping out. We've had 10 or 20 dial-ups to get something downloaded and we just can't get it on a regular basis.' Internet banking services were severely affected by these drop-outs when they came in. People were trying to dial up all the time and dropping out, and then they got so frustrated with it they just gave it away. That dropping out and the frustration of not being able to get adequate service is where a lot of the problems come from.

We were always looking to improve the services in Ouyen. Our next step was to trial a two-way satellite at our building. It was an interesting trial. Initially I felt that it was very good—we were getting reasonable download speeds. But there was always a problem in peak periods with the upload. The upload speeds were restricted to, I think, 64 kilobits per second, which is fairly low, and that 64 kilobits was shared across a whole network. As you can imagine, at 12 noon a download was no problem, because you were still getting a reasonable download speed, but if you wanted to send or request any information it would just about come to a standstill. So the comment before about the two-way sat was interesting. I do not think it is an option unless they are willing to increase the bandwidth that is available.

Senator LUNDY—With the two-way satellite that was referred to earlier, is that a 400-kilobit download and a 64-kilobit upload?

Mr Jardine—Yes, that is right. I question the 400-kilobit download, because I have never seen anything remotely approaching that, and we do monitor it fairly frequently. If ADSL were available in Ouyen we would be looking at going to ADSL as our next step, simply because it is a much easier service to use and more reliable than the two-way sat.

As for one-way sat, I know a number of farmers who have booked one-way sat into their properties, and the majority of them are not very happy with the service. The main problem is that, if a problem occurs, it can be a week, two weeks or three weeks before they get it rectified, and it is not something that a non-technical person can remedy very easily. They get a bit bamboozled by technology and everything that is associated with it, and they end up going back to the phone line because it is a lot easier. The people who have trialled it are generally in fairly remote areas. One lady I know is probably 50 kilometres south of Ouyen. Her nearest exchange would be a place called Patchewollock, and she is probably 15 or 20 kilometres from that exchange. So there are lots of problems in little places. But there are only one or two users in those areas, so how do you justify the costs associated with providing that service?

I think that the services have improved out of sight in the last few years. The previous speaker talked about Telstra Country Wide. Having that face is so important to rural people—the fact that you do not have to get on the phone, go through a number of button-pushing exercises and hope you get the right person to speak to about a technical problem or ask for some advice. Telstra Country Wide have certainly made my job a lot easier. I sometimes act as a sort of interface between Telstra and the community, because we are so accessible and we were initially seen as being at the forefront of technology in Ouyen, even though I did not know a thing about it. My kids used to provide me with most of the advice, service, technical know-how and everything else associated with the Internet in Ouyen. Telstra Country Wide are providing an

excellent service. They have assisted us numerous times in sorting out problems and providing, say, a satellite for an expo or something we are going to do, so it has been very good.

I also do a lot of Internet training around the country. We have a mobile computer van and we also have a bank of laptops that we take to rural communities. They are very hungry to learn how to use the Internet and how to best gain from using the Internet, but they get very frustrated at not knowing what to do, how to take that next step, how to improve their service and those sorts of questions. From my point of view, I think this is where Telstra fall down rather badly. They do not put in layman's language how to go about getting a new type of service.

There are a couple of new services available—they are not that new; some of them have been around a while—such as IDSN Home and IDSN2 Enhanced Business. When people try to find out about those services, unless they are really technically minded and they want to pursue it to the last degree, they will not follow it up. They just sort of say, 'It's too hard,' and give it away.

Senator LUNDY—What did you think of Mr Cirillo's idea about an end user advocate—someone who is independent who is able to help people weigh up the different attributes of the different types of connectivity?

Mr Jardine—It would be very important. I get frustrated because of the number of questions I get asked.

Senator LUNDY—You are probably playing that role in large part.

Mr Jardine—I have not got a lot of time in some circumstances to talk to people for an extended period about their Internet service provision or what they can do. The other thing is that I am not really up to speed with a lot of the real advances in technology. I try to keep up to speed with it. I rang up Telstra the other day in relation to the IDSN Home service and the cost involved in that. It took me some time to consume that information and work out the cost effectiveness of it, and I was thinking all the time that, if I were a user ringing up from a farming property, I would have an incredible time trying to digest all that information and then deciding which was the best option. If I was faced with that problem, I would just come up with some easy step-by-step instructions: this is what it is going to cost you, this is what the service is going to provide, this is the speed it is going to provide, this is where you can go for assistance. I think Telstra would find that they would get lots more people signing up for those sorts of services.

Senator LUNDY—Have you been able to tap into organisations like the Internet Society of Australia, ISOC-AU?

Mr Jardine—Initially, we were pretty heavily involved in Skills.net, which is a Victorian based organisation to enhance Internet learning. I think we were the second round of projects, so we did a lot of training in those initial years. The training was very difficult, I must admit, because we were going to remote areas with 10 computers and hooking into a 56K modem that was running at about 19K. We were forever waiting for something to happen. When that does occur, I think a lot of people get frustrated because they see how slow the Internet speed is and they turn off from it.

We are being forced into an information age now where everything we do, or everything that we are starting to do, is related to the Internet. All our forms, all our banking, all our taxation dealings are available on the Internet. A farmer now could do an enormous amount of business over the Internet. They check their grain prices, they check the weather, they can sell and buy on the Internet—you name it; it is never ending—but they just cannot get that adequate speed to make it cost effective. I have dealt with farmers for a long time, and if they cannot do something in one minute, they do not want to do it.

Senator LUNDY—The government have said in response to the recent Estens inquiry that they are actually going to regulate a minimum dial-up speed of 19.2 kilobits. It is not a fast speed obviously, but currently there is no obligation on Telstra or anyone else to provide anything faster than 2.4 on a voice service. Do you think 19.2 kilobits is going to be of any use as a standard?

Mr Jardine—I would say it would be virtually no value at all in the long term. I think they should be looking at better solutions because we are supposed to be getting an equal service across the nation. I connect in Ouyen regularly. I am in the centre of town, and at home I get probably an average of 44 kilobits per second.

Senator LUNDY—That is pretty good.

Mr Jardine—It is pretty good, yes. I get people coming into my house and I say, 'I'll just look it up for you in the Internet,' and they cannot believe it because they are connecting at around 19 kilobytes per second or, if they are on a reasonable line, they will get 30 kilobytes per second. But people have lived with that, so they are used to it. If they want to use the Internet, they will live with it, but it is not adequate as far as I am concerned.

We have trialled a number of things. We have looked at one-way sat for training, and it is good, but the amount of time you have to spend setting it up, getting it running and getting it organised for training is just not cost effective. You want to provide the best service in the training environment so people take note of what you are doing and then say, 'Right, this Internet is worth doing; it is there and it is happening.' But, when you try to do it with an inferior service, they turn away straightaway.

Senator LUNDY—Have you ever had any offers from Telstra, in particular, or any other carrier to provide discounted connectivity rates for training or other community service type projects where there is a social objective?

Mr Jardine—As I said before, Telstra Country Wide are always there to provide a link in if we have an expo or another event happening.

Senator LUNDY—Yes, that is what I am thinking of. Do you pay commercial rates for that?

Mr Jardine—A lot of times it is free of charge. It is negotiable with the manager or whoever that may be at the time. They have been very good in that sense, but it would be good if there were some sort of rebate or subsidy for provision of a worthwhile service such as training. It is like a scatter gun approach. You go all over the place—you might be in Murrayville, Patchewollock, Hopetoun, Woomelang or Birchip—and you have to establish the lines, the satellite connection and all of those sorts of things at different locations. It becomes very time

consuming and not very cost effective if you do not have something in place. I looked at getting some funding to put a mobile service in place so I could use it around the region.

Senator LUNDY—Like a mobile two-way satellite or something?

Mr Jardine—Yes. I looked at mobile two-way satellite and, since I have been using it, I do not really think that is the answer. It is just not quick enough. One-way sat would probably be better, if you could hook into a decent back channel.

Senator LUNDY—Do you think there might be some scope for further discussions with Telstra to help mitigate some of those costs?

Mr Jardine—Yes, I think that would be really good. I always get back to the point that people want to use information technology, but they usually fall down on how to go about using it and getting hold of the technology to give them better speed. We need to better inform and train people in the use of information technology. Then, as they do that, they will ask for ISDN services in these more remote exchanges. In one of my recent discussions with Telstra Country Wide, we were talking about how they are now going out and providing upgrades to these exchanges, which you touched on before. If someone says that they want to get say, ISDN Home, they will endeavour to put that in their forward planning to make that happen. I was not aware of that until the other day when I spoke about it, and a lot of people would not be aware of that if they were not making those inquiries.

Senator LUNDY—We managed to get from Telstra information relating to each exchange, such as what type of exchange technology they have used and what types of services each exchange can support. That has been quite useful from this inquiry's perspective in trying to get a handle on what is the current state of the network—

Mr Jardine—Is there a percentage on the number of exchanges that are able to cope with, say, ISDN technology?

Senator LUNDY—They have not been able to provide percentage breakdowns. I have the raw data, so I can cross-reference the name of the exchange with what is in the exchange and therefore at least give people an idea of the limitations to the services or the scope of the services that are able to be provided. We do not have detail on actual provisioning on top of that—such as how many people are connected to that service, what the maximum capacity is and so forth—but it is a start. I think you and the previous witness hit the nail on the head: it is about solving some of the mysteries of the technology, because a little bit of technical knowledge seems to go a long way in terms of understanding why one service is the way it is and what opportunities there are for improving it.

Senator TCHEN—Mr Jardine, you are another witness who was volunteered to us.

Mr Jardine—I did not realise it was like this either; I thought I was just going to talk to a few people.

Senator TCHEN—Thank you for coming along and giving us your view. Do you think it is possible to reduce the frustration or extend the attention span of farmers? If so, how?

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Mr Jardine—They complain the most.

Senator TCHEN—City people, as well, find it frustrating if they link up and the Internet does not work, but I notice that my children are much more tolerant of this sort of thing than I am. If it does not work, they sit down and pound away on the keyboard and it suddenly starts working—but we cannot supply every farmer with a child! I can remember the time when we were still using things such as 64K computers like Sinclair. Compared with today's computers, they were very slow. So my frustration level is probably better than the average farmer—I am not sure—but how do we improve their frustration levels? From what you say, obviously the technology is there but it takes a while to get used to it.

Mr Jardine—You have hit the nail right on the head. A lot of these farmers have entered the technology age only in the last few years. They have not grown up with Atari 64 computers and the sorts of things we thought were fantastic when they first came out. The first computer I bought for my kids was a you-beaut 386, and I thought it was heaven. I just could not believe how good it was. That was only about eight or nine years ago. I think the frustration comes from farmers not being used to having to wait. When kids get on a computer, they are multitasked. They do five different things at the same time—they can download while they are doing something else—whereas a farmer or a business person might just want to use one specific task at a time, and they do not have the ability to swap and change and do things that our kids do because they have grown up with that technology and they understand it better. In order to stop farmers being frustrated, you have to give them more speed.

Senator TCHEN—Either that or teach them to be more tolerant, or to be multitasked. Do you think that the hype that accompanies the Internet has been misleading?

Mr Jardine—Yes, I would agree with that. Four or five years ago I had wonderful concepts of our using the Internet for talking to people, videoconferencing, in a sense—not maximum usage—and all the sorts of things you can use the Internet for: watching movies and all that sort of stuff. But, realistically, you cannot do it unless you have super speed and the money to pay for downloads. A lot of people in our region have been caught out by kids downloading music and all those sorts of things. They have no understanding of what a 40 megabit allowance is, and they get a bill that it is 2,000 megabits or something. I know one lady who had a $5,000 bill because she was not aware of what cable Internet connection could do. She just did not know what would happen if the kids started downloading things. She knows now.

Senator TCHEN—Do you think it would in fact be a better public service if we started telling people that, instead of everyone being entitled to an instant download, it takes a bit of patience?

Mr Jardine—When you look at the services we have in remote areas, you will see that you can generally get the Internet wherever you are nowadays, whereas, if you go to certain countries, you will not get anything like that. Even in America, you cannot get adequate Internet services in a lot of the states. We are probably very lucky in what we have got, but usually it is the same old story: when you have got something, you always want something a little bit better. That is probably a selling point. You have a service, we are improving that service, there are all sorts of new things—new services, new ideas, new technology—coming online, and eventually you will end up with a fairly good service. Maybe it is just a case of selling that to the people that want it.

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Senator TCHEN—As a government senator, I am going to quit while I am ahead.

Mr Jardine—If you can sell it to anyone, you are doing a good job.

CHAIR—I had more of a general question as a community advocate. If you were sitting down writing a report on the network and on what needs to happen to be responsive to the community, what would be your suggestions to us for recommendations that we should put into our report from a community advocacy point of view?

Mr Jardine—Probably the importance of upgrading the infrastructure as far as exchanges and copper wires in the ground are concerned. I would say that, when I was a young boy—that is a while ago—they were taking the wires down from poles and putting them in the ground. It was probably 45 or 50 years ago in a lot of cases—I am not certain of the dates, but it would be 40 years ago—that a lot of that technology was put in place. You were talking before about a break-even point of 20 or 30 years. With getting 40 years out of one service—I must admit, they have been upgrading all the time as well—some of the infrastructure around the rural areas is very, very old and it cannot cope with any improvements. That is where a lot of problems I associate with Internet come from: the fact that the lines that were going out to the more remote farmhouses were 30 or 40 years old.

A lot of that is going to be alleviated because, with our economy and the way farming is, we will probably lose another 20 per cent of farmers in our region in the next five years. Of those 20 per cent of farmers, not a lot of them are living on their properties; they are living in towns. In 20 years time, there might not be farmhouses that are 30 kilometres away from the exchange. They might be just travelling out, or one farmer might own the whole 30,000 acres and be farming on a bigger scale. They are the sort of things that you have got to consider as well to find out what is going to happen long term.

CHAIR—I still remember telephonists who knew everything that was happening in their valley.

Mr Jardine—When one of my good friends at school left Ouyen in 1971, he bought an exchange in Brim. I used to go down there and stay with him, and it was great fun getting on that exchange.

CHAIR—I do not know if we need to know that! Thank you very much for your evidence today. It has been very helpful. My apologies for the lack of information about what you were doing here this morning. It is very good to have information from the community perspective, and that has been very good in terms of what we have also had from a commercial perspective. Thank you for your time this morning; it has been very helpful. That concludes our hearings for this morning, and I thank all of the witnesses for their informative presentations.

Committee adjourned at 12.13 p.m.