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SENATE

ENVIRONMENT, COMMUNICATIONS, INFORMATION
TECHNOLOGY AND THE ARTS REFERENCES COMMITTEE

Reference: Australian telecommunications network

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SENATE
ENVIRONMENT, COMMUNICATIONS, INFORMATION TECHNOLOGY
AND THE ARTS REFERENCES COMMITTEE

Wednesday, 27 November 2002

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

Participating members: Senators Abetz, 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

Senators in attendance: Senators Allison, Lundy, Mackay, 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.

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Committee met at 9.06 a.m.**CALLIONI, Mr Patrick, Chief General Manager, Strategy and Programs, National Office for the Information Economy****KELSO, Mr Douglas Ross, Policy Officer, National Office for the Information Economy****LANSDOWN, Ms Anne-Marie, General Manager, Access Branch, National Office for the Information Economy**

CHAIR—I declare open this public hearing of the Senate Environment, Communications, Information Technology and the Arts References Committee and welcome everybody here today. Today's hearing is the third of what is intended to be a comprehensive national program of hearings into two inquiries referred to the committee by the Senate on 25 June 2002 into the Australian telecommunications network and into the role of the libraries in an online environment. The committee intends, as far as practicable, to conduct the two inquiries together, although it will of course present separate reports to the Senate in due course. Its reasons for doing so are basically twofold. Firstly, while the terms of reference are relatively distinct, there is some element of overlap in terms of the need for the committee to examine the proper role of government in the delivery of online services. Secondly, the terms of reference have particular resonance in regional and remote areas and, for pragmatic reasons, the committee wishes to maximise the value of any hearings it undertakes in such areas by combining the evidence collection process.

That said by way of general introduction, I now welcome our first witnesses, who appear to answer questions regarding the activities of the Broadband Advisory Group. 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 specific questions in private, you may ask to do so and the committee will consider your request. I will only say this once for the benefit of all witnesses: witnesses are reminded that the evidence given to the committee is protected by parliamentary privilege. I have been asked by the Senate Committee of Privileges to remind you that the giving of false or misleading evidence to the committee may constitute a contempt of the Senate. As you are officers of the public sector, you will not be expected to answer questions which invite you to express an opinion on matters of policy and shall be given reasonable opportunity to refer questions to superior officers. I invite you to make an opening statement before we move to questions.

Ms Lansdown—We have not prepared an official opening statement but, by way of introduction, I will tell you a little about the activities of the Broadband Advisory Group. Senator Alston announced the formation of the group in February this year. It is quite a small group of people who can provide expert advice on a range of issues surrounding the issue of broadband. The group has 10 members. I expect that you have a list of the members, but we can give you a list if you do not. They have had four formal meetings during the course of this year and three informal meetings where they have taken the opportunity to canvass issues a little more extensively in private. We have presented them with a number of papers. A number of those are on the public record on NOIE's web site. They include ones that canvass issues in health and education and some summaries of the consultations that we have conducted over the course of this year. Those consultations have included discussions with state and territory governments, a public submission process—and we received 64 public submissions; those are

also on the web site—and two workshops, one in Sydney and one in Melbourne, to discuss issues with targeted stakeholders. What we expect to be the last meeting of the Broadband Advisory Group will be tomorrow, 28 November, in Melbourne.

CHAIR—Is it possible, Ms Lansdown, to give the committee some indication of the kinds of issues that are being brought to you at this stage, or are you not able to do that? Having said that, yesterday we had a submission from the Council on the Ageing, and their submission was effectively what they put to you, so to a large extent what we are inquiring into is also what you are looking more narrowly at. I wonder whether it is possible for you to summarise the issues that are coming through or give us more feel for what you are discovering.

Ms Lansdown—We have basically done a synthesis, I suppose, of the different consultations that we have had. The public submission process threw up quite a disparate range of ideas and views, but in summary there was quite a strong view that it would be helpful if there was a more coordinated approach to the issue of broadband nationally. I think Senator Alston is being quite sympathetic to that view. There were varying views on pricing and availability. I am not sure that there was a consistent view on that. Quite strong views came out from the health and education sectors about concerns in terms of their capacity to deliver broadband services in particular areas, and those are canvassed to some extent in the papers. The discussions with the state and territory governments also varied depending on the particular issues in that state. Obviously larger states with disparate population centres like Queensland and Western Australia raised issues that are canvassed in the Estens report. New South Wales and Victoria obviously have different issues but perhaps have progressed a little more in their thinking about the roll-out of broadband because it is a little simpler when you have a number of large concentrations of population across the state. There is an overview of the sorts of issues that have come out in the course of the consultations.

CHAIR—With regard to health and education, has your group been able to compare some of the incentives, some of the arrangements, that are in place in other countries for providing these services specifically and perhaps with some cost benefit that is not available to other groups? Has that arisen and have you been able to form any views about recommendations on that score?

Ms Lansdown—We are certainly looking at what is being done in other countries, because people have implemented various initiatives and it is worth while looking at the ideas they have had and how those things might be working. It appears it is fairly early days internationally in these sorts of issues. We have actually looked for cost benefit-analysis fairly comprehensively and it has not only been very difficult to find cost-benefit analysis in health and education but the benefits of an accelerated broadband roll-out internationally have been difficult to quantify. Most of the material we have put together seems to actually refer to one particular study in the US done by the Brookings Institute called *The \$500 billion opportunity*. Otherwise, we have had a lot of trouble finding what would be considered credible cost-benefit analysis.

There are small studies being done in Australian states in health and education but they mostly relate to a specific application and the cost-benefit analysis is based on the savings they might have made in reduced travel for patients having to move to centres where they can receive treatment and things like that rather than a cost-benefit analysis that looked at the benefits that might accrue from a network system—rather than simple travel savings, the business process savings that might accrue, the way you might work completely differently if

broadband were implemented throughout their systems. In short, I think that there is a paucity of that sort of information.

CHAIR—Mr Kelso, am I correct in saying that you were a co-author of a paper from RMIT which the committee considered yesterday in Melbourne?

Mr Kelso—I was not aware that a paper from RMIT was considered yesterday, but if you are referring to—

CHAIR—The CIRCIT paper. It was presented by Mr John Murphy, who is another of the authors, and it is entitled—

Mr Kelso—The answer to your question is yes. I was unaware that this was a topic for today.

CHAIR—No, it is not. I am simply saying to you that if you feel that you would like to comment on this paper, then perhaps this is an opportunity to do that. We can combine the two approaches if you wish.

Mr Kelso—I would probably prefer not to. I am sure that Mr Murphy covered the matters yesterday.

Senator MACKAY—First of all, why did NOIE not put in a submission to the inquiry? This is a fairly major inquiry into the state of the network. I am not particularly familiar with NOIE. Some of the questions the chair was asking could have been covered in a submission.

Mr Callioni—NOIE has a strategic role in relation to a range of issues, including broadband. We are not a traditional department of state. We are charged with taking care of issues that are leading edge, largely unexplored. It is not normally within our purview to put in submissions to the Senate about the state of government policy. That is normally left to other arms of the Public Service, like the Department of Communications, Information Technology and the Arts.

Senator MACKAY—Have you been asked by the department to contribute to a submission to this inquiry?

Mr Callioni—I am not aware of that. All I am saying is that it would not normally be our practice to be the principal speaker for government policy in this field. It would be something that the department would be more likely to do. I do not know whether or not the department is preparing a submission.

Senator MACKAY—I appreciate that it is not your principal role; however, this is a major inquiry into the state of the network, and a lot of the evidence we have heard so far goes to the issue of broadband and the state of the network's capacity to deliver it. I am surprised that—

Mr Callioni—I understand why you might be surprised. To clarify: in the division of responsibility assigned by Minister Alston, the department of communications is primarily responsible for anything to do with supply. In other words, the state of the network is their concern. Our primary concerns are about issues of demand—use of the technology and application in, for example, health, education and other fields. It is a division of labour between

the two organisations that has been put in place by the minister. That is how he likes to organise his portfolio. We do not normally comment on matters to do with supply or the state of the network. We may have views, but they are not in any way official views.

Senator MACKAY—I understand that it is not your decision, but is it not odd to look at the issue of broadband delivery without looking at the state of the network in terms of the delivery of broadband? That is critical. Is the network in a sufficient state? What remedial action is required? What problems are being experienced? We have heard a lot about this so far, and we have only just started our hearings. A lot of it has gone to the sort of cutting edge stuff you are talking about. So have you looked at the state of the network?

Mr Callioni—With the Department of Communications, Information Technology and the Arts, the Broadband Advisory Group has looked at those issues, and I expect that in their final report to government they will deal with those issues. But the report is not yet finalised. It is a report to government, and whether the government then decides to make that report public is a matter for government. But certainly they have looked at those issues.

Senator MACKAY—What specifically has the Broadband Advisory Group looked at in terms of the state of the network?

Mr Callioni—The brief for the committee was to look forward about 10 to 15 years. Its concerns are not so much with the state of the network now as with the fact that we need to understand that to get to where we want to be in 10 or 15 years; we have to know what our starting point is.

Senator MACKAY—Precisely.

Mr Callioni—So the Broadband Advisory Group has looked at the state of the network and tried to project what our needs might be in 10 to 15 years, and in its report it will hopefully address how we might get from where we are to where we want to be. So its concern is not so much with how to fix the network now—if it requires fixing—but rather: ‘Where are we now, where do we want to be and how do we get from here to there?’ That is quite a different concern than perhaps, with respect, the kinds of issues you would be concerned, with which are more, I suspect, to do with the present state of the network and the near future—although I might be wrong in making that assumption.

Senator MACKAY—We are attempting to cover the here and now and the future. But the issue I am trying to get at is that there have been a number of contentions from people that the state of the network now is fairly precarious and it will therefore impact in 10 or 15 years if something is not done now in terms of its capacity to deliver broadband. So again I ask the question: what precisely has been looked at by the group in relation to the state of the network?

Mr Callioni—I think it would be a fair summary by way of assessment of the present position to say that the state of the network is such that Australia is, by current standards, fairly well set up in comparison with other OECD countries. We are neither at the top of the tree nor at the bottom. We are somewhere in the middle of the pack. In terms of the state of the telecommunications network, Australia has a first-class telecommunications network. It is one of the best networks in the world. What we do not have, however, is the capacity, if things were

to stay as they are, to move forward to a position where we can meet the needs 10 years from now.

So while ADSL—the product that Telstra and other companies are currently rolling out—is a very good interim solution to Australia’s broadband needs, it will not be an adequate solution for Australia’s broadband needs in 10 to 15 years. So, if we were to stay with ADSL, in 10 years from now we would not be well set up. That is why the government set up this group—to consider what might be following this generation of technology and what the government might need to do to make sure that Australia is well positioned. But, as we stand, I think it would be fair to say that we are not in any way behind other countries. We are roughly in a similar situation to other developed countries in the world, with perhaps the exception of the United States, Korea and some other countries where there are peculiar circumstances that are not really relevant to Australia. Singapore, for example, has broadband connections to just about every household. But it is a city of 3½ million—

Senator MACKAY—A critical mass.

Mr Callioni—within an area smaller than Sydney. So we do not compare ourselves with Singapore for that purpose. But if we compared ourselves with countries like Canada or large European countries like France, Spain or Germany, we are not badly positioned.

Senator MACKAY—How do you know that? In relation to prospective broadband roll-out, we have been told, as I said, that the current state of the network is deteriorating. But your call is, and I appreciate that that is your view—

Mr Callioni—Like you, we have to rely on the advice that we are given.

Senator MACKAY—Who are you getting that advice from—that the state of the network is excellent and world-class?

Mr Callioni—That advice primarily comes from the Department of Communications, Information Technology and the Arts. I guess if you wish to delve into the substance of that advice, they would be the ones who could answer that for you. I am not in a position to do that.

Senator MACKAY—I understand. Do you think that the Broadband Advisory Group should be apprised of the current state of the network, how it is tracking and its capacity over the next 10 years to deliver?

Mr Callioni—I think the group would say that it has been made aware of—

Senator MACKAY—By the department?

Mr Callioni—And by other sources. As Anne-Marie pointed out, we have had 64 submissions from the public, ranging from individuals and large commercial institutions to academic commentators. People like Paul Budde have an individual view of the system. The group has taken a very broad range of views from the public as well as a very broad range of views from the states and territories—all of which are summarised on our web site. It has not just listened to the department; it has taken advice from wherever it has seen fit to do so.

Senator MACKAY—What information do you have from which you have derived the conclusion that there is nothing wrong with the network?

Mr Callioni—I did not say that there was nothing wrong with the network. I said that, in comparison with other developed countries, we are not badly positioned. I have also said that, if in 10 years time the capacity of Australia to have broadband communications relies on ADSL, we would not be well served. But my expectation is that in 10 years time we will not be relying on current technology, that the current network will have been reformed, reshaped and changed in such a way that it will be able to meet Australia's needs.

Senator MACKAY—How does it need to be reformed and changed?

Mr Callioni—As I say, that it is a matter on which the Broadband Advisory Group is reporting to government. I would ask you to rely on the group's report and what the government eventually makes public in terms of understanding what the group's assessment of the situation is. I am not here to pre-empt the group's judgment or what judgment the government might make on it.

Senator MACKAY—That is true, but we are genuinely attempting to find out from NOIE what its view is in relation to broadband and the state of the network. This is a bit circular. I assume you are hampered by the fact that you are preparing a report for government, which is a matter for policy, and that is fair enough. When will the report be produced?

Mr Callioni—The group is considering a draft report tomorrow. If it is satisfied with that report, it will then present it to government.

Senator MACKAY—When will that be? Fairly soon, I would imagine.

Mr Callioni—I would expect so, yes. I can see no reason, if the group is satisfied with the report tomorrow, that there should be any delays in submitting it to government. I would expect the government to respond promptly. Again, I can see no reason for there to be any delay in the government responding to that report.

Senator MACKAY—Is the government planning to make your report public, or is the report just advice to government?

Mr Callioni—At this stage it is advice to government, which the government may or may not decide to make public.

Senator MACKAY—I do not know who is in the Broadband Advisory Group. Can you provide us with a list?

Ms Lansdown—Would you like me to read you the list or just give you the list?

Senator MACKAY—Fling a copy over to us and we can have a look at that.

Mr Callioni—As you can see from the list of people in the group, there is a very broad range of views and interests represented. They are not innocents in a dangerous world; they know

their business. If there is any concern at any point that the group might have been—how shall I put it tactfully—‘snowed’, I think that is most unlikely.

Senator MACKAY—I appreciate that. As a Senate committee, we are attempting to find out information and it is a bit frustrating, but I understand your situation. Are the submissions public?

Ms Lansdown—Yes. They are on the web site.

Mr Callioni—They are all published on our web site, as Anne-Marie and I said, as are the summaries of the consultations with the states.

Ms Lansdown—Not the states.

Mr Callioni—Sorry, not the states and territories.

Senator MACKAY—So the summaries of consultations are not. What is on the web site?

Ms Lansdown—The web site has all the public submissions and a summary of the targeted stakeholder workshops from Sydney and Melbourne. We did not put the state and territory summaries on the web site, partly because they provided us with information that they did not want to make public.

Mr Callioni—There are also two papers on the web site: one focusing on health and one focusing on education. The pertinent views of the states and territories are certainly incorporated in those papers. If you have an interest in seeing, for example, where Australia is at in terms of using broadband in the field of education, the paper on our web site will give you a very quick and thorough background in that.

Senator MACKAY—That is a bit beyond our—

Mr Callioni—I understand that, but if you wish to understand the kind of exploration that the BAG has conducted then those two papers are very good illustrations of the depth to which the group has gone in analysing what is happening around Australia in terms of how services are delivered to citizens.

Senator MACKAY—I am going to make a suggestion, and I do not know whether the committee agrees with this or not. I think it would be useful for the office to talk to the department about providing a short paper to the committee germane to the terms of references of the committee.

Mr Callioni—That is for the committee to decide but, if that is your concern, they would be the best placed organisation to provide that view.

Senator MACKAY—I do not think the department have asked you. They are appearing, but I think it is appropriate for the department to talk to you about you providing a short summary of what you are doing germane and relevant to the terms of reference of the inquiry. The

department may say no or the minister may say no; I am just making that suggestion. I do not think the committee would say no.

Senator TCHEN—I do not have too many questions. I am in a situation where, having followed this broadband debate for some time with some reasonable care, I have achieved a high level of ignorance. If any question I ask you sounds a bit obvious, please forgive me because I am quite confused, particularly about some of the evidence we have received. I know you have circulated a list of members of the advisory group. Can you tell me whether, amongst the stakeholders, you included the representative unions and industry groups.

Ms Lansdown—I think we did; I will just have to check on the list. One of the issues was availability of people, but I think we invited them. Do you mean on the membership of the advisory group?

Senator TCHEN—Yes.

Ms Lansdown—No, we did not.

Senator TCHEN—So, when you talk about industry, basically it is the suppliers?

Ms Lansdown—No. On it are Phil Singleton from the Service Providers Industry Association and Rosemary Sinclair from the Australian Telecommunications Users Group. I think, between them, they cover quite a spectrum.

Senator MACKAY—Are they the closest to consumer reps?

Ms Lansdown—Rosemary is probably the most appropriate of the users or organisations, yes.

Mr Callioni—On the question of users, it is difficult to find a single group that represents the breadth of interest in this field. Obviously, because this group had to be small, we had to select one. The judgment was that Rosemary Sinclair was the most representative and generally best accepted by other consumer groups as someone who could represent their views—although they would all have liked to have been in the group.

CHAIR—There are essentially two consumer groups, aren't there? There is the business group, ATUG, and CTN, the individual consumers group. Neither represents the other's interests, I would have thought.

Mr Callioni—No.

Senator TCHEN—When you answered Senator Mackay's question, you made it quite clear that NOIE's and the Broadband Advisory Group's focus is on analysing and forecasting demands whereas in terms of supply—the other side of the equation—we rely on the advice of the department. From what I have seen, there seem to be two sets of opinions about the existing network, which represents a supply situation, and about looking into the future. One side is, I suppose, the manufacturers, the producers or the suppliers of the network—that is, Telstra and other companies—and the other side is principally represented by the unions. They tend to

present different views. One is saying the network is in good condition, that it can be upgraded and that they will continue to upgrade it. They are saying, 'Don't worry about it; we can meet all the demands.' Is that a fair thumbnail summary?

Mr Callioni—May I clarify. You are talking about the telecommunications network as in telephony?

Senator TCHEN—No, broadband.

Senator MACKAY—It is all the same.

Mr Callioni—Not necessarily the same. A lot of the concerns the unions have had, from reading the newspapers, have been about that aspect of the network that is concerned with access to telephones. There has been no concern as far as I know about the state of the fibre network.

Senator MACKAY—But the issue of the lack of is an issue.

Mr Callioni—But the view was about the quality of the network, not about—

Senator TCHEN—The condition and the quality, yes.

Senator MACKAY—Exactly.

Senator TCHEN—Actually, Mr Callioni, you have jumped ahead of me, because that was my next question.

Mr Callioni—I apologise.

Senator TCHEN—Let us look at, say, 10 years on. Assuming broadband continues to be rolled out, I assume that the view you receive from people like Telstra, the presumed suppliers, will be, 'Everything is fine. We'll be able to meet demands as we go on. We'll be able to upgrade the system.' Is that right?

Mr Callioni—Again, I think the suppliers can best speak for themselves, but my understanding is that the strategic plans of organisations like Telstra would dictate that they are more than capable in their own view to meet future demands; otherwise, they would not be doing their business properly.

Senator TCHEN—Exactly. That is your understanding. The information from the other view, which is generally represented by the communication unions, is, 'No, the system is deteriorating; not only are we unable to be likely to meet the demand but we probably would not be able to meet current demands.' Did you get that understanding as well?

Mr Callioni—As I said, I think the Broadband Advisory Group has not really focused, for example, on whether the telecommunications network might or might not need additional maintenance. That is not a concern because, if you were to look 10 to 15 years from now, the supply of broadband will probably not depend on the current telephone network. As I said, if we

are depending upon ADSL 10 to 15 years from now, we are not going to be well served. We are going to be looking at broadband provided through fibre, satellite and other means. It will be either through fibre or through some wireless means, whether that is satellite or other. We will not be depending primarily on the telephone network.

Senator TCHEN—So, in your scenario, you are looking at a revolutionary change. You are expecting a revolutionary change in the infrastructure.

Mr Callioni—If you were to look at the ambitions and aspirations of other countries with which we would like to compare ourselves, they certainly have a view and their governments are expressing views that are, in a way, revolutionary.

Senator TCHEN—That is fine. I want to get that clear in my mind, because one of the issues of concern to me is that some of the evidence that has been presented to us says that the system is deteriorating and unable to meet demand. The underlying—in fact, the stated—assumption is that the network, as it is, is valuable infrastructure and will be the basis until the foreseeable future.

Mr Callioni—As I said, ADSL is an interim technology. It is a very valuable technology, but it is not a solution for the long term.

Senator TCHEN—Moving on to something quite different, when you are looking in the Broadband Advisory Groups at demand, I take it that you are basically looking at the sort of demand that is related to benefits to the economy.

Mr Callioni—To the economy and society. Not purely economic advantages but, generally speaking, advantages to Australia as a whole, whether they are social, cultural or economic.

Senator TCHEN—It seems to me that every advance in communication methods and communication technology, going back through history, has been marketed or promoted as a means of advancing society in terms of what society needs to move forward, such as economics and so on. But, in reality, every one of them turned out to have a large impact—at least, for quite some time—on the circus side rather than the bread side. From what I have seen, what I understand to be happening with the broadband in use at the moment is, again, mainly in the entertainment area rather than in the productive area.

Mr Callioni—That is not necessarily so. I will answer your question in a different way. There are different patterns of usage in different countries. If you were to look at Korea, most of the usage is gaming and other entertainment type use. If you were to look at Australia and some other Western countries, most people would use the Internet not purely for entertainment purposes but for research, education and securing information. Certainly there is a lot of entertainment, but it is not the main driver in Australia. There is a lot of talk about content driving the telecommunications revolution, but content, as the Broadband Advisory Group and the government would see it, is not purely about entertainment.

Senator TCHEN—But that is important in making cost and benefit analysis, isn't it?

Mr Callioni—Yes.

Senator TCHEN—You have to give some value to the benefit coming out of entertainment. I understand Korea has been held up quite often as an exemplar of how broadband can benefit the community and as an example of excellent broadband use when, as you said, it is largely entertainment.

Mr Callioni—We are looking at a broad range of examples, as Anne-Marie suggested.

Ms Lansdown—Certainly we are aware of research that suggests that most Australian individual users are using it for research and education purposes. Obviously entertainment is in there, but it is not the first stated use of individuals. But the uses in public sector environments for e-government purposes and for health and education are very extensive. The focus of the work that we have been doing has not been as much on individual home owners as on the uses in those sectors.

Mr Callioni—And small business. The expectation is that the market ought to be able to take care of the needs. If one wants broadband or dial-up access to the Internet for entertainment purposes, the market will take care of those needs. But there may be social, economic or strategic development needs that the market may or may not be able to take care of or that it may not be able to take care of as quickly as society might need. That is why the Broadband Advisory Group has focused its attentions more on that latter part of the problem.

CHAIR—It might be instructive to receive the survey that we were given by a libraries group yesterday on the kinds of purposes for which people use the Internet in libraries at least. I think it is the only kind of survey of its sort, and it is quite instructive. Mr Kelso, can I bring you in and ask you whether you would care to give the committee some sort of brief summary of the paper that I understand you presented at Old Parliament House in the communications forum in October about investment strategies and various models for effectively dealing with reform and new technologies.

Mr Kelso—The paper you refer to was presented to the Communications Research Forum in October of this year. It was entitled ‘Community investment in telecommunications infrastructure: benefits and barriers’. It was based upon about 1½ years of research at RMIT University, although right now I happen to be working for the National Office for the Information Economy. Prior to July this year, I was with RMIT University and therefore what I say now is really couched in terms of that research rather than my current work with the National Office for the Information Economy.

The study I undertook examined the proposition that a group of members of the public with common interests and, more than likely, living in a confined geographic area would directly invest in telecommunications infrastructure of a certain type that was installed beyond their private property—in other words, we are talking about cabling out in the streets, and they may use radio as well. Basically, the purpose of this was to serve the community at large. The people who would invest in this infrastructure were primarily interested in their future needs being met on a not-for-profit basis. In other words, they would plough any investment return back into the delivery of new services or otherwise provide a discounted price for the services.

The study noted that the objectives for a typical operation would be more those of a cooperative or a community association. However, there were other instances where local governments and electricity utilities that had some degree of accountability to the community

would also take a lead role. As part of the study, which involved examining a variety of enterprises in Canada, the United States and Sweden, I found that a number are successful or on their way to success. In the United States in particular there are in fact hundreds of community-run telephone companies that have probably been around for 10 to 15 years.

But my interest was more in the creation of next-generation infrastructure beyond that of plain ordinary telephony. In Sweden and some parts of North America, it has been found that these enterprises have in fact been positively encouraged in certain provinces and states or else they have been the result of quite local initiatives, as I said before, as a result of pressure from municipal governments and municipally owned electricity companies. Those two factors seem to be quite common to many of the initiatives.

The study showed that a major hurdle identified was that of financing and funding. If we are to look ahead at next-generation broadband, for example, there have been some very interesting case studies in Canada and the United States where land developers have bundled the cost of fibre to the home services in with house and land prices so that it becomes quite bearable. For example, the incremental cost for infrastructure could be, let us say, \$US2,000 and if you bundled this in with the cost of, say, a \$400,000 block of land and house and paid this off along with the house loan the cost would become insignificant. So they explored alternative ways of funding and financing—in other words, ways that did not require waiting for carriers to decide to roll out in a particular area. It was more of a grassroots initiative.

The study concluded that many of these local initiatives have been built on a philosophical basis such that the community saw more reason in the services being delivered competitively over a common set of infrastructure. In other words, the fibre cable—and I am talking here about fibre to the home—was owned in common in some way. It could be owned by the electricity company, the city council or a cooperative or association, or it could be privately owned. Whether it was privately or publicly owned, a central theme was that that infrastructure would be operated under an open access basis so that it would not be monopolised by any vertically integrated service provider.

In other words, we are more or less getting back to an appreciation, as I concluded from this study, that future fibre to the home infrastructure would be regarded in a way similar to a common roadway, a drain, a water pipe, a sewer or something of that nature such that it would basically be a natural monopoly but that competitive services would be built upon that common infrastructure. I am sorry for taking so long, but that more or less is a summary of the study which was undertaken at RMIT University.

CHAIR—Could I just clarify something regarding the move to fibre. Presumably there was copper wire there beforehand, so is the copper taken out or is the fibre put in in addition to the copper?

Mr Kelso—In a new housing estate, there may not be any copper pairs there at all. In existing areas, the copper pairs are generally used for telephony because that is what they are reasonably good for. But broadband does not use ADSL technology—they have leapfrogged over that—so they use the new optical fibre network purely for high speed broadband. We are talking about much higher speed than you will get out of the current ADSL technology. Where there is copper pair and fibre, the copper pair is normally used for telephony because it is a sunk investment. It is ideal for that purpose, but it is not used for anything else. There are some

instances where it is used for both. One example of that is TransACT in the Australian Capital Territory, where there is a substantial amount of fibre going out to the streets and it is used for both telephony and broadband.

CHAIR—The committee has heard various proposals about how councils might build this into their drainage systems, or at least do it when they are doing the road or the footpath, or it might go along gas pipes. In your study, where did this cable go? Did it follow the copper wires? Were you able to understand that?

Mr Kelso—In most instances, particularly in North America, it went on power poles above the ground. In new housing estates it would be ploughed into a common trench with other utilities. Certainly in Sweden, where everything is underground, it is ploughed into the ground within conduits that are installed at the time the new housing estates are established.

CHAIR—We heard quite a lot in the last hearing about conduits, gel and the need to fill pipes with gas in order to keep the water out. In fact, one of the questions that came up was whether this is what happened in other countries too or whether we were looking at extremely old, irrelevant technology.

Mr Kelso—The conclusion to my study is that exotic means of delivering fibre generally do not work; it turns out to be pretty old-fashioned technology. You either string it up on power poles, as is common in North America, or put it in conduit under the ground. It has to be kept relatively simple, because the work force that is performing this work is relatively unskilled. Operations can be readily replicated, so there really are no high technology solutions for laying it out. It is just a matter of forward planning.

CHAIR—Is it thick black cable, like we have grown to hate in urban areas of Melbourne and Sydney, that has to be so visible?

Mr Kelso—Where it is aerial, yes. Whilst you would be well aware of the ugly nature of aerial cabling, the concern over this in North America is less because the communities tend to appreciate that they are directly benefiting from this. In other words, local governments, kindergartens, schools and community health centres are directly connected to the fibre, which has not been the pattern in this country until now. So, whilst the visual impact of this aerial cabling has been poor, there have been direct beneficiaries of this.

Senator MACKAY—That was very useful. We have all looked at overseas comparisons in relation to industry development or at what has happened in particular states in the US in the ICT area, regional development or whatever. I suppose Ireland and Singapore are the favourites in industry development. One of the problems that we all come up against is the critical mass issue. For example, in a state in the United States you have a lot of people; therefore, there is an easier cost borne by the community. This has certainly been my experience. There is some fantastic stuff happening internationally that we are just not doing in Australia on all kinds of fronts. Did you have a look at the translation, given obviating the difficulty with critical mass?

Mr Kelso—If we look back at the early community owned telephone companies in the United States—and there are, as I said, hundreds and hundreds of them—they found that they were able to establish viable businesses in towns of only a few thousand people. As far as new fibre to the home initiatives, they have not really found any critical mass problems of that

nature. Obviously, in very small communities of hundreds it is not viable. As far as establishing the networks themselves, they do not have a huge critical mass component. It is more in the infrastructure behind the scenes—for example, if pay television is to be delivered or if video on demand is to be delivered. There are significant start-up costs in getting certain services into the network rather than in getting the network itself. In other words, the conclusion of my studies is that it is quite viable for fibre to the home initiatives to be established that serve communities as small as 10,000, 15,000 or 20,000.

Senator MACKAY—Recently, I became aware of a plan that is either complete or on the way to completion to enable everybody in Orkney and Shetland to have access to broadband. You may be aware of that initiative. If you can do it there, considering the weather conditions, I think you can do it anywhere. That actually required a willingness on behalf of the new Scottish government to provide infrastructure assistance and venture capital. In your view, would that be an underlying precondition?

Mr Kelso—Yes. Certainly, the studies showed that the prime hurdle to overcome is financing and funding. Conventional telecommunications carriers will borrow the money in some way—raising it through the share market or whatever—and commit it and then roll out at their own rate. Local communities have difficulty in accessing such money, but in some instances we found that they just went to the bank and said, ‘We will borrow the money and we will pay it back over a period of time,’ or council rates were struck—there were a variety of mechanisms. It really is more of a financing matter. They have to get money up front, and this really identifies the alternative between waiting for a carrier to deliver service and trying to do your own thing. If you buy a service from a carrier, you simply pay the scheduled rate per month; whereas, if the community wants to create its own infrastructure, it has to come up with millions of dollars. There is no alternative to that.

Senator MACKAY—So if there is a willingness on behalf of a level of government or, hopefully, a partnership across three levels and maybe some private sector involvement, you are saying that there needs to be both a political and a community will to do this?

Mr Kelso—Yes, with particular emphasis on local government. That has certainly been the case in North America and Sweden. Local government have a key part to play, mainly because they are trusted and are seen to be impartial and only interested in the infrastructure for the sake of the infrastructure—that is, it is just a pipe. In fact, in some instances they may be barred by legislation from being involved in anything else but the pipe—they install it, maintain it and that is it—and then competitive service provides access to it on an open access basis. It is just a pipe.

Senator MACKAY—Returning to the example of Shetland and Orkney, one of the things they had as an aspiration was that every household on the islands should have access to broadband. One of the reasons for that was the isolation factor. I think we have a lot of parallels in Australia in relation to that. Do you think, in terms of the new economy, that households having access to broadband is a worthwhile aspiration, particularly from a regional development perspective—small business growth et cetera?

Mr Kelso—Yes. However, that would have to be taken into account with other objectives that that community and the local and state governments hold. It would have to be taken into account that there are other priorities.

Senator MACKAY—But a key thing with this Orkney and Shetland example was that everybody should have access to broadband. Because that happened, it has provided a bottom-up boost to economic development in those islands.

Mr Kelso—That particular example is probably a special case, because they would see their situation perhaps as so desperate that this is the make-or-break development that lifts them out of the mire of their present status and launches them into the next millennium.

Senator MACKAY—There are regions of Australia that are in very similar circumstances, unfortunately.

Mr Kelso—It is the experience from my research that certain isolated communities can galvanise action to serve their purposes only; whereas if they wait for the rest of the state or the rest of the country to provide services to them they will wait forever. So they decide that they, and they alone, will serve their needs before anyone else's. This all boils down to access to funding and financing. This is not to say that they may not be subsidised by central government in one way or another, because some of these ventures may not be economically viable in the short term perhaps.

CHAIR—That is the point I want to pursue with you. It seems to me more likely—but this is intuition—that local government would be prepared to look at investment with a longer payback period than, say, a telecommunications company because of the extreme—

Mr Kelso—I think you have identified a very key parameter—in fact, I should have raised this. A carrier would plan for investment to be returned within three or four years. It may have a very high internal rate of return. Some of the initiatives may have a rate of return of 30 per cent; whereas a local government would say that 30 years is the time for recovery, and the cost of capital will be perhaps seven or eight per cent—whatever it is. So it is a different financing arrangement.

CHAIR—Local government is not vulnerable to takeovers and the sort of volatility that is out there in telecommunications carriers. We do not know whether they are going to be there in two years time and so their time frame is shortened in terms of making something viable; would that be fair to say?

Mr Kelso—Yes.

CHAIR—Have you looked at some of the attempts to do this in parts of Australia like Mildura and other relatively large regional centres?

Mr Kelso—I am not aware of any community initiated initiatives providing broadband in Australia to any significant extent.

CHAIR—No, this is a conventional carrier relationship but, nonetheless, supported and fostered by the local community and getting federal funding, too.

Mr Kelso—One very interesting example that was funded out of Networking the Nation was in the Coorong area in far south-eastern South Australia, near the mouth of the Murray River.

The Coorong council obtained funding from the federal government through Networking the Nation. They aligned themselves with a service provider, Agile Communications—and this was quite a key marriage. The service provider bypassed Telstra with radio network back to Adelaide. With Networking the Nation funds, the council provided a radio network linking up the whole of the quite extensive Coorong district, initially just for telephony. Those networks are linked and they are all Internet protocol based networks, so they are quite advanced. Whilst there is no broadband on them right now, the intentions are to move to that in the future. That is an instance where there has been a marriage between local government and private enterprise. They have successfully bypassed the Telstra network and have obtained significantly cheaper telephone calls within the district, the state and Australia. Calls cost a fraction of the normal rate. So that is an example of where federal government funding acted as a trigger. It got them over the hurdle, and they were able to establish the network. That is probably the most successful one that I know of, and it has been going for a number of years.

CHAIR—That is useful. I wonder whether it is always—this a big question—necessary to leapfrog Telstra. Would your model work with Telstra if there were more flexible approaches being taken by Telstra? We heard the suggestion yesterday from Mr John Murphy that we should not be focusing on competition—that it made no sense in Australia’s environment to do so—and that we should accept the natural monopoly of infrastructure provision.

Mr Kelso—That is a difficult question to answer. It probably depends on whether Telstra, with a different mind-set, would be willing to invest in base infrastructure and not try to recoup ongoing revenue flow from services. It really calls for the provision of the base infrastructure from an entity that does not want to pursue a vertically integrated business operation—in other words, to openly allow competitive service providers over that infrastructure.

CHAIR—We will ask Telstra, because if your scenario were to take off here and we had hundreds of small telephone companies all being fostered by their local council, surely that would present a long-term threat to Telstra unless it could find a way of being a partner in that sort of arrangement.

Mr Kelso—Yes. It is interesting that that does not necessarily have to be so. It depends a lot on the business approach of the incumbent telco. In North America, the incumbent telcos do not appear to have been threatened by these local initiatives. Maybe that is because the local initiatives are not that frequent or there are not that many—they are still in relatively small proportion. In North America, the local telcos have cooperated with some of these initiatives. They saw that there was a dollar to be made and said, ‘Our business is to make a dollar and not necessarily to be vertically integrated and provide other value added services.’ It is probably a different mind-set.

CHAIR—We will see how we go.

Senator MACKAY—I think from the US perspective, there was also a federal government push in this direction. I seem to recall that there were incentives provided in terms of certain budgetary line items in various states in the United States. There was a federal government will from an education perspective, apart from anything else, underpinning a lot of this stuff.

Mr Kelso—With regard to the roll-out of telephony services in remote areas and with regard to the provision of Internet access to schools, yes, that was the case. But many of these other

initiatives I have investigated have been purely local, and some have ended up in the courts as a result of opposition from some carriers. In fact, some states in the United States actually prohibit these local initiatives. So the United States is a very mixed bag; it is not necessarily the bastion of free enterprise at all.

Senator MACKAY—No; that is right.

Mr Kelso—These are local initiatives that just happened to grow up from the grassroots rather than having been imposed from up above.

CHAIR—Are you saying that they are there because nobody stopped them?

Mr Kelso—To a large extent, yes.

CHAIR—Thank you very much, Mr Kelso, Ms Lansdown and Mr Callioni. Your evidence was very useful for the committee's deliberations.

[10.17 a.m.]

HAYNE, Mr Ian Davis, Consultant, Regulatory Affairs, Unwired Australia Pty Ltd

SHORE, Mr Peter Leonard, Chief Executive Officer, Unwired Australia Pty Ltd

CHAIR—Welcome. The committee has your submission before it, which we have already published. Are there any alterations or additions you wish to make to that document at this stage?

Mr Hayne—No.

CHAIR—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 specific questions in private you may ask to do so and we will consider your request. I invite you to make a brief opening statement and then we will go to questions.

Mr Shore—Thank you for the opportunity to come along today. I would like to make several points briefly at the start of the discussion. The first one is that Unwired was formed to bid for spectrum in the 3.4 gigahertz band. It was successful in that and it has paid about \$100 million for spectrum. That spectrum became available to us in May this year. We have now done a technical assessment of the options for using that spectrum and we propose to roll out a fixed wireless broadband system in Australia for high-speed Internet access from the first quarter of next year, 2003. Our submission outlines where we see ourselves fitting into the Australian telecommunications industry. I would like to talk a little bit about customers and then what we propose to do and so on.

I think broadband and its availability in the Australian marketplace right now is the hottest topic in the Australian telecommunications industry. On a global basis, Australia is currently at quite a low penetration of broadband: about 300,000 or 400,000 locations, or about five per cent of all households in Australia, have broadband. That compares to dial-up services, which are at a penetration above 50 per cent, which is quite normal by world standards. So we think that Australia is at an inflection point, and as we do our market research, talk to customers and talk to Internet service providers and carriers, we feel that there is a consensus emerging that broadband demand will reach about 1½ million households during the 2005-06 year. However, using current technologies of cable, the pay TV cable, or DSL, somewhere between 30 and 50 per cent of Australians will not be able to get broadband. Some areas are worse than others. Obviously the more rural communities are generally worse off.

There are really three types of wireless broadband services, and they are generally complementary. The first type are the 3G mobile systems, which Hutchison Communications, for example, are currently building in Australia. But they are not really suited to always-on fast Internet services. The second type are fixed wireless access services, and they are the type that we currently have. Our view is that they are really a robust alternative to the Telstra copper pair or local loop system. The third type are called 802.11 or wireless LANs, and our view is that they are effectively a cordless phone type equivalent used to extend coverage once it is taken to a certain point by fixed line services.

Our approach has been to design our system as a wholesale infrastructure provider, and we have been aiming to sell our services via as many retailers—that is telecom companies or Internet service providers such as Telstra, Optus or OzEmail—as is possible. To that extent, Telstra is the dominant provider in the market of high-speed Internet services, and to us it is both a potential customer and a potential competitor. It is a customer in that it can use Unwired to service, if you like, the black holes in its DSL coverage—it could use us to service customers who cannot get DSL. But it is also a competitor in providing DSL services to the rest of industry in competition with us.

So we are particularly concerned about regulation around the provision of these services and the prices and the terms and conditions that will apply to Telstra as the dominant player in the market. Importantly, we would not like to see Telstra's wholesale DSL prices pushed so low by regulation that the ability of a newcomer such as us to invest and make a reasonable return on that investment—enough to attract some investment funds—is diminished by that regulation that pushes Telstra's access prices down. Getting that new infrastructure is, in the long run, probably a key policy goal for governments, because multiple infrastructure competition tends to deliver the best services over a long period of time.

Additionally, we would not particularly like the 802.11 operators—who we think have a real role to play but who largely operate in free spectrum competing with each other for space—to get special privileges when compared to, say, Unwired, which paid \$100 million for its spectrum rights. Finally, there has been a practice in Australia of giving federal funding to local communities and not-for-profit organisations and the health and education sectors. But in many ways this has resulted in some fragmentation and not in any particular nation building capability. We think it may be time to reassess whether some funds could be redirected to projects such as ours, which will provide real value and extend broadband across Australia on a broad-based infrastructure basis. This is particularly the case given that at the moment we are probably in the most difficult time that we have had for at least the last decade for capital markets looking at investing in the telco sector. That completes our opening remarks. We look forward to answering any questions you might have.

CHAIR—Thank you, Mr Shore. This is technically very interesting from my point of view, so I found your submission really useful in understanding the technology and you have expanded on that really well for us. Pay-TV cable currently has its limitations, because it is only in Melbourne, Sydney and Brisbane, essentially. Do you see your system competing with pay TV cable? If so, isn't this yet another duplication of infrastructure that essentially will drive up the cost of providing services?

Mr Shore—Pay TV cable currently goes past about 2.2 million homes, and the Telstra and Optus cables are largely overlapping each other so they cover the same areas. There are approximately 7½ to eight million homes in Australia, so the cable covers about 25 per cent. In areas where the cable passes houses, only a portion—I think it is about 60 per cent—of those actually have lead-ins from the street to the house. Again, the number who are ready to take a broadband connection from the cable is maybe one to 1½ million out of seven million homes.

I have not recently seen any of the cable operators make any announcements about extending the cable past the current roll-out for reasons of expense, environmental issues, tunnelling underground and so on. To put it into perspective, probably 15 to 20 per cent of Australian households can get cable. Where they can get cable, broadband services on cable are perfectly

adequate—I had one myself for a while and it was fine. The difference with wireless technology when providing wireless for a city like Sydney is that, when you design the radio plan effectively to cover the city, you can put customers on anywhere in the city, so you will cover 95 per cent plus of households. But you do not spend money providing service to the cable covered houses unless they demand it because you do not have a fixed cost to cover the cable households. You have a variable cost based on any customer who applies for a service. You install some equipment on the customer's premise, fire up the service and then you are in business. In summary, cable only covers 20 per cent, and where cable exists it is a fine option for providing broadband. We would not be spending money on a house by house basis competing with cable.

CHAIR—I understand. What does your equipment look like? Is what you attach to a house like a little satellite dish?

Mr Shore—It is a flat panel about eight inches square. It is plastic and generally it attaches to the outside of the house, a bit like a TV aerial. It is directionally pointed and connected to it is a cable that runs to a small square black box inside the house, not unlike an ADSL modem or a cable modem. From that there are a number of telephone connections and a connection for the computer to provide the high-speed Internet service.

CHAIR—So does one's house need rewiring entirely for this service or are you linked with what is already inside the house?

Mr Shore—No, not at all. In fact, there are two options. Firstly, there is a pure high-speed Internet service. It is about as complicated as doing a pay TV connection: you come down on the outside of the house, you drill through and the socket is normally installed next to wherever someone has their desk and computer—the connection is no more complicated than that. If you then want to take a telephone service from that, generally you would connect that to the first socket of the person's telephone service, from which any extensions to the house would be naturally used by the new connection as opposed to the old one.

CHAIR—Do you have a transmission tower somewhere?

Mr Shore—Yes. Generally, either the ABC towers, Crown Castle towers or many of the towers that are already in existence for the mobile phone operators. Our coverage would be designed to optimise the coverage layout in a place like Sydney, for example, so that you would get 95 per cent coverage taking into account topography and so on. In Sydney, we would expect 25 towers would give complete coverage. Many of the phone operators in Sydney have 500 or 600 towers.

CHAIR—So yours are a greater distance from the transmission.

Mr Shore—We would piggyback on theirs.

CHAIR—I am impressed to see the table which indicates that you have a lower level of EMR from your system.

Mr Hayne—It is significantly lower than mobile phones.

CHAIR—Indeed.

Mr Hayne—The visual impact of the base station antennas is also very low. They are typically about 0.8 of a metre in height and 0.2 of a metre wide, made basically of an aluminium powder coated material. There would be a small number of those, three or six, on a mast. They have very low wind loading and fairly low visual impact.

CHAIR—And you will co-locate with mobile phone towers.

Mr Hayne—Yes, desirably.

CHAIR—‘Desirably.’ Does that mean you might have difficulty?

Mr Shore—No, I do not think so. Only where we had to do something because there was no suitable tower would we go by ourselves. We have taken the view that the most underinvested area of the Australian marketplace is in the local loop, and that is the only area where we would envisage spending our capital. The rest of the Australian business, whether it is in switching, long-distance transmission, backhaul, towers or billing systems, really is available from multiple sources, and we would basically subcontract those roles in the building of the network.

CHAIR—Would customers expect to have trouble when there is a taller building built next door or to lose connection in storms or whatever? How resilient is this technology?

Mr Shore—There is really no problem in the weather conditions. We are several generations of technology down the track. However, it is generally thought of as near line of sight so, if you are standing in front of a massive brick wall trying to receive a signal from the other side, it is not going to work, but if there is some distance between you and an obstacle, the radio signal tends to bend and you get quite good reception. The whole point about radio planning and finding the right number of towers in Sydney is that, in certain circumstances, you will have multiple towers to look at from a house. If one of them is blocked out, you will get multiple towers—multiple options—and that is how we would get the 95 per cent coverage.

Senator TIERNEY—Could you provide us with some of the flavour of making an investment decision like this? You are in a very high risk area, it has high capital cost, you are in rapidly changing technologies and what you are doing may become redundant in four or five years; maybe it will not. Could you provide us with some background to the way you have made this investment decision, particularly as you are handling the end of the line? They are multiple, of course, across the country.

Mr Shore—I think it is relatively simple. I was saying before that the local loop is the most underinvested part of the Australian network. It generates revenues of—let’s say, for the sake of this discussion—effectively \$7 billion, and it has been a monopoly of Telstra’s since communications began. We took the view a couple of years ago that demand for high-speed Internet services would take off. That view has been validated in the period since then. Australia is coming from a low base, but I think it is starting to accelerate. The Telstra network simply is not in good enough condition, for historical reasons, to be able to provide services to everybody.

Fixed wireless access, globally, is becoming the de facto standard for delivering high-speed Internet and telephone services where the copper local loop in built-up areas is not as good as it

could be. A group of investors got together and, 18 months ago, bid at the auction for the spectrum. The spectrum became available a few months ago, after it was cleared of defence and other uses, and the company is about to roll. You are right; in the current capital markets, the appetite for telecoms investment worldwide is at 20 year lows. In the eyes of the investment community, it represents a relatively risky investment, particularly given the market power and the established position of some of the other players.

Senator TIERNEY—You mentioned that part of the spectrum, which included defence, was cleared. Could you describe what part of the spectrum you actually have, what it was used for before and how much of the spectrum you have?

Mr Shore—I will let my expert here take this question.

Mr Hayne—We are in a part of the spectrum called the 3.5 gigahertz band. The company has acquired two by 32.5 megahertz in that band. Prior to it being released by the Australian Communications Authority in 2000, it was listed in the Australian spectrum plan as being for defence purposes, so I will not make any comment other than that is what it was publicly listed for. It was cleared of those users, specifically so that it could be released to support initiatives like fixed wireless access, because—Dr Horton might like to comment on this later on—I think the ACA understood that releasing spectrum for fixed wireless access was something that the market was looking for.

Senator TIERNEY—Can you give us a sense of the sort of speeds you deliver into the home, compared to the current copper network? If people connect, what can they do?

Mr Shore—We are using a range of products from a company called Airspan, which makes both the base stations and customer premise equipment. Our intention is to have speeds of 256 kilobits a second, 512 kilobits, 1.5 megabits and a two to 10 megabit service. There is a variety of speeds, and there are up to eight telephone services that are combined with those. The two to 10 is clearly an industrial strength, commercial offering or something that we recently did in a schools project in New South Wales for connecting schools. We think that the sweet spot, if you like, in the consumer, the SOHO and the SME market is around 256 or 512. One of the reasons we feel that is so is that, over the last 20 years, the compression of video signals has become so effective that they have gone from requiring 155 megabits to something under 512 kilobits to send a signal picture down the line. We think that, in the consumer, the SOHO and the SME market, 512 is certainly an adequate and attractive offering. That is what we will be doing.

Senator TIERNEY—Are you going to geographically segment the market to those different speeds that you will offer? Can people actually buy the higher speed, regardless of where they are?

Mr Hayne—Network technology is able to be configured so that individual customers can be allocated different amounts of bandwidth as they are set up. We could have a different set of rack charges that apply to different speeds, and the customer would be able to ask for the speed that they required and pay the appropriate price for it. But there would be no geographic segmentation.

Senator TIERNEY—If I can come at geographic segmentation in another way, how do your priorities work for roll-out, given that there are so many end points across the nation?

Mr Shore—This was something that took an awful lot of time to think through, and the answer may not be as pleasing as some people might like. By far the biggest market is in Sydney, and that is where by far the most number of unsatisfied customers are. That is where we will go first. As in any business, the density of customers and the density of demand for a system that needs to be loaded to get an economic return tends to dictate where you go.

However, we are conscious that we have done the financial modelling of at what level it becomes uneconomic to provide it, and we believe that we can go down into certainly the major and then more minor rural environments. We have recently made some offers to community type groups and to a larger telco and said, ‘If you wish to service communities of, for example, fewer than 10,000 people, we would be willing to bundle our spectrum and the equipment and effectively sell that to you, and you can go and do whatever you like in those areas, because we are not going to get there within a reasonable timeframe.’ What does that mean? It means that we are not going to get there for a couple of years because the build and capital required to run the business through the cities and places like Newcastle, Wollongong, the Central Coast and so on is going to consume us for that time. Therefore, we are open to effectively leasing our equipment and spectrum to community groups who might want to have a crack at doing it themselves or, if a telco has an obligation in a certain area and they can use our equipment to provide service more cost effectively than they are doing now, we would be absolutely delighted to provide them with the means to do it.

Senator TIERNEY—Take a town like Coonamble, which is a small town of 5,000 to 10,000 people in western New South Wales. Were any models done for how communities might move in more quickly on this if they wanted to?

Mr Shore—Frankly, we have just begun to do that. We have begun to explore a franchise model almost, where either we provide the equipment and the local running, billing, collection and so on is done by a local group or, as I have said, we simply give access to our spectrum and sell the base stations and the customer premise equipment and say, ‘The size of the market here doesn’t warrant an entity like ours coming in setting up an office and so on but, if you can do it on the back of some other activity, here are the prices for this gear.’

Senator TIERNEY—Do you have that piece of spectrum Australia wide?

Mr Shore—It is not quite Australia wide, but it covers about 95 per cent of the population.

Mr Hayne—There is a map in our submission which shows the geographic coverage of the spectrum that we have. Basically, it does not include the north-west corner, where there are more kangaroos than people.

Senator TIERNEY—You did not bid for that, though?

Mr Hayne—It was not offered. It was not defined by the ACA.

Senator TIERNEY—Do you have the right to franchise out any geographic areas under what you have bought?

Mr Hayne—Yes.

Senator MACKAY—I want to give you the opportunity to comment on the report of the House of Representatives inquiry into wireless technology, which I think was released earlier this month—I have only read the executive summary. Have you had an opportunity to look at it? I notice that the media reports indicated that the committee found that wireless was not the panacea—which is fair enough—but that it was particularly not the panacea with respect to regional communities. In its executive summary, I notice that the House of Representatives committee looked at government providing some specific encouragement to industry—which is a pretty broad statement; I am not quite sure what they meant by that—and the ACA and the ABA establishing a spectrum bureau to examine some of the issues that were raised in the report. I have not read the entire report, but I am interested in your comment on this committee's view that wireless was not the answer, particularly with respect to regional and rural areas.

Mr Shore—I am not familiar with the whole report, but I do not think anybody would contend that wireless is the whole solution to the broadbanding issues facing Australia. What I would say is that, for example, when mobile phones were first introduced they did not reach everywhere and rather than the people who had mobile phone networks saying, 'Look, we're okay. We do go everywhere,' you were better off accepting that there were problem areas. It finally got to the stage where the government put in \$50 million or \$100 million to increase the mobile phone coverage in areas where it was considered to be, I suppose, sufficiently in the national interest to do so.

Right now we do not have broadband coverage for, in our view, 30 to 50 per cent of Australian households. We think there is a big demand and we think it is a really important industrial and social issue. We think that, taken together, the combination of DSL, cable, satellite and the wireless technology that we have will accelerate the penetration. If you do not use wireless technologies like ours, you will simply be left with 300,000 to 400,000 customers in 2005-06 who specifically asked for the service and will not be able to get it.

Senator MACKAY—It may be advantageous for you to apprise us of that because it does involve wireless technology. Having read the executive summary, it seems that they went to an awful lot of effort with pairings and so on. So it might be a good idea to check that out. As I understand it, they said that there is no one solution, which is pretty much what you are saying. As I understand it, this was commissioned by the government—because the government has a majority on that committee—as a result of the minister looking at wireless technology in the United States, which I understand is more pervasive and potentially more advanced than here. My understanding is that they have come down and said, 'Look, it is horses for courses,' in terms of regions, which is pretty much what you are saying: there is a plethora of things available, a basket of goodies and wireless is one of them. Would that be fair, Mr Hayne?

Mr Hayne—My understanding is that the initiative looked at was primarily in the 802.11 space, the wireless local area network technologies. There was a lot of evidence given to the House of Representatives committee about these technologies; they have their proponents. We are a proponent of those technologies as well, but in their right place. We do not believe that the 802.11 family of technologies is a panacea for rural broadband at all. However, it is a great way of extending broadband capability from a fixed wireless access link, such as we can provide, to a local area: a proximity area of a couple of hundred metres to, maybe, a kilometre. It is not the way, though, of extending broadband on a wide-scale basis because it is in unlicensed spectrum and therefore susceptible to all sorts of different types of interference which can interfere

technically with the reception of the signal. So you get into issues of reliability and whether or not the thing will actually work.

That family of technologies is a very neat complement to fixed wireless access because it extends the range of a fixed wireless access link locally. Similarly, fixed wireless access is a way of extending the range of copper and optical fibre networks because they are fixed and we can go around those fixed nodes to serve additional customers. In any network that Unwired might construct, we will need a way of hauling the data back into the telecommunications network. Technologies like optical fibre are a great way of doing that. There are a lot of complementary technologies that work together.

Senator MACKAY—Basically, I think that is the conclusion they came to, but I am not an expert in this area.

Mr Shore—It is often useful to think of our fixed wireless access with \$100 million worth of spectrum as being the equivalent of the Telstra copper network and 802.11 being the equivalent of a cordless phone that wanders for about 30 metres around the end of it in a way that sometimes gets disturbed by the microwave oven or something else. It does not represent a robust network for passing high-speed Internet services because you have to be on the end of a line that somehow is going to pass it back into the Internet if you want to operate. We see it as a sort of a cordless phone equivalent and it is useful for a form of extending the high-speed network but it is not one in its own right.

Senator MACKAY—Would this be what the minister was referring to in relation to wireless transmitters in the United States?

Mr Shore—A lot of the WiFi hotspots are actually 802.11 and they are transmitters. They are in community centres, coffee shops, restaurants, hotels, airports and so on. That is happening here as well, but it is not a wide area high-speed Internet service.

Senator MACKAY—Would the issue be that in the United States you have critical mass and here you do not?

Mr Shore—No, it is not really about that. The area in which these 802.11 services operate is called the ISM band—industrial, scientific and medical band. It is unlicensed, anybody can use it and it is the area in which microwaves and lots of other things operate. All these instruments are always competing for the available space and they interfere with each other. It generally works for somewhere between 30 metres up to 100 metres from a point. If that point is not connected by a high-speed Internet service back into the core network, then you cannot complete your connection.

Senator MACKAY—So why is it regarded as a success in the United States but not applicable here?

Mr Shore—No, it will be successful but only for the very specific reasons for which it is actually designed, regulated and monitored. On the end of one of our particular products we have WiFi built in. To use your house as an example, if you had two teenage kids studying upstairs with computers, we could give you a high-speed Internet connection to your main computer. The two computers upstairs could effectively be on a wireless local area network,

connected and also able to use high-speed Internet—like a cordless phone. But, unless I had the high speed Internet connection to the main computer in the first place you have nowhere to go with these things and they only work in a close area around that point.

Senator MACKAY—I have got it.

Mr Hayne—We have an example of this very architecture in operation in our Sydney office at the moment. We have a fixed wireless access link from the Elan Building in Kings Cross to the office in Castlereagh Street where we have an 802.11 access point that is integrated into the fixed wireless access link. When I travel to Sydney I put my 802.11 card into my laptop computer and I have instant broadband access, firstly over the 802.11 link to our little terminal in the office and then from that terminal back into the core network over the fixed wireless access link.

Senator MACKAY—Essentially the core network is not there in Australia, is that the point?

Mr Shore—That is the point and the point I was making earlier is that, if demand grows to 1½ million customers and 30 per cent of them do not have a means of getting high-speed Internet through the core network—that is the copper cable or the pay TV cable—you have to find another way to service them. Another way is the wireless that we bid for and won the spectrum and are proposing to roll out. That is the position we see for ourselves in the market. Not fighting everybody but complementary to the copper networks of Telstra and the cable networks of Optus, complementary and able to fill all of those gaps in their service areas and possibly to take some of the business in a competitive sense as well.

Senator MACKAY—That brings me to my final question. What you are proposing would require a holistic vision from a federal government perspective, presumably in conjunction with state and local government. A lot of this comes back to the three levels of government working together. I think you made the point in your opening statement that some of the Networking the Nation funding was—I think you used this term—‘fragmented’ and not nation building. Does this again come back to the fact that there is not an overarching vision for where we want the country to go in terms of ICT?

Mr Shore—I think there will always be a sense that the vision has to keep stretching out further and become more holistic. As you move into the future a bit you have to rethink it and so on. Broadband is a big issue; as I said before, I think it is the hottest issue in Australia in the communications area at that moment. There does not appear to me to be a holistic view from federal, state and local governments about how to accelerate the process of giving broadband to the majority of Australians who want it. We are not particularly stopped from spending hundreds of millions of dollars building this stuff, but it is hard because the capital markets are very tough at the moment and raising money is hard. All we were saying is that, if you were going to give \$50 million away to 50 \$1 million projects, it seems to us that that will get you one result: maybe 20 of them will work and five will eventually go on to become something in those towns. But it might be worthwhile to think about whether you might allocate funding in the same way for the mobile base stations—which would build a viable medium-term piece of infrastructure that would satisfy some of the bigger problems in a uniform way—rather than choose 10 different technologies and go about it in a much more fragmented way.

Senator MACKAY—Technologies that you may change 10 years, five years or one year later, or six months later?

Mr Shore—Yes, that is right. In the telco sector the costs of product development and planning, understanding the network, and setting up the initial billing and customer care systems for a network of any sort are large. If you set that system up for a country town, it costs almost as much as if you set it up for Sydney or almost as much as if you set it up for the whole nation. That is the up-front cost of building the systems to run these businesses, so you are better off amortising the cost over a very large number of customers and areas because it gives you a more economic model and a basis for survival.

Senator TCHEN—In your summary statement you said as Unwired plans and deploys its network, you face a number of challenges, most notably the competitive environment. That is understandable. Then you mentioned the dominance of Telstra over the local loop. My understanding is that your service is capable of replacing Telstra's service in the local loop and that your technology is significantly superior to what Telstra offers through their copper wire. So why are you handicapped or challenged by the dominance of Telstra? It is a false dominance, isn't it?

Mr Shore—We did not say that our technology was superior; we said basically that our technology could do the same thing as—

Senator TCHEN—Not more?

Mr Shore—If Telstra has a perfectly clean working copper pair that carries ADSL, for all intents and purposes that is the equivalent of our wireless link carrying voice and data at the same speed. So they are different; one is not necessarily superior to the other. What I was trying to get at is that Telstra is a potential customer because it could buy from us to satisfy a need that it cannot meet given the problems with its local loop. Also, if we were to be very successful in winning customers away from its network for both voice and high-speed data services, it would see that as very threatening. So it has a very powerful position in the Australian marketplace; it has the ability to bundle pay television, mobile services, telephony and Internet in a very powerful way.

If you are a single service provider, quite often it is very difficult to crack open that package of services and sell just one to a customer. Also, as a provider to the rest of the market of wholesale broadband Internet services, it has the ability to look at its competitors and decide on the price and the set of terms and conditions it wants to offer to compete against a newcomer like us. So they have tremendous pricing power, cash flow and ability to compete until other companies run out of the ability to compete. All we are saying is that we want to cooperate with Telstra and we want to help them service customers they cannot currently service, but we think that the regulations around how they price and provide high-speed Internet services, particularly at the wholesale level, should be closely monitored.

Senator TCHEN—You said that Telstra is capable of bundling all their services. Would you describe that bundling as anticompetitive behaviour?

Mr Shore—No, I think it is probably very good marketing. I am a classic customer of that very good marketing: I have multiple mobile phones in the house, I have a couple of telephone

lines, I have pay TV and I have high-speed Internet, and I get it all from Telstra. When I get to the top of the tree having bought all those services, I get a very significant discount. If I come along as Unwired and they try to sell me a single service, then there is the cost to me of breaking the bundle and I lose some of the discounts that apply with escalating product packages. So it is good marketing, but it is tough to compete against.

Senator TCHEN—From your description of your service, you provide a full bundle as well.

Mr Shore—We do not provide pay television and we do not provide mobile services.

Senator TCHEN—Are you capable of providing that?

Mr Shore—No. We are high-speed Internet and we are telephony.

Senator TCHEN—Is it possible to provide mobile through your service?

Mr Hayne—No, it is not a mobile technology.

Mr Shore—We are fixed wireless access; we are the equivalent of the copper pair that goes down the street. We come from a tower to thousands and thousands of homes but only in a fixed link to provide broadband Internet services or telephone—not mobile.

Senator TCHEN—That surprises me because you are really providing a link in the transmission of the signal. You cannot pick up a mobile signal on one end and transmit it at the other end and retransmit?

Mr Shore—No.

Mr Hayne—The radio architecture for mobile systems is very sophisticated to support mobility. One of the reasons that fixed wireless access is a good value proposition for us is that the technology does not have all of those systems to support mobility.

Senator TCHEN—I misunderstood you in that case. The mobile service that Telstra is capable of providing comes from a different network?

Mr Hayne—That is correct.

Senator TCHEN—Why does the dominance of Telstra over the local loop matter? They are bundling services across a number of networks and capabilities.

Mr Shore—Correct. The dominance only matters because you have a company that is tremendously powerful, it has tremendous cash flow, it has a terrific position in the Australian marketplace with a very high percentage of the customers with multiple services bundled into a package with discount rates that apply. To break into that marketplace as a newcomer without a brand, without a reputation and with new technology is always tough—that is all we are implying.

If, for example, Telstra was able to use its market power, for a period of time, to price its services which were equivalent to ours at lower than its cost or at a price which was lower than a commercial return, then it could very much harm our ability to get up, because we would need to match their prices in the marketplace to win customers.

Senator TCHEN—I understand.

Mr Shore—Therefore, I am saying that we need to watch that. I am not saying they are doing it, but we need to watch it.

Senator TCHEN—I have heard evidence in other inquiries which complains that they were doing it. All you have to do is get together with some mobile phone services and the pay-TV service and you will be able to do the same thing, won't you?

Mr Shore—Yes, except there is only one company that owns the pay-TV service.

Senator TCHEN—Yes, but I am just wondering why—

Mr Shore—I agree with you. In principle, we should be able, over time, to bundle products and services and offer a similar package. But that is a little way away for us from where we sit today.

Senator TCHEN—Okay. That brings me to my next point. What you are asking us to do is recommend to the government that they actually set regulations in place to govern this sort of behaviour. But regulations change much more slowly and are put in place much more slowly than changes in market behaviour. So that makes it difficult for me, anyway, to think about the government putting regulations in place to meet a particular perceived difficulty at the moment, whereas that difficulty might very quickly disappear through market mechanisms. Do you understand what I am getting at?

Mr Shore—Yes, but all we were saying was that it is important, from an industry point of view, that we remain vigilant about wholesale pricing practices and so on within the industry, so that we do the very most we can to encourage new investment in new infrastructure. I think it would be a great pity if a company like this, over the next five or 10 years, was not successful in providing an alternative wireless way right across Australia for people to get high-speed Internet services. If it were not, then in 10 years the only way you would get it would be via the copper network or cable.

Senator TCHEN—All right. Let me get to the point about this regulation regarding wholesale pricing. Surely requiring Telstra to lower its wholesale pricing is beneficial to the retail market?

Mr Shore—I think that is only true if the prices are commercially defensible. If Telstra is forced to sell at less than a commercial rate, it means that anyone else trying to come in and invest will have to sell at less than a commercial rate, because they do not have the Telstra volumes. That is a disincentive to invest—therefore, people will not invest and over the long run you will be left with a monopoly in the local loop. That is not an attractive outcome. So we do not believe that it is an attractive policy to force Telstra to wholesale at prices which are lower than its cost.

Senator TCHEN—If that were true, then it would be to Telstra's benefit, since Telstra also operates in the retail market, to actually very happily embrace such a regulation to keep out competition. Is that true?

Mr Shore—No, I think competition would still flourish. If the wholesale price were raised by \$10 right across the board, then retail prices would rise and people would still effectively make the same margins.

Senator TCHEN—But the consumer will have to pay more.

Mr Shore—I do not think anyone is suggesting that the consumer should pay less for something than it actually costs to provide. If you do, you are not going to have companies existing, growing and making new investments in the business. You have to return the costs of running the business.

Senator TCHEN—I would not champion the counter argument, but I am sure other people would. What I am getting at is that you are saying that the regulation over wholesale pricing, when applied, would basically disadvantage other potential wholesalers.

Mr Shore—I am saying exactly that—if Telstra is forced to sell at a price which is less than its cost, unless it is getting commercial return on its investment.

Senator TCHEN—From Telstra's point of view it should be happy to maintain a low wholesale price provided it does not actively disadvantage its balance sheet, because the flow-on benefits are that it can keep wholesale competitors out. But if it reduces to too low then obviously it will cut into profits, because Telstra does not have a monopoly over the retail market.

Mr Shore—That is true.

Senator TCHEN—So Telstra will be trying for a balance as well.

Mr Shore—That is exactly right.

Mr Hayne—One of the points that we made in the submission was that the current approach to regulation over the local loop is underpinned by an expectation that it is a natural monopoly. That is why you have this focus by the ACCC on wholesale pricing and unbundling of the local loop and so on. We believe that the technology that we would introduce into the marketplace alters that fundamental assumption about a natural monopoly in the local loop. We are saying that we do not think the argument about a natural monopoly in the local loop holds anymore, because we are able to do it differently. We can provide very similar services using an entirely different technology base.

Senator TCHEN—But that would be assuming that the ACCC—and I do not know whether the question has ever been put to them—make the assumption that natural monopoly equals the need to reduce the price below commercial level.

Mr Hayne—I agree with you. I am aware, from talking to people within the ACCC, that they are sensitive to this idea about a natural monopoly and the erosion of that assumption. Whether or not that leads to a change in their fundamental approach to their work remains to be seen.

Senator TCHEN—Thank you, Mr Shore and Mr Hayne. That certainly helps me to understand what you are talking about.

CHAIR—On that point, were you supportive of the recent rebalancing that has been agreed?

Mr Shore—In local call charges and line rentals?

CHAIR—Yes.

Mr Shore—Yes. This is a personal view, but I think that it is heading in the right direction and will probably continue a bit further until, effectively, line rental prices and revenues reflect the cost of providing the line, and the local call charges more accurately reflect the cost of providing that. From an outside investor's point of view, the more you get prices reflecting the real cost, the more chance you have of encouraging someone else to invest. While a line rental cost is set at, say, \$12 or \$13 a month, it is extremely difficult to get an outsider to invest, if that is the benchmark they can charge because that is the regulated price in the market. From our point of view, we would like to see line rental charges rise to their real cost to provide.

CHAIR—And this rebalancing affects you and your service?

Mr Shore—Yes.

CHAIR—You provide the transmission and the receiving device on the house and so forth. Where do you link with the Telstra loop and other providers?

Mr Shore—In a voice sense, from the customer's point of view, they avoid it completely until, let us say in a Sydney sense, we pass to a central switching centre. At the central switching centre all of the calls, or the Internet traffic that was destined for someone else, would then pass to the relevant interconnect partner—it could be Telstra, Optus, OzEmail or Telecom New Zealand—where it will then flow into their network.

CHAIR—So that central switching is not yours.

Mr Shore—It is ours. We would provide the infrastructure all the way from the home. We would build that to the tower. We would lease what we call back-haul from the tower to a central switching centre, and there are competitive leasing companies of that back-haul fibre in Sydney. We would establish a switching centre in Sydney and, at that centre, we would hand off to other carriers. Other carriers who were making a phone call to one of our customers would meet us at the switching centre, where we would take the call and take it all the way up to our customer.

CHAIR—You will just have the centre in Sydney? You would not set one up in each—

Mr Shore—Everywhere there is a roll-out, there needs to be effectively a concentration of traffic and a switch or what they call a point of interconnect. If we did it in Newcastle, there would be one there, and Adelaide or wherever.

CHAIR—Will you need to negotiate with Telstra on that switching bit of it?

Mr Shore—Yes, absolutely.

CHAIR—Is there an issue regarding the price of access to it or not?

Mr Shore—Not really, no. It is pretty well established in the marketplace and that bit also is relatively heavily regulated.

CHAIR—Thank you for coming today. It has been very useful to the committee.

[11.17 a.m.]

CUTLER, Dr Terrence Austin, Adviser to Board, Comindico Pty Ltd

FORMAN, Mr David, Director, Corporate Affairs and Regulatory, Comindico Pty Ltd

CHAIR—I welcome representatives of Comindico. The committee has Comindico's two submissions before it, which we have already published. Would you like to make any alterations or additions to that document at this stage?

Mr Forman—No.

CHAIR—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 specific questions in private, you may ask to do so and the committee will consider your request. I now invite you to make an opening statement before we move to questions.

Mr Forman—I would like to thank the committee for the opportunity to present here today. I would like to make some comments that go to some of the issues that we raise in our two submissions, particularly to the supplementary submission. It is Comindico's belief that the Australian telecommunications marketplace today is fundamentally structurally anticompetitive. We believe that this, rather than any technological or infrastructure failure issues, is the root cause of the disadvantage that is experienced by many consumers. The regulatory environment is designed to manage behaviour in a competitive marketplace. Unfortunately, while the communications market environment is marked by a set of commercial relationships, that does not mean that there is a contestable market. I would like to provide a few examples of how we see that playing out.

First is the cost to Comindico of linking our Tasmanian interconnection points to the mainland via Telstra's backbone network, which is completely out of proportion to the cost in other parts of the network. In a pricing package that Telstra recently presented to Comindico—which covers 12 Australia wide routes in the locations of Sydney, Canberra, Wollongong, Perth, Adelaide, Geelong, Melbourne, Newcastle, Southport, Brisbane and the routes to Hobart and Launceston in Tasmania—the two Tasmanian links alone represented more than 30 per cent of the total package cost. Furthermore, they represented only eight per cent of the total capacity that was provided in that package. When Comindico suggested to Telstra that it could not charge such a premium just because it had a monopoly over connectivity in Tasmania, the reaction in effect was, 'Why wouldn't we?'

Situations like that place Comindico in a difficult position. Does it subsidise Tasmanian end users by increasing the cost to other consumers across those links, does it make Tasmanians pay more for the same services as other Australians or does it just not offer a service to Tasmania—which would have the effect of reducing opportunities for downstream competition in that state? Another example is that Telstra has an effective monopoly over similar infrastructure that Comindico needs to link its exchanges in regional areas using ATM connections supplied by Telstra—there is no other supplier to a lot of our interconnection points. Telstra's unreliability is now Comindico's biggest problem in delivering reliable services to the regions. The failures in

Telstra's regional ATM network have been trending up for several months. In recent months, 70 per cent of Comindico's network unavailability has been attributed to failures in Telstra's network.

To our customers, of course, the fact that it is Telstra's failure is irrelevant. Their perception is that Comindico is experiencing network problems. We are experiencing this at the same time as Telstra is boasting in fora such as the Estens inquiry that its regional performance is improving. Overall, the reliability and performance of the Comindico network is still high, but the fact that such a significant percentage of the problems on our network is beyond Comindico's control, and that the situation is becoming worse, demonstrates how easily Telstra can make competitors hostage to its own performance.

Even in the face of clear indications—such as the important legislation that is presently before the parliament—that policy makers are committed to increasing and strengthening competition, Telstra is seemingly intent on extending the market power that it gains from its vertical integration. For example, Telstra has made it very clear to the market that, although it will allow other pay TV operators to use the Foxtel cable, it will not allow telecommunications competitors to offer Internet or high-speed data services via that cable infrastructure. In effect, it plans to lock up that communications gateway to the consumer and further suffocate the opportunity for competition in the market.

Comindico believe that this will be the most important regulatory issue in the coming 12 months, and we intend to use whatever regulatory and legislative mechanisms are available to resist Telstra's attempts to monopolise the emerging broadband access market. After years of fighting for fair access via the PSDN network, it would be a disastrous outcome for Telstra to have that kind of control over the cable network. It is particularly important at a time when technologies are becoming available and getting deployed across the world and in Australia that enable voice to be offered through these channels. Telstra's control over access to the consumer via the traditional telephone networks is the foundation of its vertical market dominance. It must not be allowed to leverage this position into control over access technologies of the future.

In the light of those types of experiences, Comindico believe that it is timely for the fundamental dynamics of the regulatory market to be reconsidered in an effort to give effect to the stated policy ambition of a fully competitive national communications market. We believe that only a fresh approach to the regulatory regime offers a hope of shifting Telstra's mindset and reinvigorating the market. We believe that can be achieved through the addition to the Trade Practices Act of the new 'last resort' remedy we speak about in our submission—the ability of the ACCC to apply to the Federal Court to order a company to divest itself of certain assets if it believes that a structural response is the only viable response to persistent anticompetitive behaviour.

This remedy would be equivalent to the power the ACCC has to order the divestiture of assets in the case of a merger and equivalent to a remedy that is available to the FTC in the US. The FTC used that, of course, in the case of AT and T, and I think it is accepted that a lot of the growth and investment that has been seen in the US in the telecommunications industry is a consequence of the different levels of competition that they enjoy relative to us. Our view is that the Australian telecommunications industry clearly faces a situation where the regulator needs at least that structural remedy in its armoury to deal with anticompetitive behaviour. The important thing is that that kind of remedy be forward looking, to the extent that all market participants

know that the intent of legislation is to give the regulator the power to respond to systemic anticompetitive behaviour by acting to restructure markets and then withdrawing.

I will stop there and let you ask questions. I know that I have thrown a few things out there but, in effect, we are of the view that the competitive environment is the fundamental issue. The absence of infrastructure or technological shortages will flow more clearly from a more competitive marketplace.

CHAIR—Dr Cutler, did you wish to say anything?

Dr Cutler—No.

CHAIR—Your submission talks at great length about your switching technology. Could you tell the committee a bit about it. Is it home-grown technology? In what way is it better than existing technology?

Dr Cutler—I think you have homed in on the point that distinguishes Comindico as an innovative new network roll-out in Australia. It is really the first nationwide deployment of fully Internet protocol packet switching capability. That makes it the network of choice of the 21st century. What we have seen for the last century is networks built around a circuit switching model, if I can use that jargon, which required these point-to-point links. The Internet and packet switching revolution is a complete breakpoint in the design and architecture of networks. It is quite fundamental. And no-one in their right mind would be rolling out a circuit switch network today.

CHAIR—Are they? Is anyone doing it?

Dr Cutler—Some people are having some residual investment in circuit switching, particularly in some of those niche fixed wireless services at this stage. But most new investment now would be going into packet-switch based infrastructure and in broadband capability, because why invest in yesterday's game? The network deployment we speak about is actually very significant.

CHAIR—Is this technology adopted in other countries?

Dr Cutler—It is being rolled out in other countries; for example, in the United States there is a very interesting similar deployment with a company called Cbeyond. The chief executive of Cbeyond was in Australia last week talking to a number of players. Similar networks are also now being rolled out in Japan. They are the two markets where you are seeing most of this deployment at present, but it is still very early stages.

Mr Forman—On your question about whether this was home-grown technology, the hardware in the Comindico network is all Cisco equipment, but a lot of the software that runs the switching has been developed and is being developed by Australian companies in collaboration with Comindico, notably Open Telecommunications Ltd. That company has an historical relationship with Comindico.

CHAIR—As I remember, Cisco had a representative on the broadband advisory council. Is that right?

Mr Forman—Yes.

Senator TCHEN—The legislative committee counterpart of this committee recently conducted inquiries into the telecommunications amendment bill. Did you make a submission to that?

Mr Forman—No, we did not. I made a choice in that the number of—

Senator TCHEN—Because a lot of the issues you raise here were actually discussed there.

Mr Forman—I am aware of that. We are stretching our resources getting submissions into a number of inquiries that are going on at the same time. I should say that we are supportive of the telecommunications competition bill and so we chose not to be seen to be trying to slow down that process.

Senator TCHEN—I understand. You would not have slowed it down, because the inquiry was on. I think Senator Mackay was on that inquiry as well.

Senator MACKAY—And Senator Lundy as well.

Senator TCHEN—That is right. Given that the committee is about to report, I would not touch those issues. Looking at other aspects of your submission, firstly, does this national network that you have built up use existing Telstra infrastructure?

Mr Forman—No. Terry is the man with the history here; he has been involved in this from the beginning. We like to think that we are the embodiment of what the policy regime is attempting to create, which is to focus investment on new aspects of technology. In an environment where the existing network infrastructure is divisible into its elements, those elements are able to be priced and therefore a market is able to be created in them. We have built the IP capability into 66 locations. Similarly to some of the things that you heard from Peter Shore, we acquire back all capacity and we acquire access to the consumer.

I should make the distinction between the Internet and the Internet protocol here. We are not the Internet. This is a network that is completely controlled and managed by us in the same way as Telstra completely controls and manages its network, and Optus and so on; but the technology that distributes the data is Internet protocol. That is the way we package up the data and move it around. That Internet protocol technology is at the heart of what we do, and it allows us to converge all forms of data into a single port, as we call it. You have been hearing about the convergence model for 10 years. Terry, do you want to correct any of my history?

Dr Cutler—The way in which telecommunications regulation has evolved over a number of years, and has really been accelerated by convergence, is the distinction between separate markets and separate contestable markets at the infrastructure physical link layer and the services and applications layers which run over that physical infrastructure layer. In the case of Comindico, it is a connectivity in applications business that runs over the physical infrastructure

of other carriers. That of course runs into problems in the rather unique competitive environment that has emerged in Australia, where you have vertical integration between those layers by the dominant incumbent to an extent which does not happen in any other OECD market. That is why some of the problems that David alluded to arise.

Senator TCHEN—Can you elaborate on some of these issues? Through contracts and so on you acquire access to other people's physical infrastructure to form your network. In providing your service do you have access problems through those different segments of your network?

Dr Cutler—In that model of running connectivity and applications services separate to the buying in, if you like, of those infrastructure services you run into problems where there is not a contestable market at the infrastructure level, which is effectively where you do not have competing players providing those physical links—

Senator TCHEN—I think it would be helpful to the committee if you could give us specific examples of those difficulties.

Dr Cutler—In markets like Melbourne and Sydney, for example, you have not only Optus and Telecom New Zealand providing full end-to-end physical infrastructure but also the emergence of new players, as we have just heard from Mr Peter Shore, from Unwired, and so forth. Outside those primary telecommunications markets in Australia, you do not have competitive infrastructure providers. The extreme case is the one that David alluded to with respect to the whole state of Tasmania where in fact there is only one provider of that underlying infrastructure. As a result, that has held back the deployment of separate connectivity and application services in those markets. That is, I think, the basic problem in most markets outside Melbourne and Sydney.

Senator TCHEN—Can you give us some examples of the behavioural difficulties that you have come across? You can give them to us in private if you wish.

Senator MACKAY—There have been so many—

Mr Forman—That is true. In every negotiation with Telstra you can see the difference in performance where there is a competitive market and where there is not. For example, with the issue of provisioning an access technology to a customer, there are certain connections for which Telstra is required to deliver the provisioning in 40 days and it delivers it in 40 days. Where there is a competitive alternative, we find that those provisionings can be delivered to us in 20 days or less. Interestingly, James Geiger, who Terry mentioned is the CEO of Cbeyond, was talking to us when he was here last week. He said that he was alarmed by the regulatory environment because he has delivered the equivalent of those services in the US in five days. There is no transparency in the absence of competition to drive up performance. There is no transparency to us as to why it should take 40 days. That is just one example.

Dr Cutler—At the other end of the spectrum, there is Telstra's ability, in markets where it is the default monopoly provider of those infrastructure links, to retain the end customers that a competitor may seek to target. I think there has been some newspaper comment in recent times about cash for councils. It probably is not unexpected if you are a major player. There is evidence where you can go into a market and offer a sudden very attractive discount to a major customer in a regional centre which then deters a new entrant or makes it uneconomic for a new

entrant. The minute the new entrant disappears, price and service levels return to normal. I think there have been numerous examples of that over past years.

Mr Forman—This is where we see the danger of the Telstra plan to be the only provider on the Foxtel cable of Internet and data services. We would have an absence of internodal competition, to use the terminology again that James Geiger presented to us in the US. There has been a level of competition between the cable service providers and the telecommunications companies that has driven deployment and driven consumer acceptance of broadband and consumer access to it. The cross-ownership is an issue that he described to us as the biggest difference between the two markets.

Senator TCHEN—I could continue asking you questions about this, but I am sure that my colleagues will pick up some of these issues as well. On another issue, something that perhaps you have not done—and people coming before committees often start with this—is to explain to the committee what consumer benefit your service delivers that other services do not. Why does your service deliver a greater benefit to the nation than other services?

Dr Cutler—There are two fundamental benefits that the deployment of this sort of Internet protocol networking service provides. Because of that Internet protocol platform, it provides the full integration of voice and data applications over the single network connection rather than the behind the scenes cobbling together of them which you have in the environment of a traditional circuit switch network. The end user benefit of that is the simplification of organising a service at the customer premises, because you do not have to have a separate PABX, a separate cable modem, coming in and then have to try to integrate that on a local area network. So it simplifies it at the customer end.

It also has a fundamental cost differential, which translates into customer benefit. The roll-out of this brand new network architecture avoids a lot of the cost elements in traditional circuit switch networks and therefore there is an inherent 30 to 50 per cent cost differential in the operation of such a network. That translates, of course, directly into downstream consumer benefit.

Mr Forman—There is also an advantage in rolling out new services, because the switching is fundamentally software based. Traditionally, for a hardware based network, if you want to roll out any service you begin where the population density is highest. You may eventually get down to less dense populations but you will probably never get all the way out to the regions without some other than market kind of imperative. In this network, you load the software onto the network across the country at the same moment. One of the principles that underpinned the original investors' decision to go out to 66 locations was that you can terminate a call in a local call zone across the country and provide equivalence of service, subject to other things such as access, right across the country to 98 per cent of the population.

Dr Cutler—For example, you could roll out a particular commerce or transaction based service nationwide in one go rather than have the progressive roll-out that often lasted many years which typified the traditional telecommunications deployment of new services, where it was tied to the underlying infrastructure. So it is a radical shift in the potential deployment of innovation and new service.

Senator MACKAY—First of all, congratulations on the submission. I think probably the best way to describe it is that it does not pull any punches, which is very handy for us because it cuts straight through to the issues that we are here to look at. I want to explore this issue with respect to Tasmania, being a senator from Tasmania. Just to recap: it is costing you 30 per cent of your total package to service eight per cent of capacity, presumably in Launceston and Hobart, and Telstra are saying—I will be polite—‘tough luck’. I think the phrase you used, Mr Forman, was, ‘Why wouldn’t we?’ in terms of what seemed to be fairly exorbitant and baseless charges. This inextricably flows on to consumers, and presumably at some point you may say with respect to a commercial decision that there is just no point—with 30 per cent of your costs involved in servicing eight per cent of your market. What is Telstra’s logic, other than them saying, ‘We’re doing it because we can’? I will not use the obvious analogy there, but is it just them saying, ‘We’re a monopoly; therefore we’re going to charge you what we like in terms of the wholesale rate’?

Mr Forman—I have a couple of points on that. First of all, this was a package in the negotiation around a new set of pricing which they came to. Our analysis illuminated this issue—that around 30 per cent of the cost was for these two links and that it was eight per cent of the total capacity across the network. My understanding from the guys running that negotiation who brought this to my attention was that, having established that this was the breakdown of the cost, they said to them, ‘You can’t think you can charge that surely just because you have a monopoly.’ Their reaction was, ‘Why wouldn’t we?’

Senator MACKAY—So there was no attempt to provide any—presumably fairly vacuous—sort of rationale for it?

Mr Forman—There is an impression that there may be a justifiable case for having a higher cost—it may be a higher cable to maintain—but it is my understanding that they did not present that. They suggested, ‘Why wouldn’t we?’ That was the response.

Senator MACKAY—Because where else are you going to go, guys?

Mr Forman—Fundamentally. We talk about the issue as being one-off. An absence of a market creates a certain mind-set and a certain set of behaviours in the monopolisers. It is not necessarily one that is belligerent; it just that they do not understand and they think, ‘Why would there be an issue about that?’

Senator MACKAY—I understand.

Mr Forman—Hence our belief that there is a need for a fresh approach to try and drive a change of psychology through the market.

Dr Cutler—This is not atypical. Right around the country you see a difference in pricing and availability between where there is duplicate backbone cable and where there is only a single provider.

Senator MACKAY—What has been your company’s response? Presumably, you would have to have passed on costs somehow to the Tasmanian consumer. Is that correct?

Mr Forman—At the moment, Comindico has not made a decision to charge Tasmanians more—

Senator MACKAY—So you do not have differential rates?

Mr Forman—We have different sets of relationships. We have two businesses: a wholesale business, where we provide the capacity for other ISPs who reach the customer downstream, and a business that is direct to corporates. All of those relationships are negotiated. We make no distinction that says we have to load up our base costs in Tasmania. As we roll out voice over Internet protocol products in March, we will be determining the specifications of the products and the prices of those products. They will most likely be much more uniform sets of products with more consistent pricing, if not a single price, in the retail market.

Dr Cutler—We would like to exploit the potential of Internet protocol delivery to have a flat nationwide price. The only reason why we would not do that would be if you get these differential input costs that distort things.

Mr Forman—The price of voice over our network is equivalent to the price of email. It is the same kind of relationship. So the opportunity is to provide a flat-rate price: single toll connectivity for voice anywhere in the country.

Senator MACKAY—Presumably, you would not be able to sustain this sort of cost regime?

Mr Forman—Unless you can bring forward the Basslink alternative cable. Either everybody pays more than they might otherwise or Tasmanians pay more, or we just do not worry about Tasmania. They are the three broad options.

Senator MACKAY—Either Tasmania gets the same rate or it is not there? Is that the bottom line?

Dr Cutler—Or you charge them more.

Senator MACKAY—Well, to use Telstra's term, 'Why wouldn't you?', given that you are a totally commercial operation. So the likely implications for Tasmanians are either to not be in your sights, as it were, or to pay more because of Telstra's fairly unsubstantiated view—if I can make that sort of call—along the lines of: 'We have a monopoly and therefore we can charge what we like.' Would that be a fair assessment?

Dr Cutler—Yes.

Senator MACKAY—The second issue I wanted to raise—and I think, Mr Forman, you just touched on it—was Telstra not allowing operators, other than pay TV operators, to use the Foxtel cable. I think Austar is moving or has moved into Internet. What was their rationale there?

Mr Forman—We know Telstra to be saying that in the marketplace—that they are going to own this access technology. In commercial discussions with other people, who may be anything from content providers to potential investors in other alternative potential competitors, they

have made it very clear that there will be no cable high-speed Internet and data access provider other than BigPond.

Senator MACKAY—Other than their own?

Mr Forman—Yes, other than their own.

Senator MACKAY—And the cable operators?

Mr Forman—Foxtel has the cable, of which Telstra own a large proportion, and so they are claiming that that relationship will allow them to lock out anybody else from access to the cable.

Senator MACKAY—Other than Foxtel?

Mr Forman—No, Foxtel will deliver pay TV. The cable is also capable of delivering—as Peter Shore was talking about earlier—the bundle of services.

Senator MACKAY—What about Austar?

Dr Cutler—The issue here is that, whilst the focus in the new arrangements between Foxtel and Optus has been on access for other third-party pay TV providers over that now shared infrastructure, there has not been a great deal of attention paid to the question of access for non-pay TV services over that digitised cable.

Senator MACKAY—Indeed, that is what I am getting at.

Dr Cutler—That is the issue that we are raising as significant.

Senator MACKAY—So they are saying, ‘Forget any non-pay TV other than BigPond,’ which is their own.

Dr Cutler—That is what we understand.

Senator MACKAY—This is pretty significant. I do not know about other committee members, but I had not heard about that.

CHAIR—What about Optus cable? Is that being made available?

Mr Forman—I do not know whether anyone is delivering anything on Optus cable.

Dr Cutler—It is a good question—and my answer is: not that I am aware of at this stage.

Senator MACKAY—This information has been picked up in commercial negotiations and presumably it is up to us, as senators, to follow this through. Is the ACCC aware of this?

Mr Forman—We raised it with them, just in the last few days since we heard it from a number of sources. We have been hearing it for some weeks, but we heard it from a source that

put it highly enough for it to have now become the No. 1 issue for us. As we say, we will be going to whatever regulatory and legislative mechanisms are available to us to open that cable up.

Senator MACKAY—This is what you call in industrial relations parlance ‘a lock-out’ in terms of your business. You have presented this to the ACCC. Presumably they have undertaken to investigate it?

Mr Forman—We have simply had discussions with them to tell them that this is what we have heard, and we will continue those discussions with them to talk about what we do next.

Senator MACKAY—What impact would this have on your business and other businesses in similar circumstances to you, if this were to go unremedied?

Mr Forman—One of the great strengths of Comindico’s IP technology is that it is neutral to the delivery technology at the end. So, any way that we can link to your house, we can come back to our exchange—we can deliver over that service. Therefore, it is clearly in our interest to make sure that every gateway to the consumer is one that is contestable.

Dr Cutler—That is a very important point. Clearly, as we go into the future, cable is the optimal delivery mechanism because it supports higher speed. It is not too difficult to imagine the time—which, personally, I think will come much sooner than everyone expects—when we will reach the limits of ADSL. People will become as frustrated with ADSL speeds as we used to be with dial-up Internet access. Ten years ago we thought 14 bits per second was fabulous; now, when you confront it, you cannot believe how anyone used it. Exactly the same thing will happen with ADSL, so future-proofing regimes—so that you can take advantage of the higher bandwidth delivery mechanisms like cable—will become increasingly important.

Senator MACKAY—If you are locked out of that, the effect on competition means that not only you but also consumers are at a substantial disadvantage.

Dr Cutler—Going back to the structural point you made earlier, that infrastructure bottleneck will deter and hold back the innovation and deployment of service and new application deployment.

Senator MACKAY—What is their rationale? To be unparliamentary, is the view ‘it’s our cable; get nicked’?

Dr Cutler—There is a natural tendency in all commercial creatures that, if you own it, you want to get the maximum benefit for yourself. That is not uncommercial behaviour, and that is why we have regulation to curb that behaviour for the public good.

Senator MACKAY—Hence the reference to the ACCC to see whether it is anticompetitive.

Dr Cutler—And to put it on the agenda and on the table.

Senator MACKAY—Presumably—hopefully!—this committee is part of putting it on the agenda. I have a number of other questions but I do not want to hog all the time.

Senator TIERNEY—A question I asked of the last group also applies. You are in an environment where there are high capital costs and very rapidly changing technologies. Could you run us through how you reasoned through taking the investment risk of adopting this technology and putting it out in the marketplace? Now that you have established that, how do you see the future competitive environment, with possible new technologies?

Mr Forman—Terry has probably been the great advocate of IP as a technology for a decade.

Dr Cutler—I will try to answer that. When Comindico was first established, we were in a somewhat different environment from today's. The network infrastructure that we deployed, involving those 66 points of presence around the country to provide that nationwide service delivery capability, involved a high up-front fixed cost that would have been avoided had we adopted an approach of roll-out initially in only Sydney and Melbourne, for example. So there is some cost. Part of that is based on the presumption that there would be a more robust competitive regime in the delivery of the underlying customer links in a lot of those markets than has emerged over the last 12 months because the whole sector has contracted and a lot of players have either gone out of business or radically scaled back their plans. As I think other people have commented to you, it is a less attractive market but we have essentially made the fixed investment in our service delivery network.

As with any player now, the issue is to try and maximise the utilisation of that network, and that is easier to do. We have seen this in markets in which you either have strong retail ISPs operating who see immediate benefits in connecting to our service or where there is a strong competitive base of GSL suppliers and other alternative local loop suppliers.

Mr Forman—To add to Terry's answer, the bet was on Internet protocol technology as being the technology of convergence and that the cost saving implicit in that was going to be the future-proofing element of the investment, if you like, so that when Comindico goes to the market with its voice package in a few months time, it will not be saying to customers, 'You need to buy this technology or you need broadband,' but it will be going to customers saying, 'We can give you all of the communications services that you acquire now from a number of vendors or clumped together from one vendor and we can offer you that at about a 30 per cent discount to what you are paying now.' That will be what brings them in.

The fact that we are technology neutral from our network out to the customer means that we will get to them by whatever means out there is available to us at the moment, but we will convert them to an always-on connection. To our way of thinking, it is the experience of that always-on connection that takes them through the gateway to the future. It is not discussions about how fat broadband is. Once they have that, the fact that everything for us is just another service in a single layer means that we can continue to convert them and that the appetite for broadband will follow. So we break that chicken and egg debate about whether you have broadband or content first. Forget about that. The killer application is price—what you are paying now. Give them the same for less and then they will buy more.

Dr Cutler—The investment attraction was that really for the first time there was an opportunity to be able to roll out an end-to-end pure Internet protocol network.

Senator TIERNEY—Given all that, and given that you can deliver it at a 30 per cent lower cost, why aren't all the ISPs signing up?

Mr Forman—Many of them are. The company was created in 2000. I do not know what the latest numbers are, but we are one of the most significant in terms of the number of Internet end-users who are connected to us. Certainly I think it is fair to say that we are one of the fastest growing companies in the industry and we are of a scale that puts us right up there—

Senator TIERNEY—In terms of ISPs signing up, that is in a rapid growth phase.

Mr Forman—Correct.

Dr Cutler—And remember, we have really only been marketing services this year and the key breakthrough will occur next year, when we can offer the voice service. I think that is going to make it very attractive because then we can exploit the real benefit of this integrated pure IP service delivery.

Mr Forman—For example, the Austar dial-up network have converted its entire dial-up ISP network to Comindico, so they still market it but it is our network.

Senator TIERNEY—So if people have a bundle of services, including telephone, you mention an overall lower cost of 30 per cent. In terms of telephone calls, is that the sort of saving people would find on just a standard voice telephone call?

Mr Forman—We have not defined what we are going to take in terms of the precise detail of what the product will look like to the customer. It may be that we say to someone, ‘You are spending X number of dollars per month on all of your connectivity and you have the price of calls on top. The cost that we will charge you is something less for the connectivity, and that will include the cost of your calls.’ It may be something like that.

Dr Cutler—This is where you change the whole pricing structure, potentially, because in an always-on environment we are offering someone a certain amount of capacity. Whether you choose to use that capacity to make a voice call, have an online Internet session or indulge in some transaction in data exchanges is irrelevant to us as a provider.

Mr Forman—Fundamentally, at the risk of being overly simplistic, it is because the old circuit-switched network is a circuit. You make a call and you have a persistent connection for the term of that call. Internet protocol does not require that fixed connection. The data goes out there and, in little packets, makes its way through the most efficient possible route to the other end, where it is turned back into a voice.

Senator TIERNEY—You mentioned 66 points of presence. I do not want you to describe where all of them are, but, broadly, how are they placed and what was the rationale for rolling out that way?

Mr Forman—I have a map, if that is helpful.

Senator TIERNEY—*Hansard* has difficulty with maps.

Dr Cutler—Essentially it means that there is one in every one of Telstra's main call charging zones. The number is dictated by the architecture of the Telstra network to give us that nationwide coverage.

Senator MACKAY—That is that synergistic relationship you were referring to?

Dr Cutler—Yes.

Senator TIERNEY—In terms of geographic coverage, does that give you the whole country?

Dr Cutler—Potentially, if we have that local access.

Senator TIERNEY—You saw particular advantages for customers outside metropolitan areas. Could you explain a little further what they are?

Dr Cutler—In my view, the key advantage is that a new service can be available to any customer or any business operation simultaneously around the country. This is in contrast to the old environment where, with the introduction of a new technology like ISDN or frame relay, your ability to offer services over that technology was restricted to the roll-out of the physical infrastructure. Typically, that would begin in Sydney and Melbourne, then five years later it might hit Adelaide and Perth and eventually Tasmania. Because our network architecture is unbundled from that physical infrastructure, it means that we can immediately deploy the same service anywhere. Like the concept of always on, that is a fundamental breakthrough in the understanding of service delivery as against the notion of infrastructure roll-out. Does that make sense?

Senator TIERNEY—Yes. Taking that a little further, into the regional areas, you talk about developing regional communication-telecommunication companies in partnership with rural and regional communities. Has that actually happened anywhere? Do you have any examples of that?

Dr Cutler—I suppose the best example to date has been in areas like Mildura, where there is Neighbourhood Cable and where we are working with some of those early local telcos. In other cases, we are beginning to work with local government and councils to develop similar initiatives. That is still at a very early stage, and it raises a whole lot of issues about how the industry and government can work to better promote in various ways the development of that new infrastructure investment in those regional centres.

Senator TIERNEY—If we take your Mildura example, I assume that the infrastructure there is quite good.

Dr Cutler—That is because Neighbourhood Cable has rolled out a duplicate cable network for the delivery of pay television which can also carry telecommunications services.

Senator TIERNEY—Given that that is there, what does this new group have to do to make your services work better in their area?

Dr Cutler—How we see it working is that, if you can have a local group funding the installation of new infrastructure, we can provide at marginal cost the support service infrastructure of billing systems and so forth that would be completely uneconomic for them to develop or try to operate on a stand-alone basis, because that is where you get major economies of scale. You could have a very effective partnership with those local operators, and the interest of a national player like Comindico is that those regional centre partners become the retail presence and outlet for the service on a very localised basis.

CHAIR—When you talk about rolling out network, you are not rolling out any cable anywhere and you are not putting copper wires in; you are simply doing the switching technology. That is your key feature, but you have the billing arrangements, marketing and customer attraction sides of the business. Is that correct?

Mr Forman—Yes. At 66 locations, we have built connection points so that we have the routers and the servers in fully secure, fully climate controlled redundant power environments—\$300 million worth.

CHAIR—They work regardless of whether you have to deal with optical fibre, twisted copper pairs or whatever?

Dr Cutler—Correct.

CHAIR—They are just a bit slower.

Dr Cutler—Yes.

CHAIR—That is interesting. As part of your submission, you recommend that the Trade Practices Act include divestiture. Can I assume from that that you are talking about breaking up Telstra into the smallest possible units? Is that what you mean? How would divestiture work to serve what you see as a way forward for universal broadband access, for instance?

Mr Forman—We would not propose what the model should be of a post-structurally separated Telstra. Everybody is going to have a different opinion on that. The groups best placed to make a decision are the ACCC and the courts on the basis of observed problems in the market. We can point to areas where there are problems of vertical integration. People will talk about wholesale and retail. Clearly, Foxtel is an issue for us. The example in the US with AT and T was that they went for not just wholesale and retail but a number of geographically defined retail companies—the Baby Bells—plus a separate manufacturing and research group. Any of those models may be considered appropriate, but the immediate effect we think it would have would be to create a new discipline over Telstra that meant that, when it was considering doing something in the marketplace, when it was looking at its behaviour in relation to its would-be competitors, it would have to contemplate what may happen—

CHAIR—Hang there as a threat.

Mr Forman—as a forward-looking deterrent rather than going back and fixing potholes in the road.

Dr Cutler—I think the best example of that is the recent FTC actions in the US with respect to Microsoft.

CHAIR—It would probably do a lot to their share price!

Senator MACKAY—I want to clarify the Tasmanian situation. Have you referred this to the ACCC as well?

Mr Forman—No. That was a proposition that was put to us in negotiations by Telstra.

Senator MACKAY—You are still in negotiations?

Mr Forman—We are still in negotiations.

Senator MACKAY—So, presumably, if they do not resile from that, you may pop them off to the ACCC as well on that case—or somebody might.

Mr Forman—We are pursuing other issues. We are pursuing, for example, the notion of peering with Telstra, which would take away some of these transit costs.

Senator MACKAY—What is peering?

Mr Forman—Peering is based on the proposition that we do not have a single network, that we have a network of networks and that everybody has to exchange their traffic. That traffic can be exchanged on a number of commercial bases. What Telstra tends to do is to charge everybody for taking their traffic somewhere and not to pay anybody for the opposite service. The idea of peering is that two networks agree that they are sufficiently comfortable with each other that they swap traffic on a no-cost basis.

Senator MACKAY—So this would be an optimum negotiating position for you in this current—

Mr Forman—It would not go precisely to that, but it is one of the other issues we are dealing with. We are taking that issue to the ACCC, so we will drive that one through first.

Senator MACKAY—So that will inexorably have an impact on the Tasmanian situation?

Mr Forman—Possibly.

Senator MACKAY—Have you thought to raise this point with the Tasmanian government?

Mr Forman—No.

Senator MACKAY—They would be most interested, given the Intelligent Island money, our aspiration to develop ICT and the money that has been pumped in as a result of various tranche sales in Telstra in Tasmania.

Dr Cutler—Wearing a different hat, I have been in discussions with the Tasmanian government, for example, about how this illustrates the importance of some of the telecommunications initiatives they are contemplating in conjunction with the gas reticulation and the Basslink project.

CHAIR—The Basslink comment is a serious one.

Dr Cutler—Absolutely.

Senator MACKAY—Yes, it has a huge capacity.

Dr Cutler—The proposal there is that, if you are putting in either an electricity link or a gas link, you could put in a fibre-optic capability at the same time.

CHAIR—So you would link it with the gas or with the electricity?

Dr Cutler—With both. It then provides an alternative which arises just because of these quite independent infrastructure players and a unique opportunity for Tasmania.

Senator MACKAY—Dr Cutler, when did you produce your seminal report?

Dr Cutler—Which one?

Senator MACKAY—There was quite a critical one commissioned by the federal government, I think. It was called the Cutler report.

Dr Cutler—There was the report in 1995 on the online economy.

Senator MACKAY—Yes.

Dr Cutler—Then, when I was chairing the Australian Information Advisory Council, a report was produced in 1997.

Senator MACKAY—That is right, and it was not released until later. When was that one brought down?

Dr Cutler—I think that one came out in 1997 or 1998.

Senator MACKAY—Yes, that is the one; it was great.

CHAIR—Where is the parent company for Comindico?

Mr Forman—There is no parent as such; it is an independent company.

Dr Cutler—This is an Australian entity with a mix of private equity investors such as JP Morgan. AGL is the other major shareholder, and there are a number of others.

CHAIR—And where does the switching technology come from? As you said, it is not home-grown.

Dr Cutler—All the basic building blocks come from Cisco.

CHAIR—And where is Cisco based?

Dr Cutler—In the US. But a lot of the software to run those Cisco systems has been developed locally here in Australia.

CHAIR—Excellent; that is what we like to hear. Thank you.

[12.19 p.m.]

HAYDON, Mr John, Acting Senior Executive Manager Telecommunications, Australian Communications Authority

HORTON, Dr Bob, Deputy Chairman, Australian Communications Authority

CHAIR—Welcome. Mr Haydon, I see you are executive manager of the authority's UNO group. What does UNO stand for?

Mr Haydon—Universal services; it is a misprint.

CHAIR—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 specific questions in private, you may ask to do so and we will consider your request. As you, Dr Horton and Mr Haydon, are public sector officers, I point out that you will not be expected to answer questions which invite you to express an opinion on matters of policy and that you will be given a reasonable opportunity to refer questions to superior officers or to other responsible individuals. I now invite Dr Horton to make an opening statement after which we will ask questions.

Dr Horton—We did not originally anticipate making an opening statement but, on Dr Drinkwater's suggestion, we came earlier to get the general drift of your line of questioning. It may be useful for us to make some sort of statement based on that exposure, where we could point you to some advice that we might be able to provide and which might be helpful. As a secondary thing we could go through some of the things that we do in terms of monitoring and so on which might very well be relevant to the inquiry—you will probably know most of that but we can recapitulate on that—and then hand over to questions.

First of all, on some of the observations today, I notice there was a comment about the dearth of cost-benefit information. For your information, with our section 105 report, in which we annually report to parliament on the performance of industry, we have a chapter on consumer benefits, or a cost-benefit analysis, since 1997 of all the initiatives and policies in telecommunications and radiocommunications which have occurred. We hired an external consulting body to work out what the actual cost-benefit of that was compared with the case where those initiatives had not occurred. We intend to table that with section 105 as a companion report. We think that will probably be tabled in early December—so I think it is in your time frame—and it could be quite useful. It is not necessarily broadband; it is all telecommunications activities.

CHAIR—Presumably, you will send a copy to the Broadband Advisory Group before they report?

Dr Horton—Yes, we will. It does sectorise its approach, as well, with some comments on metropolitan and regional areas. When we speak about broadband, there was some mention of what the long-range prospects of broadband are and the vision of how it will develop. We are in something of a privileged position in our interactions with the international community in telecommunications standardisation and in radiocommunications for interference calculations

and notification of the use of frequencies with the International Telecommunication Union, so we can add some comment to that international environment. Essentially, we are going forward in the broadband area called next generation networks. This is the operational way in which converged voice data and images will occur in the future, and it is an international picture. There is nothing that we will be essentially doing in Australia which will be different; we are part of the international community. The backbone networks, the exchanges and the inter-exchange transmission are moving in general towards packet switching and the use of Internet protocols. Intelligence will become less in the intermediate exchanges and will move out to the extremities of the network to either routers or to customer equipment.

They are the fundamental changes. There will not be a revolutionary change in next generation networks. We are already seeing packet switching between exchanges with the use of either frame relay techniques or ATM—that is, asynchronous transmission mode of packets of data. Whether they are voice, data or image does not matter; it is all converged data. In accessing the core networks, there are a number of techniques which are appearing in the radio area—cellular radio to begin with. We are moving toward 3G—the third generation networks. These will carry data as well as voice at up to 384 kilobits per second. So quite a significant bandwidth or data rate will become available with those in the future. They are also packetised, so they fall into this category.

The other access techniques we see that will grow in the radio area are for wireless local loop, and we have heard something about that this morning, and in the more immediate vicinity techniques such as the local area network 802.11 types of technique for access to a digital platform from devices.

In terms of satellite networks, I know more than I can tell you at the moment. In fact, we have an authority meeting tomorrow to decide whether we will accept an offer to register future satellite networks for a large US corporation, probably one of the largest in the world in satellites. Essentially what they are looking at—and they have asked me not to name them at this stage, unless you want to take that in private—is to build Ka band networks which will be able to deliver broadband services and interactive Internet type services at a much cheaper price in the future. So we can see that there are immediate benefits to Australia in us taking on this coordination exercise of lodging those networks with the rest of the world on behalf of this particular corporation because they feel that Australia does this job as well as can be done by their own country. We can see the benefits to Australian rural and remote developments in the future. Again, this is another digital access technique which is in the pipeline. We as a regulator are not predisposed to choose technologies—we are technology neutral—but to facilitate their coming about.

In terms of broadband service monitoring, we have no role at the moment for this but we are responding to what we see as developing public expectations. We put out a discussion paper on the need for performance monitoring for broadband and other high data rate services in the future. We issued that paper in October this year to assess the independent quality of service monitoring of broadband and high data rate services with an initial view on many factors which will influence consumers' service quality experience. They include network design parameters, the reliability of different network elements involved in the delivery of a service and customer management practices by companies. The proposed approaches are canvassed in the consultation paper, and they range from industry self-regulation options to measuring performance against specific indicators to a minimum service standard prescription.

We are currently assessing the feedback from the consultation process, and I will give you a sample of one bit of feedback we had from Optus. The first line of the Optus submission says that Optus does not believe the ACA should intervene in the emerging market for broadband services by imposing a performance monitoring regime. So you can imagine we are going to have an uphill battle here, but in the interest of consumers and the industry in general we will be continuing to pursue broadband performance monitoring.

We also put out information papers for consumers and for the industry in general. One which has achieved notable acclaim has been a mobile phone package of information for consumers. In fact, that has reached the short list of Commonwealth innovation awards this year, and that will be judged in the first week of December. What we intend to do is move on to a similar information package approach for Internet and the broadband world, including fixed communications. So we intend as a regulator to be moving ahead in parallel with industry's development and setting up an understanding or approaching the information asymmetry between the supply industry and the consuming public.

Those are a few comments on where we fit in, but an overriding comment would be that the composite infrastructure of the future is really an industry matter. It is for industry to bring together the whole range of its solutions to work together. You have a meeting with ACIF tomorrow. ACIF has a very strong and important role in that to make sure that the industry comes together in a sensible way. Some of the standards and some of the codes of practice will no doubt be registered with us as a regulator so that we can enforce them to make sure that the intentions are achieved.

I turn now to what we actually do at the moment. Part of your terms of reference was to examine:

(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 ...

The ACA has specific knowledge relating to the upgrade of the PSTN network in the extended zones because we have a role as the contract manager of the extended zones agreement. Under this, Telstra is required to upgrade its telephone network in extended zones by 31 December 2003. Specifically, it must replace all of its digital radio concentrator systems with alternative access technologies. These include: high-capacity radio concentrator systems, satellite technology, new cable and CDMA wireless local loop solutions. I should refer, too, to the constant references to ADSL that keep coming up. DSL is a family of access techniques in the local loop. 'A' is the first of a series; we should really talk about 'X' DSL.

CHAIR—What does 'X' stand for?

Dr Horton—It stands for an unknown letter.

CHAIR—So it is a question mark?

Dr Horton—Yes. We know that it can also stand for 'H', which is high-capacity DSL currently on the drawing board. VDSL is also on the drawing board, and that is very high-capacity DSL which will carry something like eight megabits per second; in other words, 8,000 kilobits per second. So there is a very high capacity on the drawing board for the future in the

sort of timeframe that you are looking at. I would suggest that you do not get too drawn in to considering just ADSL in that final local loop, because other solutions for the copper network are becoming available, and there are also fibre optic solutions which are coming onto the market. Again, going back to the extended zones, under the agreement between Telstra and the Commonwealth, Telstra must also offer customers a two-way satellite Internet service with a choice of prices and data rates, which range from 33.6 to 400 kilobits per second. The satellite equipment and installation are free. Customers are required to sign up to an 18-month service plan. As of 30 June 2002, there were something like 2,600 customers, or 25 per cent of the eligible customers, who had taken up the free two-way satellite Internet service.

I turn now to another issue: the ACA's network reliability framework. You may recall that this had its beginnings at the time of the unfortunate incident of the young boy who died last year. This framework is to commence in January 2003. This will require Telstra to provide fault data at three separate levels. The first level is in Telstra's field service areas, and there are approximately 44 field service areas. The second level is in Telstra's exchange service areas, and there are approximately 5,000 ESAs in the network, and the third is at the individual customer service level. This is the same population of services as is captured by the CSG—the customer service guarantee—of which there are about eight million services. So a much more focused and drilled down approach to network reliability will come into being in January 2003.

One of your terms of reference referred to the capacity of the Australian telecommunications network, including the PSTN, to provide Australians with reasonable, comparable and equitable access to broadband services. Under the digital data service obligation, 96 per cent of Australians are able to access ISDN on request—that is, if you consider that ISDN is defined as broadband. Four per cent of Australians can access the special digital data service which is an asymmetric satellite data service providing 64-kilobit download capability and an uplink provided through the customer's PSTN service. Another point to draw to your attention, although not strictly a broadband issue, in terms of equity when accessing the Internet, is that all Australians now have access to an ISP for the cost of a local call.

Another term of reference refers to the current investment patterns and future investment requirements to achieve adequacy of services in the Australian telecommunications network. Under the network reliability framework, the NRF, the ACA is focused on ensuring that those individual services and ESAs do not experience excessive fault levels. It is pertinent to point out that the ACA's role is really as a safety net regulator rather than overseeing Telstra's investment programs. That is where we fit in as closely as possible to the investment patterns in the industry.

The other term of reference refers to regulatory and other measures that might be required to bring the network up to an adequate level. In terms of the access to telephony service, the USO ensures that all Australians, whatever their geographic location, have access to a service. The network reliability framework and the customer service guarantee, which includes initiatives for extreme cases of failure under the CSG, provide further protection in terms of connection and reliability of service. The requirement under the USO to provide a customer with an interim or alternative service in cases of either extended service connection or delays in repair further enhances access to telephony services in this instance. We are awaiting the outcome of the government's response to the Estens inquiry as to how much further forward this should move in terms of future data and broadband services. That is essentially a broad introduction to a few

ideas that have been generated today and also what we actually do to date, in relation to your inquiry.

CHAIR—Thank you very much. The committee has had only two days of hearings but I must say my impression is that the next few years are going to see an avalanche of different technologies and different methods of delivering broadband services in particular but telephony generally. I think a number would suggest—at least out in the general public—that the pay-TV cabling exercise of duplicated infrastructure was a disaster. Are we going to get another disaster in terms of multiple layers of infrastructure that all do something a little bit different at least? I note that you do not see your role as picking the technology, and that is appropriate. Are we heading for a very difficult time for consumers to understand what is going on and does this mean a likely high cost of infrastructure because of this duplication?

Dr Horton—The evolutionary changes we see ahead are not in the necessary duplication of infrastructure but the use of composite infrastructure. That is where we feel that the degree of maturity of the industry and the approach and control which ACIF might be able to bring about by industry coming to agreement on the composite platform and how it works together are extremely important in the future. Senseless duplication of infrastructure is not an efficient way of approaching the future. We are not just talking about voice services these days; we are talking about broadband in the future, and that is a much more expensive investment. There will be appropriate technologies for appropriate situations, and they need to be able to work together for end-to-end performance and any-to-any connectivity in the broadband era. We would certainly suggest that a sensible approach be made when it comes to infrastructure and that the competition develop over that infrastructure. That brings us to content services and carriage services which make the most efficient use of a composite national infrastructure.

CHAIR—So you are confident, at the end of the day, that the kind of interconnectivity which will result from a range of technologies, a range of providers, a range of wholesalers and so on, will mean we do not have too much duplication. Is that fair?

Dr Horton—I am not confident, essentially, but I think we should have learnt from lessons of the past that duplication was probably an unnecessary exercise and that there are much more sensible approaches than the blind faith in competition as a whole. I think we realise these days that in carriage service competition, fundamental duplication, triplication or however many network infrastructures to create those services is not the way to go, because we cannot afford that as a community.

CHAIR—When you say ‘we’, is that ‘we, the government’, ‘we, the ACA’, ‘we, everybody’ or—

Dr Horton—I think ‘we’ as an industry.

CHAIR—The whole industry, you think, understands that.

Dr Horton—Yes, we as an industry generally realise that now. There is some degree of precompetitive working together of industry which needs to raise the platform of communications on top of which we compete so that we have efficient economic services delivered to the public.

CHAIR—Your monitoring and safety net regulator role presumably will become more complex—and probably has already—compared with even, say, three or four years ago. Are your resources matched by this new complexity?

Dr Horton—There will probably never be enough to do everything we would like to do as a regulator, but we realise that we have to live within our means, the same as anybody else. We would need some consideration of resources where there is an amalgamation of functions in a regulatory sense.

CHAIR—With whom is that likely?

Dr Horton—Broadcasting, postal services, for instance, coming together in the one regulatory umbrella. Obviously, we cannot cope with that with the resources we have. New functions require new resources. But at the moment, in telecommunications and radio communications, I think we are probably structured and reasonably well resourced to support the challenges we see in the next two or three years.

CHAIR—I will ask you about some of the things you would like to do, one of which is a package for Internet similar to the about-to-be award-winning mobile phone kit. Isn't it much harder to do a kit on the Internet? Won't it change almost daily? What will this kit aim to achieve?

Dr Horton—The same thing as the mobile kit did, which is to arm the consumer with as much information and understanding as possible of the range of different, complex choices available to them and provide them with a logical basis on which to make consumer decisions. I do not think it will be any harder than in the mobile area. There are something like 600 ISPs around Australia. There are probably as many retailers of mobile phones, and there are a heck of a lot of mobile packages to consider. We do not see it as being much more complex, although the issues will run in different directions.

Senator MACKAY—I want to ask a series of questions to you in your capacity as independent regulator, which I think means that you are allowed to have a view which is distinct from a department or an agency or whatever. I think the new network reliability framework is a good innovation. Do you think this will provide you with the ability to monitor fault rates more carefully? I augment my comments by saying that broadband is simply one of five terms of reference; the critical of nature of our inquiry is the state of the network. I am interested in your views on that.

Dr Horton—It certainly does. The whole idea of the NRF is that we can drill down to an individual service level and get the service performance statistics of that particular service from Telstra, which we have not been on to get before. Between now and January, Telstra is in the process of putting systems in place so that we can get that information.

Senator MACKAY—Will that information be made public? Presumably, it will.

Dr Horton—We will report, as we do now, on a quarterly and yearly basis, albeit in an aggregated sense, of course, because we could not report on every service in Australia. But the exceptions are the important things, which will draw out the important cases.

Senator MACKAY—But presumably the parliament will have the capacity to access the disaggregated information.

Dr Horton—It is public information, which is provided to us as a regulator.

Senator MACKAY—That is good. Estens recommends that the ACA should identify what I think they term ‘the worst performing Exchange Service Areas’ as soon as possible after this new network reliability framework comes into place in January. Presumably, this is to expedite the fixing of difficulties. I think that is a good recommendation. What is your view in relation to that? I suppose what they are talking about is fixing the bigger problems first.

Mr Haydon—I can answer that.

Dr Horton —I can answer that question, but he wants to answer it.

Mr Haydon—We are already working with the department to develop a plan of action for that and we are working with Telstra. As Dr Horton mentioned, Telstra are in the process of building systems now to provide for the data from the new year on. The discussion with Telstra is about accessing data via an interim methodology so that we can come to some decisions, either toward the end of this year or very early in the new year, in advance of the formal introduction of the complete network reliability framework.

On that basis, we will certainly be looking to find the current worst performing exchange service areas or parts of exchange service areas, as the case may be, and then work with Telstra towards a rectification plan. You may appreciate that the network reliability framework is about skimming the worst performing bottom end of that entire network progressively, and that eliminates those tales that are the bane of consumers.

Senator MACKAY—If it is properly done—and I have no doubt the ACA will be doing it properly—this has the capacity to really lift what has basically been obfuscation on Telstra’s part, which is certainly my experience in terms of getting information about faults. I guess it is in within your purview to ensure that it is.

Mr Haydon—It will go some way towards that. There is a limitation in that, as I mentioned, it is going to address the worst performing elements, whether they be part of an exchange service area or the service to an individual customer. So it is not going to give us information about the service provided to the eight million subscribers at large, nor is it going to give us information about the 5,000-odd exchange service areas at large. It will give us information about the worst performing ones.

Senator MACKAY—I misunderstood: I actually thought that the network reliability framework was intended to be more pervasive than that. I know that one of the recommendations of Estens was about worst performing exchange service areas, but Alston made a statement on 16 July about that. Maybe I am wrong; I do not know.

Dr Horton—No, you are right. There are three levels. What we were just talking about was level 2, the exchange service area. That should throw up any rats’ nests or exchanges which are not performing systemically well at all. But we do have that third level, which is the individual

consumer level. If there is performance which falls below a threshold, we will be able to drill in and do something about it.

Senator MACKAY—That is good.

Mr Haydon—When we constructed the network reliability framework, we thought of disaggregation, because that was the theme in the Besley inquiry. We felt that any disaggregation had to be workable in a context that fit in line with Telstra's management of its network. We came up with the concept that the first level of disaggregation was going to be at the field service area level, which is a management unit used by Telstra. That approximates a fiftieth of Australia. So your first level is to consider what is happening if you divide the Australian subscriber base into 50 or so sub-units. Then you have to drill down further, and that is a level 2, where you then divide the Australian subscriber base into about 5,000 units, look at each individual one and deal with the ones that need attention out of that 5,000. Then at the lowest possible level you look at the individual subscriber. That was the conceptual approach.

Senator MACKAY—If that regimen happens, that will be great, I think.

Dr Horton—It will happen on 1 January.

Mr Haydon—It will happen.

Senator MACKAY—That is terrific. I presume that Telstra are cooperating.

Mr Haydon—They are.

Senator MACKAY—Good.

Dr Horton—We do not want a repeat of the incident which occurred last January. I am sure Telstra does not either.

Senator MACKAY—That is right; exactly. Perhaps, had this framework been pre-existing, it may have ameliorated that.

Dr Horton—Possibly. We cannot go into that.

Senator MACKAY—I understand; I am not attempting to lead you. The Estens report did indicate that the network reliability framework required some finetuning. It said:

... there is currently no high level capacity within the framework to inform the public of the frequency of faults and where they occur.

Presumably, what you have said here today is that it is your intention to, within that framework, inform the public of the frequency of faults and where they occur.

Dr Horton—We have an obligation to report to parliament and ultimately to the public as well. That is the end product of our activities.

Senator MACKAY—But that is not what Estens is saying. It says that the concern with its new regimen network reliability framework—and it may be baseless—is that there is no high-level capacity for the ACA, within the framework, to drill down to that micro level in terms of informing the public of the frequency of faults and where the faults are. It is something that Telstra has sought to cover up for years. Is Estens incorrect, and will the new regime obviate that?

Mr Haydon—In dealing with the worst performing elements and the worst services of individual subscribers, the framework is completely rigorous and comprehensive. What he is discussing there is the capacity to make available to the public at large how areas of the Australian telecommunications network are performing insofar as it is of interest to an individual subscriber. The difficulty we have there is that Telstra deals with about 800,000 to a million CSG type faults per annum. To be able to present data about those is an impossible task. The framework is going to certainly have access to data about the performance of individual exchanges. It will act upon the data relevant to the worst performing elements of it, and the reporting process will be necessarily an aggregation of different aspects of that. It is a matter of how you go about presenting instruments.

Senator MACKAY—Telstra do have it. They have the CNI; they do have this information.

Mr Haydon—Of course.

Dr Horton—The whole basis on which we approach this is that we do not want to devise the grand scheme from day one. It may be a huge waste of time and resources and there may be obfuscation, too, which will get in the way. We can solve what we definitely know we can solve to begin with, then recapitulate on the outcomes of that and perhaps build a stronger monitoring system or a more detailed monitoring system as time goes on.

Senator MACKAY—For example—this is an important issue—people do not know if they are on a six by 16 pair gain. I think that is outrageous for consumers. Until recently, even when people rang Telstra they were not being told. It is only recently, since the incident you referred to, that they have opened that up. I think that people have a right to know if they have a fault on their system—especially a repeat fault, which was the case for the Boulding family. That is what I am getting at. Will that level of information be available?

Dr Horton—Progressively, with time, but it depends on the circumstance to begin with.

Senator MACKAY—Will you need more powers to do this?

Dr Horton—We have not yet got the government's response to the Estens report so we do not know precisely what we will be told to do or the powers that will be needed for that. It is a bit difficult to answer that question at this stage.

Senator MACKAY—What do you say about suggestions from Estens that you should have access to information about faults by 100 SIOs—services in operation—at level 2 to assist you to analyse the ability of the ESAs—the exchange service areas?

Mr Haydon—We are dealing with Telstra in regard to that now. The formulation of the network reliability framework is contingent on a licence condition that is in its final stages of

formulation. That licence condition will articulate exactly what Telstra must provide. Separately from whatever it must provide, we will certainly seek to ensure that the information that we need to do our job properly is reasonably provided, even if it is outside of the ‘must provide’ information.

Senator MACKAY—That is good because Estens in this respect was quite useful in identifying these difficulties. The Estens report also says that more clarity is required at the network reliability framework level 3 in terms of what you have just explained—when consumers are what they term ‘remediated’ to a higher level of reliability. In what situations will you be able to issue remedial directions to the provider for level 3 breaches? What further clarity would assist you in that task?

Mr Haydon—There are two parts to that. What remediation directions could we issue? And that is quite open. What remediation directions would we issue? That would be on a case-by-case basis and would depend upon the kind of remediation required and the kinds of plans that were already in train for remediation of a service for a particular subscriber or for the locality in which that subscriber lives or operates. It is also governed by the kind of performance that a particular subscriber has experienced in the past—not just the number of faults but the kinds of faults.

Dr Horton—I think what we are talking about here are the powers to order remediation.

Senator MACKAY—Precisely.

Dr Horton—That will follow through from the government’s considerations of the Estens report.

Senator MACKAY—We have had evidence to this inquiry that Telstra is using mass service disruptions as a way of getting around the customer service guarantee. We have had several submissions to this effect. Have you had a look at that yet? Do you think that is something you could look at and that it is in your purview?

Mr Haydon—Yes, it is. Part of the government’s response to the introduction of priority services which flowed from the death of Sam Boulding in Victoria was to seek a review of the mass service disruption process. We have been working with Telstra to ensure that better information is provided, that the mass service disruptions are more demonstrably substantial and that the information made available to subscribers is clearer.

The difficulty with mass service disruptions is that a flood in one locality does not mean that other localities are not affected, because good management practice would require that resources are migrated from other localities to address the most affected locality. So there is a second flow-on effect, if you like.

Senator MACKAY—I agree. To some extent that is Telstra’s spin. That is what Telstra say. For example, we were in Wollongong recently and they had, in January and February, a mass service disruption declared. There was a very strong view amongst small business that it was a way of circumventing the customer service guarantee. I appreciate that this review is going on—and I have to say that the Telecommunications Industry Ombudsman expressed fairly

strong views about this in a letter that we got via a member of parliament. What I am asking is: will you be doing more than you have outlined in this respect?

Mr Haydon—Perhaps if you looked at the impact of the mass service disruption it might help—

Senator MACKAY—It was very pervasive in this instance.

Mr Haydon—They have been in the past, yes. The impact of a mass service disruption notice is that it is declaring to the public that Telstra is claiming that there are circumstances beyond its control that make it impossible for it to meet its commitment under the customer service guarantee. It does not give Telstra any reason to work less vigorously toward the repair of the services that are broken; it does mean, however, that when an MSD is in effect the customer is not entitled to compensation for the outage.

Senator MACKAY—Precisely.

Dr Horton—But would it be true to say that we are looking at the reasonability of trying to judge these MSDs in the past?

Senator MACKAY—Yes. That is my question.

Mr Haydon—To the extent that we can, yes. There are some quite severe boundaries around the kind of assessment that we can make without being part of the management team of Telstra.

Senator MACKAY—What severe boundaries are they?

Mr Haydon—We do not know the disposition of their work force, we do not know the nature of the faults in a particular locality, we do not have a means of assessing whether their management practices were the best available at the time, other than by reviewing it after the event.

Senator MACKAY—So you are constrained because essentially Telstra provide you with the information and you have no option but to say, ‘We had to take it at face value because of these constraints.’

Mr Haydon—Clearly, to the extent that we can we test it. I am just saying that there are some limitations on the extent to which we can test it.

Senator MACKAY—I think that is something that the ACA should have more power in relation to.

Dr Horton—Certainly Telstra are not constrained by the ACA in declaring a mass service disruption.

Senator MACKAY—That is right.

CHAIR—On that point, there has been a fair amount of evidence that Telstra's maintenance is being wound down for cost-saving reasons. Are these declarations showing any trends? Might you see that matching some sort of work force reduction with regard to maintenance? Is it your job to do that?

Dr Horton—This should not relate to maintenance but to catastrophic events or acts of God.

Senator MACKAY—That is the issue.

Dr Horton—Yes.

Senator MACKAY—The contention is that it is related to downsizing the work force et cetera.

Dr Horton—In our evaluation of the reasonableness of the assumptions of previous mass service disruptions, that is what we will be on the lookout for.

Senator MACKAY—So Telstra can declare a mass service disruption without recourse to anybody.

Dr Horton—Yes.

Mr Haydon—Of course, that is open to challenge.

Senator MACKAY—By whom?

Mr Haydon—By the customer, as it turns out.

Senator MACKAY—They have to try to meet Telstra's gigantic litigious team in order to make their point?

Dr Horton—It would be a huge challenge to an ordinary customer to do that.

Senator MACKAY—Indeed.

CHAIR—This is a bit out of left field, and I know it is a policy matter and probably you cannot answer it, but it occurred to me, listening to the circumstances of these small business people, that they lost hundreds of thousands of dollars by being off the air for a fortnight or whatever it was.

Senator MACKAY—And getting no compensation.

CHAIR—Getting \$30 a month for not having access to the line seems to be hardly worth bothering about. Do you have a view as to whether the CSG should be extended to something that more closely relates to the loss of profits and so on for small business in particular?

Dr Horton—There probably will be a point when the policy needs to be reviewed and revised, but we do not have a particular view on whether it is close to the actual costs incurred by customers.

CHAIR—It cannot possibly be, can it?

Dr Horton—I do not know.

CHAIR—Just the line rental—that is all they get back.

Senator MACKAY—In your capacity as independent regulator, is it your view that there are insufficient constraints or transparency on Telstra in relation to its capacity to clear mass service disruptions?

Dr Horton—There are virtually no constraints.

Senator MACKAY—Therefore, it is not good enough from your perspective.

Dr Horton—I do not know if it is good enough or not. Certainly, from the strength of feedback that we are getting, there is a lot of concern about it.

Senator MACKAY—I do not want to lead you, but you are the independent regulator. Is it your view that there should be some constraints or a more rigorous regimen?

Dr Horton—We would judge it to be not as strictly regulated as many of the things that we regulate.

Senator TCHEN—Senator Mackay asked a question that was in the back of my mind. Dr Horton, what you are saying, in effect, is that Telstra can come to ACA every day and say, ‘We have a mass service disruption in area A today; tomorrow we have one in area B; the day after we have one in area C. On the fourth day we have it right across the nation’, and there is nothing you can do about it?

Dr Horton—That is correct.

Mr Haydon—They notify. The way the regime works is that, if a circumstance is outside Telstra’s control, it is no longer bound by the condition of the CSG. An MSD is simply a notification that such a circumstance exists. Whether a circumstance exists or not is a matter of fact tested outside the MSD notification process and would ultimately be a matter for courts.

Dr Horton—It is challengeable, as Mr Haydon says, but the people who are on the receiving end of the MSD are not usually the sorts of people who would mount a challenge.

Senator TCHEN—What is the process of challenging? Does ACA challenge?

Dr Horton—No.

Senator TCHEN—Who challenges it?

Mr Haydon—The customer can claim that their particular circumstance is outside the conditions of the MSD and they can pursue that through the TIO in the first instance. Then it falls to the courts.

Senator TCHEN—And the onus of proof is on the challenger?

Mr Haydon—Yes.

Senator MACKAY—And the TIO is constrained in his powers, is he not?

Mr Haydon—He can form his own views. We do not need to do that for him.

Senator MACKAY—We will get him in front of us at some point.

Senator TCHEN—They are pretty good rules. I wish somebody would give me rules like this.

CHAIR—If I can suggest that, in any case, no-one is going to go to court over \$30 a month for a line rental, are they?

Dr Horton—No.

Senator MACKAY—Not against Telstra's legal team.

Dr Horton—There is the opportunity of class action, of course. That is about the only thing I could think of which would be palatable.

Senator TCHEN—Thank you; I am temporarily speechless.

CHAIR—Dr Horton and Mr Haydon, thank you very much for coming in. It has been useful.

Proceedings suspended from 1.08 p.m. to 2.11 p.m.

BROWN, Mr Ewan Dallas, Executive Director, Small Enterprise Telecommunications Centre Ltd

CHAIR—I welcome Mr Ewan Brown, Executive Director of the Small Enterprise Telecommunications Centre Ltd, known as SETEL. The committee has your submission before it, which we have already published. Are there any alterations or additions you want to make to that document at this stage?

Mr Brown—I have no alterations to the actual submission, but I do have a presentation.

CHAIR—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 specific questions in private you may ask to do so and the committee will consider your request. I now invite you make an opening statement, after which we will go to questions.

Mr Brown—SETEL considers that there are two fundamental issues affecting small business access to better, higher level telecommunications services in the country. Firstly, the majority of the national telecommunications network delivers services to small business and residential consumers based on the standard telephone service. We feel that is a fundamental impediment. It is rated at a minimum of 3,500 bps for analog voice and a recent ramp-up to 19,200 bps under the Internet access program. We consider that hardly sufficient for modern businesses or even for modern residential consumers to conduct their affairs in an appropriate manner, given the reach of telecommunications technology and infrastructure. The other concern is that most current consumer safeguards centre on this standard service, for example the customer service guarantee, the universal service obligation and untimed local call areas. There is a digital data service obligation, but it exists at considerable cost in both time and money for SMEs—both users and potential users. A significant amount of vastly underutilised wireless broadband infrastructure is available in Australia, but its effective use is constrained, largely by access issues and problems.

The second issue is that small business and residential consumers are not yet convinced that a value proposition exists for broadband or medium-speed services in this country. The complexity of the telecommunications marketplace is excessive from a consumer perspective: the preponderance of plans and offers generally creates confusion rather than offering realistic choice. Education and training can address this issue from a small business perspective, but users need to be convinced of the value of their investment in both time and money. To date there are insufficient applications available to convince many small businesses that it is worthwhile to progress to the next step in the e-commerce journey. SETEL has sought to address some of these concerns through its recent submissions to inquiries and its e-commerce report. These factors contribute to the digital divide, which is related not only to availability of technology but to access and affordability. At present the focus is on placing requirements on the market to deliver higher grade and higher speed services. SETEL believes that all three tiers of government can play a leadership role in promoting the roll-out and use of higher speed telecommunication services by providing subsidies, and facilitating more effective distribution and utilisation of their own services to the public at large throughout the nation. Commercial imperatives will operate to ensure that ubiquitous high-speed services are not made available to all Australians at reasonable prices or at prices commensurate with expected usage and benefits.

CHAIR—We heard before lunch from the Australian Communications Authority and we put questions to them about the confusing array of products, wholesalers and retailers, technology and the like. They said they were working on a kit designed for consumers. Have you been involved with the ACA in developing that kit? Do you have some views about whether it is possible to develop such a document that might be helpful to the people you represent?

Mr Brown—I certainly do have strong views in that respect. We advocated strongly through the TSI, or the Besley inquiry, that consumer organisations be funded appropriately to develop those kits. The recommendation was taken up, but the ACA was funded to do it at a far higher cost than we envisaged. We are rather pleased with the first project—the Mobile Tool Kit—which was developed at a cost of about \$1 million, whereas we were proposing something in the order of \$300,000 with a more user-friendly format. But we are rather happy with the result of that and are looking forward to the next two projects, one in particular relating to Internet and we are not sure what future services will come out. We do get involved in the latter stages, probably immediately pre launch. We are happy that it is moving in the right direction. It is addressing some of those concerns.

CHAIR—You say it is addressing some of your concerns. What would address the rest of your concerns?

Mr Brown—Partly, addressing the operation of the self-regulatory network. SETEL is also heavily involved in the ACIF process where we are trying to craft codes of conduct and guidelines. We are gradually moving to a greater awareness that consumers need to move beyond the industry hype and the fact that the industry participants think they have products and services that meet the needs of consumers. In some respects industry are not really listening to the real needs of consumers to ascertain precisely what they need. They are delivering services that they think they should utilise, and they are also tending to package them and bundle them in such a way that it is almost impossible to discern what the real benefits are. You cannot compare like products.

So through that ACIF process, we are trying to produce consumer friendly material that will help them understand what is involved. For example, last week we finished off guidelines on unfair terms on contracts. I was the leader of a small group that wrote a consumer brochure to try and advise them on how to determine whether a contract term was unfair. The major sticking point was that I could not get past the industry bloc to tell them where to get advice—that is, going to a consumer legal centre or some other referral bureau. In some respects the self-regulatory process, because it is an industry run body, tends to look after its own.

CHAIR—So if it were to be less self-regulatory or more regulatory, what would you like to see the committee recommend with regard to regulation?

Mr Brown—In many respects, I have expressed significant concern that the regulators do not act quickly enough in relation to poor performers in the telco market, and even the ISP market. There is a tendency to wait until a significant number of complaints have been received before an issue is dealt with. The ACCC tends to put their benchmark far higher. In many respects, we are dealing with breaches of trade practices legislation rather than trying to craft higher level benchmarks in industry codes. We have a two-part structure that is supposed to provide consumer safeguards but the biggest concern is that the regulators are not acting quickly enough. I am on the TIO council and we have that sort of problem too with the regulators not

jumping in, naming names, nailing hides on the wall and saying, ‘This is a bad example to consumers’ so consumers can at least identify some who are not performing properly rather than having to work it out for themselves and understand the complexities.

CHAIR—We talked earlier today as well about the CSG and how effective that is in protecting consumers from the costs of the system going down or not having a line. Does your organisation have a view about whether there needs to be reform of that system so that it takes into account more than the monthly line rental?

Mr Brown—We have advocated for differential penalties in relation to small business, mainly because of consequential loss and the greater impact of the slowness of either to repair a fault or to provide a service. That has not been accepted. I did manage to get the switched component for small business—up to five lines or less—introduced into legislation. That was a significant improvement, but they did not take much notice of the higher level penalties. There are still significant concerns because small business are often exhorted to put on extra lines—separate lines for fax and separate lines for Internet access. We are finding that the lack of provisioning of the network at the moment means that it is not providing adequate and speedy access to a lot of new customers, particularly in older urban areas. We are also finding that we have significant problems with the marketing hype and the realisation that services are available in relation to high-level services like ADSL but are not covered by the customer service guarantee. The real concern with the customer service guarantee is that it relates to the standard telephone service. That is yesterday’s technology; it is not really relevant to a majority of small businesses because they want more than just a good performing voice service.

Senator LUNDY—I am interested in the comments you made in your submission about the 19.2 kilobits per second—or however many bits per second it is—being hardly an appropriate level. I would like you to expand on that and, perhaps for the committee’s benefit, to give a more tangible insight into how slow that actually is, for example, in using the web or downloading files from the Internet. That figure has been bandied around a lot lately, and so it would be very useful to get a more tangible sense of just how slow 19.2 kilobits per second is.

Mr Brown—It may be suitable in terms of gaining information which you do not have an immediate need for, so it is almost like a stand-by service, as I would call it. It can be adequate for basic fax, because fax was generally rated about 9,600 under the older scale. But as more and more businesses start to use email for their communications and start to use the Internet, even 19,200 will not download a page of graphics with a reasonable degree of speed, and often it results in time-outs. In relation to the needs of people in rural communities, if they want to look at weather maps or anything that involves some form of graphics, 19,200 will either time out or take so long to download that they just get frustrated. From a time situation, small business really cannot afford to hang around a machine, waiting for that material—particularly in terms of the Internet.

It is also associated with the local point of presence and the need for regular dial-ups, because some ISPs have reasonable use policies, and that can be on a time factor as well. So you might find there is a drop-out while you are waiting for a document, and you have to dial in again. In effect, you have got to download the whole document again and try to get it through. It can be an hour-long task to get a reasonable sized document through. A good example of that is from several years ago when one of our members tried to persuade their local managers to encourage the telcos in the area to provide coverage maps for mobile data, which are full of coloured

shadings. Our general response was that that would be a total waste of time because most of the time it would not come through at the speeds available, even at 19.2.

Senator LUNDY—We are gradually getting more and more information about the precise limitations on connection speeds through Telstra's use of pair gains and, as we heard yesterday, about systems much larger than pair gains that can also restrict Internet connection speeds. Is your organisation able to help your members get their heads around what their speed limitations are? Do you provide that sort of service? I know it is a point of frustration, but we are hearing that there are not too many sources of information from which frustrated Internet users can find out more. What role has SETEL played in demystifying some of the technology that your members are confronting?

Mr Brown—Our role is mainly an educative one. We are a small organisation—and at the moment it is myself, because of limits in funding, and there is a whole raft of issues to look after. We have developed a template, which is designed to be passed on to our member organisations who can then pass it on to all their small business members as a service, to identify some of the terminology used and highlight some of the questions they ask. For example, we are told that our area out at Gungahlin can have ADSL from the local exchange. If I go into the broadband exchange web site and punch in my number, it says I can get it; but, if I apply to Telstra, they will tell me it is not available. They do not tell me why or how it is not available. A similar circumstance occurred in the last week or so with one of my directors based on the Gold Coast. He had seen very attractive ads for ADSL and wanted to put it on. He asked for some details and was told that it is not available on his number, let alone his line.

Senator LUNDY—So pair gain, even though the exchange was enabled. I had better stop there because I know that others will want to ask questions.

Senator TCHEN—Can you tell us what your actual membership is? I know you said that the sector exceeds 600,000 small businesses, but I notice you very carefully do not say you represent 600,000 small businesses. What is your actual membership, your coverage?

Mr Brown—Our membership is mainly industry associations who have members in the small business sector. We find it is far more efficient to operate that way rather than dealing on an individual membership basis, although we do have that facility. We have a block membership with the small business coalition, which has 39 small business associations, and we have other small business associations and members, academics and any interested small business operators that want to join SETEL and make use of the benefits of membership. We maintain that we have a coverage of 600,000 to 700,000 through the multiplier effect.

Senator TCHEN—So are you the sector's peak representative body?

Mr Brown—Yes.

Senator TCHEN—Are you represented on the Broadband Advisory Group?

Mr Brown—No. I was a member of the national information economy advisory council but was not appointed to the Broadband Advisory Group. I have been asked to participate from time to time where there are matters of relevance but I am not a formal member.

Senator TCHEN—Do the consumer representatives on the Broadband Advisory Group not directly represent your interests?

Mr Brown—I do not think there are any real consumer representatives.

CHAIR—ATUG is on it.

Mr Brown—We have close liaison with ATUG and SPAN and have regular dealings with both Rosemary Sinclair and Phil Singleton, but specific representation of SME interests does not exist.

Senator TCHEN—Are you happy with the way the advisory group are perceiving and representing your concerns?

Mr Brown—I am not happy. I am not sure that they are addressing them in the manner in which I had hoped they would. We have certainly had significant input into publications like the *Broadband state of play* and followed a similar theme of the lack of applications available for small business in terms of broadband services. One of the reasons that we were inspired to progress the SME e-commerce report was that we thought that too much focus was on the higher level deliverables and there were too few small businesses actually at the stage to make use of it.

Senator TCHEN—It seems to me that it may be a matter for concern because consumer groups do not normally consider small business as consumers. Usually they are regarded as black hats rather than white hats.

Mr Brown—We have good representational recognition that small business is a separate class of consumer in telecommunications. It is recognised through the TIO scheme, ACIF and the whole self-regulatory process.

Senator TCHEN—In appendix 1, page 21, of your submission, you mention eight key findings in the e-commerce report. Are you able to elaborate on each of these and indicate which ones are relevant to this inquiry?

Mr Brown—All the dot points?

Senator TCHEN—Firstly, could you identify which ones you think are relevant? You covered a very broad field.

Mr Brown—A lot of the content of the report was, in some respects, trying to state the obvious as we saw it.

Senator TCHEN—It never hurts to state the obvious.

Mr Brown—The legislators and the policy makers were not aware of the real factors affecting small business. We wanted to get the message across that small business are time poor. We have a lot of trouble even convincing small business that e-commerce and telecommunications are vital components of their day-to-day operations. They often see it as too

difficult to try to develop that expertise. We saw a need to garner some external help. We wanted to change the focus of the government's attitude towards e-commerce. They initially saw that e-commerce was a marvellous opportunity for SMEs to expand their business, become involved in the global marketplace and move into areas that were like a minefield. They did not have the expertise. So we were trying to dispel the myth that there was a golden egg out there with e-commerce for small business.

We also found that they need substantial encouragement to become productively involved in e-commerce. That is a corollary to the outcome of this inquiry by providing the better services. The lack of access to broadband and higher level services is seen to be an impediment, but it is not the sole impediment. We do not want to see an overly grand focus on e-commerce. From the GST model, we saw the involvement of industry associations contributing significantly to the success of the uptake of all the GST material that came through. We recognise that, unlike what would have been the case with the introduction of the GST, the lack of speed of uptake of e-commerce is not a national disaster, but we still think that there can be a facilitating role played by industry associations provided they are resourced to do so.

We want to get the message through to the suppliers that they have to get away from the technology-speak and stop confusing the end user. They cannot come up to speed or even keep pace with what is happening in the marketplace, let alone understand what is available now—it is too complex. We see governments and industry having a role in demystifying e-commerce, and we also believe that they have substantial benefits to gain from delivering their services more efficiently through higher bandwidth services so that we can have a clever country, we can have education and health delivery online and we can have businesses and residential consumers complying with all the government requirements, memberships or whatever online.

We need to get the message across that SMEs have to learn. I had hoped that as e-commerce emerged there might be an intermediary sector that would help small businesses address a lot of the technical aspects. That has not arisen; we do not have that situation, because of the so-called competitive marketplace environment. It is essentially left to the end user to make that informed decision. We do not have the intermediaries providing the level of expertise and the assistance that would speed up the whole process. We have identified training and technology as particularly important and we are intending to focus those representations to the small business minister.

At least one-third of our recommendations were on education and training because we saw that that was substantially remiss in terms of a lot of the products and services in the training sector. We believe that once you have a skilled-up small business operator they have a greater awareness of the new technologies and they can assimilate the material. Reinforcing that concept of the value proposition was the strongest theme that came out of the whole exercise. But, again, they need leadership and assistance—and we are calling for higher-level government leadership, so that is something that may come out of this inquiry. In terms of assistance, handouts were not accepted as a viable means. Subsidies and taxation benefits were probably rejected as possible measures, but they were certainly seen as some way to enable SMEs to afford the material to encourage them to address that value proposition issue.

We saw a lot of relevance in coordination and promotion of government initiatives. We recognise that there have been some important government initiatives in terms of trying to improve telecommunications throughout the country, but we find that they almost hit a brick

wall. They establish technology and infrastructure but then there is no ongoing promotion and demand aggregation in the areas where the major benefits could occur. In a sense, we want to get more people involved in the regions to say, 'We've got ownership of this infrastructure. We can do something with it to make our regional businesses and our regional community thrive.' That was a significant recommendation and it was why we wanted more coordination, promotion and reporting of those industry initiatives. Plus, the other factor we have tended to find out through research is that nearly every new project is a greenfield project and no-one is providing the right sorts of templates and advice to help new starters move further up the scale when they actually start, rather than their having to reinvent the wheel every time.

There is also a tendency to cover off the big business needs of the higher end of the market first, particularly with standardisation of protocols et cetera. We see that as being relevant in the longer term as it flows through to the small business sector, but a key message is that scaled-down big business solutions do not necessarily work for SMEs. This can apply particularly to government purchasing. If you set the benchmark too high, you exclude a lot of potential small businesses who want to participate in government procurement programs, and even in national supply chains. We have been doing a bit of work with those people as well, letting them know what the real small business needs are. That is the main thrust of those particular recommendations.

Senator TCHEN—Can you make some comment about the supply side issues in terms of the service that is provided to you? I know you answered some of these questions in specific queries that were put forward by Senator Lundy, but can you talk about them more generally? Eventually in the marketplace there will be more than one supplier; there already is more than one supplier.

Mr Brown—One of the comments I made in my initial statement was that there is a wealth of broadband infrastructure around the country. One of the impediments we see is the access to the last or second last mile, where it is not seen to be viable to connect the home or the business with that high-speed broadband infrastructure. I also said that there are not sufficient applications available at the moment, nor is there sufficient expertise in the majority of SMEs, to be able to immediately take advantage of that access if it were made available.

In some respects we want to see a competitive marketplace existing throughout the country. If it is not available, we want to see specific requirements made on a single supplier and, maybe if it is a USO supplier, with a higher grade USO providing higher level services. It tends to be a little bit piecemeal at the moment, in terms of the options available. If you cannot connect via a fixed line, you are immediately offered a satellite service. You can have a mobile satellite service that really maybe addresses one particular user. Once it becomes in the mobile mode, it is not available for, say, an office circumstance in the home or in the property.

Senator TCHEN—Why is that?

Mr Brown—It is related to the mobile handsets. If it is switched into a mobile voice mode and someone takes it away from, say, a base station, it is not available for other applications in the home.

Senator TCHEN—That is the satellite system?

Mr Brown—Yes. We have not seen programs that really meet the full needs of all the users once they get encouragement to take them on board. We would like to see more providers competing in the marketplace or having a basic suite of services that suits the needs of the user in a business context. In a sense, what we are trying to push is that the applications that would require that bandwidth probably apply to a fixed office environment as much as the mobile environment. It has to cover voice and data. It has to cover a whole range of services, like access to banking, transmission of material to accountants et cetera, if we want to make full use of that value proposition.

Senator TCHEN—Thank you.

Senator MACKAY—Do I have time for a question?

CHAIR—A quick one.

Senator MACKAY—Just going to your direct responses to our terms of reference in your submission on pages 13 through to 15: you make some fairly telling comments in relation to the lack of competition within the existing regime. We have had evidence before us so far that one of the ways—and you referred to this a little bit earlier—that may be most appropriate to address this rather than look at constructing alternative models would be to basically empower the ACCC more than it currently is. Presumably that would cause some consequential amendments to the Trade Practices Act. Some witnesses have put that to us because their contention is that every time you attempt to establish an alternative regulatory model you get people attempting to pull it apart, including people involved in politics. What is your comment in relation to the ACCC as a strengthened regulator?

Mr Brown—It is very hard to apply pure economic logic to the circumstances in Australia. We feel as though the issues affecting the sale of the remainder of Telstra tend to blur the circumstances to a degree. We are finding that, even with the operation of the ACCC, given that it can be fairly slow in providing access to alternative providers, you still have the first mover advantage from the incumbent. They can change wholesale pricing. They can affect a competitor's pricing regime if it is through an access arrangement.

Senator MACKAY—Just to be clear, in theory the ACCC could impose—by amendments to the Trade Practices Act—a more thorough regulatory and competitive regime than is currently constituted. That is the way the argument goes. If we wait for an alternative model that everybody agrees to, either in a privatised or non-privatised format, we could be waiting till the cows come home. But it may well be in the interim that some of this non-competitive behaviour that you have identified could be addressed by the ACCC and amendments to the Trade Practices Act through the current Dawson review.

Mr Brown—My perception is that the way we are heading in Australia is not the right one. In many respects, we have tried to address it with the simple allusion to everybody having a bigger share of the bigger pie. So the education and training aspect is that we can accommodate more providers and different forms of technology. In a sense, we want to get away from the technology myth as well and to say to a user, 'You can have access to a high-speed service. You do not have to know whether it is a 128-kilobyte or a 250-kilobyte broadband service. As long as you know that it will provide the speeds you desire, it will give you all the services you want and you can shop around and choose whether it be by satellite, mobile means or fixed line.' That

is why we were suggesting a differential approach to the USO, for example—so that we take it out of the commercial environment to a degree. We are finding that the current competitors in the marketplace will cherry pick. People in CBDs have marvellous access to a range of services. People in rural and remote areas probably now have better access to services. The poor cousins are probably going to be the people in the outer metropolitan areas and the small business and residential consumers in the older metropolitan areas. We are seeking a technologically neutral solution that will encourage the commercial sectors to operate. One concern I have is that a lot of the competitors are not really putting their money where their mouth is in offering a full suite of services. Part of that is due to the fact that they cannot get access for resale at the moment. But we do not have a competitor with sufficiently deep pockets to provide a duplicated network, and I do not think we need it. Really, what we want is some efficient utilisation of the infrastructure that we have available at the moment.

Senator MACKAY—I guess that comes back to the point you have made about a national vision and some sort of integration across the three levels of government—rather than a piecemeal approach to this issue, a more comprehensive approach involving the three levels of government and industry. Would that be fair?

Mr Brown—That would be fair. But, adding to that, you also encourage the demand side to make greater use of it. The best way to gain efficiencies is to have far higher usage.

Senator MACKAY—Thank you.

CHAIR—Thank you very much, Mr Brown. Before the committee adjourns, I would like to acknowledge the task force recommendations that you have provided. The committee appreciates them and thinks they will be useful. I thank all the witnesses who have appeared before the committee today.

Committee adjourned at 2.47 p.m.