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HOUSE OF REPRESENTATIVES

STANDING COMMITTEE ON COMMUNICATIONS, INFORMATION TECHNOLOGY AND THE ARTS

Reference: Wireless broadband technologies

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SYDNEY

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HOUSE OF REPRESENTATIVES

STANDING COMMITTEE ON COMMUNICATIONS, INFORMATION TECHNOLOGY AND THE ARTS

Friday, 14 June 2002

Members: Mr Pyne *(Chair)*, Mr Hatton *(Deputy Chair)*, Mr Baldwin, Mr Ciobo, Ms Grierson, Mr Johnson, Mrs May, Mr Pearce, Mr Sercombe and Mr Tanner

Members in attendance: Mr Ciobo, Mr Hatton, Mr Johnson, Mr Pearce and Mr Pyne

Terms of reference for the inquiry:

To inquire into and report on the current and potential use of wireless technologies to provide broadband communication services in Australia, including regional Australia, having particular regard to the following:

- The current rollout of wireless broadband technologies in Australia and overseas including wireless LAN (using the 802.11 standard), 3G (eg UMTS, W-CDMA), bluetooth, LMDS, MMDS, wireless local loop (WLL) and satellite;
- The inter-relationship between the various types of wireless broadband technologies;
- The benefits and limitations on the use of wireless broadband technologies compared with cable and copper based broadband delivery platforms;
- The potential for wireless broadband technologies to provide a 'last mile' broadband solution, particularly in rural and regional areas, and to encourage the development and use of broadband content applications;
- The effect of the telecommunications regulatory regime, including spectrum regulation, on the development and use of wireless broadband technologies, in particular the Radiocommunications Act (1992) the Telecommunications Act (1997), and Parts XIB and XIC of the Trade Practices Act:
- Whether Government should make any changes to the telecommunications regulatory regime to ensure that Australia extracts the maximum economic and social benefits from the use of wireless broadband technologies; and
- Likely future national and international trends in the development and use of wireless broadband technologies.

WITNESSES

Committee met at 9.03 a.m.

BAKER, Mr Gregory David, Chief Executive Officer, Institute for Open Systems Technologies

CHAIR—I declare open this meeting of the House of Representatives Standing Committee on Communications, Information Technology and the Arts. Today the committee will take evidence as part of our inquiry into wireless broadband technologies. First of all I welcome Mr Greg Baker from the Institute for Open Systems Technologies. Although the committee does not require you to give evidence under oath, I should advise you that the hearings are legal proceedings of the parliament and warrant the same respect as proceedings of the House. The giving of false or misleading evidence is a serious matter and may be regarded as a contempt of parliament. Would you like to make any opening remarks before we proceed to questions?

Mr Baker—I apologise for the enormous tome. I hope it was not too heavy a body of work to read.

CHAIR—No, not at all.

Mr JOHNSON—It is very comprehensive, actually.

Mr Baker—I suppose the nub of what I was trying to say in that is that, if an organisation wants to set up a public wireless access network—something that is open for anyone to send data on at no cost—we should not be requiring those kinds of organisations to get carrier licences, or at least we should not be requiring them to get full carrier licences with the full obligations required of them. The reason for that is twofold. Firstly, a public wireless access network is in some sense a community service, forwarding data for large numbers of networks, so we do not want to be taxing that, in any way, if we can avoid it. Secondly, the main reason we have carrier licences is to control interference. For a number of reasons, interference is not going to be a big problem when it comes to these public wireless access networks, and let me briefly say why.

Suppose we had a public wireless access network in place already. Nobody is going to come along and create another network in exactly the same place at exactly the same frequency and then complain about interference, because they would simply use the existing network. So interference is not going to happen, which means the requirement of having carrier licences to keep interference under control is going to be irrelevant. Secondly, there is only going to be one public wireless access network in any given location because nobody is going to duplicate effort. So we are not going to find ourselves with a problem of other commercial networks at the same time being interfered with by the public wireless access networks, because it will be obvious what frequency they are on and it is easy enough just to work around that.

If we can do something about the expense and the effort of getting carrier licences for public wireless access networks, I believe we can actually make real headway into the last mile problem. Normally, if I am a consumer and I want to get access to high-speed broadband, I sit and wait and hope that some big company might run some cable past my door or upgrade the local exchange hoping that there are more customers like me out there. So it is very difficult for the big companies to actually know where to put their broadband services and it is very difficult

for consumers to get them. With wireless, things become very different; in fact the whole equation is flipped over. Let me give you a quick scenario to explain what happens that is different. Suppose we have two small country towns: there is an ISP in one of them but not in the other. You are living in the other town, so you get together with a few of your friends and between you find a few hundred dollars to buy some wireless cards and an antenna. You point the antenna in the general direction of the town with the ISP and instantly you and your friends have broadband access.

We are only talking a few hundred dollars; it is the kind of money that we can ask a group of individuals to put together—even an individual on their own—or a town council or a community group. What you will notice there is that the ISP has suddenly gained a whole series of customers that it otherwise never would have had—broadband customers at that—and it has not had to have any capital outlay. That works because the individuals who wanted to set up the antenna set it up as a public wireless access network and did not have to then go and spend $10,000 minimum on a carrier licence; they just had to spend a couple of hundred dollars on equipment that already has class licensing anyway. The ISP is very happy with this because even though the wireless portion of the network might be public access it can still charge customers for running an email server, a proxy server or something along those lines. So there are still ways for the ISP to derive revenue, but the carriers are in a privileged position for making revenue because they can also charge for data access. This kind of compromise means that the existing carriers still keep the same regulatory environment and the investment they have made is still valuable, but we have also opened the market up so that consumers can get control over their own broadband destiny.

In the enormous tome I submitted, I looked at the sort of speed we could expect from a public wireless access network. It is not good. It is not as good as you would be able to get from cable, ADSL or dedicated connections, but it is probably going to be better than what you would get from the existing dial-up modem system. The important factor is that it is far cheaper. At the moment the big cost for an ISP is in having zillions of dial-up lines. If you have public wireless access networks everywhere, an ISP merely needs a point of presence in one of those public wireless access networks and then it can service the customers.

So we would find, if we could go through with the amendment that I suggested, that suddenly we would have a universal medium. It is a technology that will allow rural and regional Australia much better broadband access and will be much better for suburbs as well and, more significantly, it will bring the price of Internet access down to a point where it will be available to people it never would have been available to before. Roughly speaking, I do not see why it could not hit $4 or $5 a month for permanent access, if we are using wireless networks. As I said, it will not be high speed, but it will be very cheap and universal. That is the sort of technology we will need if we are going to bridge the digital divide and make sure that there are no lost opportunities. As far as I can tell, there is no other technology that can give us that universality and I do not know of anything that is even on the drawing board that is going to do that. This is basically the one technology we can do this with. I hope that explains why I tortured you with vast quantities of paper and what I think the proposal is trying to achieve.

CHAIR—With respect to interference, you said that it would be illogical for someone to come along and run the same public wireless access network in the same spot as somebody else who was already doing it, so it just would not happen. But, given human nature, what if

someone decided that the person running the public wireless access network was not doing a good enough job and that they could do better, so they did run a second one and tried to get people to come over to their network? Why would that not happen? That is what usually happens when there is no control.

Mr Baker—It would not happen because it is open access anyway. What can you complain about? They are not doing a good job of running the network but does it transfer data correctly? Yes. That is it; end of story. There is no way you can run it well or badly.

CHAIR—You could run it faster, perhaps.

Mr Baker—No, because the limitation of the technology says it is 11 megabits a second.

CHAIR—What if somebody has a certain kind of technology which allows them to run the public wireless access network in that local area and their technology becomes out of date? The next person comes along and says, 'We can run it,' and the other person says, 'I am still getting reasonable speed. I am going to stay in this area and you can take me on if you want to, but we will see who decides to take up your service.' Then you could have six or seven different people doing the same thing, with new technology, all the time.

Mr Baker—Indeed. The new technologies that come along will probably be at different frequencies. In order to get more bandwith through wireless networks, it will have to be at a frequency spectrum other than 2.4 gigahertz. I think 802.11a is being proposed at over five gigahertz and that is fast technology. So, yes, maybe we will have an old public wireless access network and then a new one will arrive that will be the next frequency spectrum up, but they will not interfere because they are several gigahertz apart.

CHAIR—Therefore, it is not true to say that there will only ever be one public wireless access network.

Mr Baker—There will only ever be one within one frequency spectrum range. A better way to put it is that there will only be one using any given technology.

CHAIR—That is right. Are there any questions?

Mr HATTON—Regarding speeds, it was useful to have calculations such as 11 megabits a second—that is real.

Mr Baker—They are very rough.

Mr HATTON—But it is useful to have them, in particular for the telephony stuff. You would end up with only about 25 people, therefore it is not viable and people would probably use it just for data and so on. You mentioned that with the technology down the track the order of magnitude becomes much greater because it would be running at about 150 megabits a second. Is that in the five gigahertz band?

Mr Baker—I think it is in the five to seven gigahertz band but, as far as I know, it is not yet licensed in Australia. The equipment to do that has not yet passed class licensing.

Mr HATTON—So it is not the B; it is A.

Mr Baker—Yes.

Mr HATTON—Then we will have a series of iterations—G and whatever else.

Mr Baker—Yes, probably, for gradually cranking up the spectrum.

CHAIR—And G is proposed to operate at the same frequency as A.

Mr Baker—Yes. While not interoperable, they are supposed to time-slice in such a way that a G sending and an A sending can divide the time efficiently between them.

Mr HATTON—Who is going to pump the information from one area to another? Here are a couple of country towns; if you set up a mesh around those, the critical thing is getting the information there. You have to have either an optical fibre network relatively close or a satellite pumping a town or national transmission lines have to be close and pumping it. How do you envisage that happening?

Mr Baker—I think we will end up with a bunch of little islands which are not mesh connected. They will be connected via other things. I expect you will probably find that ISPs will set up in each little island and, if you want to get from your island to another island, you will essentially have to go through the Internet, which the ISP will then charge for. That is the same situation that we have at the moment. How do you send data from country town 1 to country town 2? You send it over the Internet and it gets charged for at the usual rates. I do not think anything will really change there. I think it will still be the same transfers that we have at the moment.

Mr HATTON—So the system is then systemically contiguous. If you take one bit out, it falls apart. If you cannot get access, if you have these different islands that are getting a service, but all of a sudden the connection between point A and point B—which is running past, providing that Internet connection—falls out and the people providing this service are no longer providing it, you then have nothing for those towns. It is great to have a wireless network, but, if you have not got a junction point or a nodal point, then you have a difficulty.

Mr Baker—I think you would find that you would have several nodal points between every island. I envisage that you will have an island and probably several ISPs' points of presence in that island. You would then connect to any of those to send data outside of that island, wherever that was going to be. If you were in an adjacent mesh going from one network to the next network and one of those networks fell apart, yes, you would have a problem. But, on the other hand, the dynamic routing means that if you have enough networks together there will be some path to get through, even if it is slower.

Mr HATTON—It is a bit like the Internet.

Mr Baker—Exactly. It would be Internet protocols that people would use anyway, so it would route in the same way as the Internet, only there would be much better redundancy than there is on the Internet at the moment. I might have A connected to B and C and D and E to get to F, so, instead of just two-way redundancy, we might be finding five- or 10-way redundancy.

Mr HATTON—Because it is almost costless, apart from buying the equipment to get into it, you envisage that most of it will be done by omnidirectional wireless—

Mr Baker—Probably.

Mr HATTON—until you get to the point where the congestion is so great that you need point-to-point stuff.

Mr Baker—Yes.

Mr HATTON—Why wouldn't another model operate where a lot of it was done by directional to particular nodal points?

Mr Baker—That is entirely possible too.

Mr HATTON—Is there a greater cost in doing it that way?

Mr Baker—No, not really. The directional antennas are a little bit more expensive than omnidirectional antennas simply because there is more metal in a dish than in a pole. I think a directional antenna is about $240 and an omnidirectional antenna is about $150. And you can make these things out of Pringles cans, so—

Mr HATTON—It can be done.

Mr Baker—It can be done.

Mr HATTON—How much interference do you think there is going to be? In the paper you indicate that you think most of that would be worked out and you could get beyond the congestion. But would you get beyond the interference between different providers or would the mesh just operate? Most of the stuff we have had in relation to this says that the more people you get in the game—the more that are on—the more congestion you get and also the greater the amounts of interference.

Mr Baker—Yes, and the reason they are saying that is that they are envisaging that there will be lots of different networks on at the same time and in the same place but, as I said, there is only going to be one public wireless access network in any given frequency spectrum, so there is going to be nothing to have interference with. I have forgotten what your question was already.

Mr HATTON—That is all right. I will go to the next one because I probably have as well. You have given some indication that you think that there would be a presence for this also in major metropolitan areas like Sydney and so on where they had the capacity to do it.

Mr Baker—Yes.

Mr HATTON—Given that our major problem seems to be in rural and remote areas—and a lot of people who have given evidence so far have said they do not think anyone is going to do it unless it is going to be subsidised in some way—would it be reasonable to look at locking out the major cities for this kind of public wireless access? Could you say that, if we are going to run these sorts of nets, either you do it as a dedicated system, where it is completely licensed, or you do it as a mesh type system, but this is for the remote areas?

Mr Baker—I have thought about that long and hard. I think you do not want to do that, simply because the cities give you that critical mass of people doing it. For example, I probably would not have got involved in wireless networks unless there had been zillions of people around me doing the same thing, but now I am going to be helping my brother-in-law in Peak Hill set up these kinds of networks. If we had said that it could not be done in the cities at all, then I probably would not have done that. That means that I would not have been telling my brother-in-law what to do, so Peak Hill would never have got it. I think you need to have the people in the cities doing it—and getting inefficient access—to make sure that the manufacturers want to make equipment that there is a market for and to make sure that the knowledge base and information about how to do it are out there and that the ISPs know that it is a worthwhile thing to do. Then it hopefully spills over.

Mr HATTON—I am interested in the name of your organisation: the Institute for Open Systems Technologies. It almost sounds like a think tank. It is just a company?

Mr Baker—It is just a company.

Mr HATTON—It is not broader than that?

Mr Baker—No.

Mr HATTON—It is just a smart name for it. In terms of how you would envisage it operating in the city or country or whatever, if it is only a couple of hundred bucks to buy the antennas or set up the stuff, does that mean you are paying a relatively low price for insecurity in terms of the information that you are going to pump through this? Do you need encryption to provide the privacy? Is it going to be a similar situation to the old-style party lines in the country, with the person sitting there plugging people in but listening in to everything that is happening? The equipment that people could buy cheaply is insecure, isn't it? Do you have to pay more money to make sure this system is secure?

Mr Baker—Wireless networks are hopelessly insecure regardless of what you do. With the data that is going to be sent across, it is not only the person in the middle who can listen on a party line; every single person in the whole town can listen in on all the data that is going past.

Mr HATTON—A bit like '*Peyton Place* comes to regional Australia'.

Mr Baker—It is the same as the Internet. Pretty much every piece of traffic there is unencrypted. Do you need special equipment to encrypt it? No, most of the things that you buy do have encryption, but with most of the things that you buy the encryption is so bad that it is

not worth bothering. Are there things that you can do about it? Yes, there are. You do encryption at your computer and you just use secure protocols across an insecure network. We have been doing that across the Internet for five or 10 years now.

Mr HATTON—But one of the big problems with that is people know encryption is around but they do not really understand it. You can have it point to point pretty easily, but if you wanted to actually secure that mesh, you would need some kind of mechanism, wouldn't you, where you would actually push that?

Mr Baker—Mostly, I do not think it is going to be possible. I do not think you would find a mechanism that could have everybody having encryption that nobody else could sniff on and keep track of all the keys. I do not think it is going to be viable and I do not think it matters anyway. If every piece of data that you send is public information, you will just make sure that the kinds of things that you do are not such private matters. For example, you browse the web; across the Internet you never worry about the fact that every web site that you are seeing is able to be tracked. I think the same thing is going to happen. People just will not worry about that. Should we do so? Possibly we should, but I do not think there are any options there.

CHAIR—We have had evidence from other people who say that their companies are using wireless to communicate within their companies. They would not be doing that if it was not able to be secure. I think your statement that everything you do on the web is pretty insecure anyway is a bit of a wild generalisation, don't you?

Mr Baker—Yes. Because they control both ends of the link, they can happily organise the encryption very well.

CHAIR—But you would not be able to do that with yours?

Mr Baker—No, we would not be able to do that because there is not any one person owning both ends of the link. It would be possible to put encryption on, but how are you going to distribute the keys? Are you going to announce them to everyone? In which case, what is the point of having keys?

Mr HATTON—Unless you use public keys and pretty good privacy stuff.

Mr Baker—Yes, which you can use over an insecure network anyway.

CHAIR—Your public wireless access networks are not going to be used for corporations, businesses and people who want to do secure things; they are just for people who want to play games, visit the web and Internet pages and all that sort of stuff.

Mr Baker—Residential Internet access.

CHAIR—So it is a very limited kind of interest that it is going to be used for. A lot of people use it for that purpose, of course, but it is not going to be able to be used for other things.

Mr Baker—I do not think it would be worth while. If a company were wanting to get a point-to-point link using wireless technologies, they would set it up themselves. They would not trust the public access network's unreliable hopping from one network to the next. It is just not a viable thing to do, if you are trying to set up a stable network.

CHAIR—Isn't your proposal inherently unstable in any event, if you can hop from one to the other and you have to rely on the one you are hopping to to work?

Mr Baker—Yes, it is extremely unstable.

CHAIR—So that is a given?

Mr Baker—Yes, so I do not think that companies are going to want to rely on something where there is no accountability as to whether or not the data gets there. It probably will get there, as long as a couple of things do not happen along the way.

CHAIR—That is not a very good selling point, is it?

Mr Baker—No, it's not.

CHAIR—'It probably will get there, as long as a few things happen along the way.'

Mr Baker—You would not want to send your school project in on a public access network.

Mr HATTON—It is a different version from, 'I forgot it. It's at home.'

CHAIR—'I sent it on a public access network. Goodness knows where it is now.'

Mr Baker—Or 'The network is so slow, it is still making it's way here from last week.' I do not think that companies are going to be particularly interested; I think it is going to be mainly residential and small businesses who are happy to make that trade-off by getting it much cheaper though much less reliable. There will be situations where they will be completely happy with that.

Mr HATTON—If that system was out there and was clogging up the space, a company that could come along and say, 'Okay, we've got a proprietary system here that could do it,' would not be able to do it—unless you went onto a different band to five gigahertz or whatever. The alternative is that you could mandate that there is going to be a contract, that regional areas are going to get this kind of access, that the company can do it and that they are the only ones who are allowed to do it, but they would not be able to unless they operated on a different band, would they?

Mr Baker—Within the 2.4 gigahertz frequency spectrum, there are at least 11 frequency sets that you can use. The equipment dynamically finds the frequency set that is not being used at the moment, though only one of those is going to be used by a public wireless access network in any given collection of them. If another company wants to come along and set up equipment, they will keep one of the others in the 11. Yes, we will have a problem, if we start getting 10

commercial organisations out there competing plus a public wireless access network and somebody else wants to come along. But I do not think there is much chance of 10 companies operating networks in the same place at the same time.

Mr HATTON—The point that the chair brought up in terms of businesses out in regional Australia is that—and some of those would be small or medium and some might be a bit bigger—there would be a lot of pretty small businesses and individuals who might want to use this service because it is the only one there. They could fix their problem in terms of security, if they had an agreement with the people who they were sending the information to that they would encrypt from one end to the other.

Mr Baker—Yes.

Mr HATTON—That would solve their problem, as long as it actually got there.

Mr Baker—Yes. In rural areas it is much more likely to, because the cells are going to be less dense. They are going to larger cell sizes so, in all probability, even if you are 30 kilometres away from town, it will probably still be one cell covering that entire area. So your chances of it getting there are very good when compared with a city region where you might be three or four cells away and any cell dropping out in between would be a problem.

Mr HATTON—Could you explain how you charge people for this. Normally it is the transfer of data, but it cannot be the transfer of data because you are allowing different groups to operate within the net. Are you looking at nodal points where the information is supplied from?

Mr Baker—As far as I have thought about it, you would probably have to log in over a secure tunnel. You cannot charge for the bandwidth being sent across the wireless portion of the network but you could charge for parts in the non-wireless portion. So the end user would log into the ISP across the network and then the ISP would keep track of all the traffic that comes through that tunnel and would know when it got to a certain point and then went to this user account—and so could account for it that way. So you would be charged on perhaps the number of bytes downloaded to the proxy server for your web browsing session or the number of bytes that were in the email sent to that particular email address. That would make accounting a little more difficult, but it will all be automated anyway. So keeping track of that accounting is just an initial cost, not a long-term cost.

Mr HATTON—You put an argument in your paper about companies that have put money into 3G—even though it is more reasonable in Australia than elsewhere—are going to keep running strongly for two reasons: one, they have complete portability; and two, the money is there so they want to block out other alternatives.

Mr Baker—Yes.

Mr HATTON—You think that will still operate primarily in the cities but that it will not be a player in the country and regional areas generally?

Mr Baker—I have no idea about 3G. My answer depends on which day of the week you ask me: I will either say 3G is going to work wonderfully or say 3G is going to be a complete flop.

And I suspect you have had evidence of the same nature before. Do I think 3G is going to make it into the country? Possibly, but it is still the wrong way around. We still want to be in a position where consumers get control over what they want to do. So the consumers would put the antennas up and point them to the network they want to be part of. With 3G it is still a matter of waiting for a big company to come along and put up a cell station for them so that they get access. I do not think any of the big companies have done a good job of estimating the market demand in rural or regional Australia. To be fair, that is because it is really hard to estimate. I think the 3G model, even if it works, is not getting at the nub of the problem that causes rural and regional Australia to get bad data access.

Mr JOHNSON—I have a question in relation to base stations. I have an image in my mind of base stations all over the countryside. Can you give me some idea of the structure of these? Are they going to be like the wind fans you see all over the place in Europe?

Mr Baker—A base station, in 802.11 terms, only needs an antenna that is five centimetres long. So the base station that I have in my house for my personal use is about the size of a small kettle and I bought an antenna for that. The antenna is about one metre long and I strapped it to the side of the house. That is what we mean by a base station.

Mr JOHNSON—So every home would need one, pretty much?

Mr Baker—Not really. It depends on the cell size and your line of sight. You typically need one in about a nine square kilometre circle.

CHAIR—Thank you very much for making the effort to come along this morning and for your submission. We might catch up with you again as part of this process.

[9.38 a.m.]

STIFFE, Mr Peter John, General Manager-Regulatory, Vodafone Australia Ltd

WITHERS, Mr Jonathan, Director-Technical Strategy, Vodafone Australia Ltd

CHAIR—Welcome. I have to advise you that, although the committee does not require you to give evidence under oath, the hearings are legal proceedings of the parliament and therefore warrant the same respect as proceedings of the House. The giving of false or misleading evidence is a serious matter and may be regarded as a contempt of parliament. If you would like to make any introductory remarks about your submissions, or add anything new, we would be very grateful to hear from you.

Mr Stiffe—Thank you. Vodafone welcomes the opportunity to appear before the committee. We believe we can provide some unique insights to assist the committee. Vodafone is a specialist in wireless communication and has operations in 28 countries, working within a wide variety of economies, geographies, cultures and regulatory regimes. We consider that our wireless specialisation has been a key ingredient in our success. We have at many times been presented with the opportunity to become a full service telco but have always rejected this as it would lead to a lack of focus and conflict within the organisation. Thus, although now a large company, Vodafone very much considers itself to be in competitor mode in the markets in which it operates.

From a technology standpoint, Vodafone would consider itself to be reasonably agnostic to the multitude of wireless solutions that exist. However, we do provide strong support to the standardisation processes, because we see these as being very important to create the right conditions for true global markets. One observation we would make is that, as we go forward, the technology used will not define the users' service in the way it has done in the past. Mobile networks, for instance, will support not only voice communication but will allow access to the Internet, access to content and traditional broadcasters. Development of existing networks and introduction of new technologies such as third generation wireless networks will facilitate the delivery of a wide range of mobile services. Customers will expect high speed access to the Internet, entertainment, information and mobile commerce, otherwise known as m-commerce, services wherever they are, and content will be crucial to fulfil those expectations.

Vodafone has now operated in Australia for about nine years. A candid view from within the Vodafone group would be that the Australian market has been one of the toughest in the world to crack. We still look forward to the day when we can return a dollar or two to our shareholder, and, for that matter, we would like to be able to start paying some company tax at some stage. Committee members will know that Vodafone strongly believes that overregulation can stymie an opportunity even before it gets off the ground. Therefore we would like to provide you with our thoughts on a couple of the key regulatory issues that will impact on how broadband wireless networks, products and services may develop.

We believe our customers and the Australian economy will be best served where customer choice is not constrained through market specific regulatory decisions. Rather than trying to

manage the development of wireless broadband, governments' focus should be on ensuring that efficient entry is not constrained by lack of access or at least uneconomic access to key inputs such as radio spectrum. It should also be focused on identifying and punishing anticompetitive behaviour when it occurs. Governments should take great care when considering structural regulation. And in an environment where markets and delivery mechanisms are converging and where technology substitution is occurring more and more rapidly, the imposition of structural regulation on selected parts of the industry will create significant distortions. Vodafone considers that the regulatory regime has a significant impact on the development of products and services as well as influencing the incentives to innovate and invest. For services such as wireless broadband, where there is considerable uncertainty about the future shape of the market, it is essential that regulation is not preimposed based on current perceptions of the likely market in future.

Unfortunately, however, Vodafone does see a disturbing trend of regulation extending to competitive parts of the market 'just in case' anticompetitive behaviour arises. This is also termed regulatory overreach. Looking forward, we consider that there are real risks that industry specific regulation will be extended into new areas such as content and 3G services. These risks have the potential to seriously harm the incentives to invest in new networks and new products and services such as 3G mobile systems and other wireless broadband technologies. It is interesting to observe that, unlike in Europe, none of the three main mobile carriers in Australia have yet commenced their 3G rollouts despite the spectrum being available later this year.

Our view is that the regulatory regime should be focused on addressing durable market failure. Regulation should only be applied where it is efficient to do so and where durable market failures exist. As much as possible, the market should be given opportunities to work effectively on its own. We are also very concerned that the government itself has had a significant part to play in creating barriers to entry and investment in the market. We do not expect any handouts from the government as we invest and develop our business. We are also happy to pay taxes on any profits that we make—and, as I said, we would be delighted to do so. However, we are concerned that the government has seen the whole of the industry as something of a cash cow and has diverted a very significant amount of shareholder funds away from investment in new infrastructure and services directly into government coffers through a range of industry specific taxes and levies.

This has three very real impacts. Firstly, it reduces our ability to deliver benefits to Australians that would arise from increased investment. Secondly, it increases the barriers to entry for new players and for existing players, like Vodafone, that want to offer new services. Thirdly, it puts new players and smaller players at a significant competitive disadvantage compared with Telstra. This is because Telstra is much better placed to be able to absorb industry-specific levies because of its scale, scope and length of time in the market. Telstra already enjoys a privileged place in the market. We would caution the committee against any recommendations that further entrench this position or make it more difficult for Telstra's competitors to develop their businesses.

Wireless broadband presents an array of opportunities for the delivery and distribution of data services, and Vodafone is going to be a key part of that delivery. Success will continue to be determined by how well organisations perform and compete in the marketplace. Potential and realised success should not be inhibited by misdirected regulation and industry-specific taxes.

Customers should pick winners in the market, not the government. We would be happy to answer any questions that the committee may have, on either technology and service aspects or any of the regulatory issues that I have just raised.

CHAIR—I do not carry a particular flag for Telstra, but one of the themes that has come through in the evidence from companies like Optus and Vodafone is how evil the Telstra empire is—for want of a better way of describing it. However, you have to balance that out, don't you? Telstra has an enormous advantage because for the better part of the last century it has been the monopoly provider of telecommunications. So, while Optus and Vodafone would like opportunities to break into the market, it is not really Telstra's fault that it has a natural advantage built up from the fact that it has its network in place across the entire country. And the government has to be careful, doesn't it, not to imbalance the situation by believing that its role is to hamstring Telstra somehow—to tie its hands behind its back—because of a misplaced belief that Vodafone and Optus should be given the opportunity to compete with Telstra? The government's role should be certainly to have a level playing field for competition, but that does not extend, surely, to making Telstra's job harder just so that Vodafone and Optus can get a leg-up.

Mr Stiffe—We absolutely support what you are saying. We certainly do not see Telstra as being evil. It is just another business doing the best it can within the market that it operates in. We are not suggesting that Telstra ought to be constrained any more than other players, and certainly no more than Vodafone. However, we do argue that each time a piece of regulation gets put into the marketplace that affects both Telstra and its competitors, generally its competitors come off worst.

CHAIR—Why is that? Could you give us some examples of where the regulation the government has brought in has given Telstra an advantage over its competitors?

Mr Stiffe—The government deemed interconnection rates for GSM networks to be regulated; it was one of the deemed declared services. This means that the price that we pay for a call coming into our network is regulated, the same as it is for Telstra. However, that has much greater impact on Vodafone than it does on Telstra because we offer a single line of business. So that is one real case where symmetric regulation has had a much greater impact on Vodafone than it has on Telstra. We have argued that that regulation ought to be lifted in its entirety; we have not argued that Telstra ought to be regulated and us not. We think that is a good example of how competitive service has been regulated to our detriment and perhaps, ultimately, to Telstra's advantage.

CHAIR—If you put yourself in Telstra's shoes for a minute, what would be its argument about that same issue?

Mr Stiffe—I do not know exactly what its argument would be, but I do hear in the media that it also argues for less regulatory constraints on competitive services.

CHAIR—We will get the chance, of course, to put this to Telstra because Telstra will appear before us as well. Are there other examples that you can think of where Telstra has been given a particular advantage over others by government?

Mr Stiffe—I do not think the intention is that Telstra is given an advantage; I think it is one of the outcomes, though, that we see.

CHAIR—But is that just because Telstra is already there?

Mr Stiffe—It is because Telstra is bigger and is both a vertically and a horizontally integrated business. So it is able to spread regulatory costs over a number of both competitive and monopoly areas.

CHAIR—Do you think the government has an inherent conflict of interest as the regulator and owner of Telstra?

Mr Stiffe—I do not think that this particular issue is related to the ownership of Telstra.

CHAIR—But it does stand to reason, doesn't it? If Telstra is returning 50.1 per cent of its dividend to the government, why would the government want to make Telstra's position worse when it could continue to regulate the market in such a way that it will continue to maximise its profits from Telstra? There is an inherent conflict of interest.

Mr Stiffe—There may well be, but that is something for the government to answer. As a resident and taxpayer in Australia, I would hope that the government is acting in the overall best interests of Australians.

CHAIR—Sure. It is not really a matter for this inquiry, of course, but it is just a matter of interest to me as a proponent of the full sale of Telstra.

Mr Stiffe—One other specific example that may be worth noting of a type of regulation that impacts on Vodafone more than Telstra is the way that spectrum licence fees are calculated. We pay about the same amount as Telstra for our GSM spectrum licence. Even though Telstra has three times as many customers as we do, we still pay the same amount. That means that on a per customer basis Telstra is far better off than we are. We are very concerned about the overall costs that we pay in licences, taxes and levies that are industry specific.

CHAIR—Who is the parent of Vodafone?

Mr Stiffe—It is Vodafone Group.

CHAIR—What is the market capitalisation of Vodafone?

Mr Stiffe—I do not think that is relevant in the Australian context. The Vodafone Australia business has to succeed on its own merits. Frankly, it is a marginal business in this country.

CHAIR—Vodafone internationally obviously is expanding into the Australian market and it is being backed by its parent company—

Mr Stiffe—That is completely right.

CHAIR—so the market capitalisation of its parent company is relevant because if it did not feel that it could afford to expand into Australia it would not have made that commercial decision.

Mr Stiffe—Vodafone is committed to Australia and is expecting to make a return on its investment, but that is related to the size of the investment that Vodafone makes in this country rather than the size of Vodafone's business in other markets.

CHAIR—Just as a matter of interest, though, do you know what the market capitalisation of the Vodafone Group is?

Mr Stiffe—It changes on a day by day basis and we watch the stock price to give us our—

Mr Withers—It is about a quarter of what it was two years ago. But it is certainly very significant.

Mr Stiffe—We can get the exact number. It is in the hundreds of billions of dollars.

CHAIR—Please do that, if you would not mind, just so that we know that for certain.

Mr Stiffe—Yes.

CHAIR—The market capitalisation of Telstra is about $60 billion.

Mr JOHNSON—It is still a minnow.

CHAIR—Do you know what the market capitalisation of Optus's parent is?

Mr Stiffe—No.

CHAIR—It would be interesting to know that.

Mr Stiffe—Once again, I would like to stress that the market capitalisation of the parent has little to do with investment decisions in this country. If Australia does not stack up as an investment destination, it will not receive investment funding.

CHAIR—Of course. There is no question about that. But at the same time, Telstra is not competing with Vodafone Australia and Optus. Telstra is competing with SingTel, as the backers of Optus, and Vodafone Group, which are obviously both trying to break into the Australian market, so you cannot exclude the parent as though it is not relevant.

Mr Stiffe—With respect, I would disagree. Telstra competes in this market with Vodafone Australia. Vodafone does have some advantages that it is able to bring to bear because of its global connections. We are able to provide newer innovative services that may not always be available here. But in terms of just market muscle, in Vodafone's view the Australian market is a separate market and we compete in this market. Vodafone does not have an integrated fixed and mobile business link in this market.

We are not complaining about that; that is a conscious choice that we have made on how we compete. So we are not asking that Telstra be somehow constrained in an artificial way to make life easier for us. What we do say is that to the extent that the government choose to regulate more or impose industry specific taxes they do have a relatively greater impact on the Vodafone business in Australia than they do on Telstra in Australia.

CHAIR—I am not carrying a particular flag for Telstra, but it is a useful way of getting evidence out if one argues with the witnesses.

Mr Stiffe—Absolutely.

Mr PEARCE—A large part of your submission revolves around this issue of the regulatory regime and the government's role in regulation of the industry. There is a very strong focus in your submission—and clearly you have just said—in terms of advocating that the government should do what it can to level the playing field, if you like. I am interested in what, in my view, is a gap there, because you also mention in your submission that Vodafone has, by choice, decided to specialise in the mobile telecommunications area. You are saying that you have decided to, by choice, focus on mobile telecommunications; therefore, that puts you into one segment of the market and one segment only. If you look at Telstra, Telstra is a full telecommunications service provider by anybody's determination, I think you would agree. Telstra is in mobile communications, fixed communications, satellite communications et cetera.

I am interested in your comments. On the one hand, you are wanting to be an equal with the likes of Telstra and Optus and other players when it comes to regulation—you want regulation to impact on you the same as it does on others—but, on the other hand, you differentiate yourself under your strategy as being primarily a mobile communications service provider. That is your business decision, and mobile telecommunications is something that Vodafone is very good at. Isn't there a dichotomy there? In other words, how can you ever expect the regulations to impact on you the same as they do on a company like Telstra when you are a very different player in the market?

Mr Stiffe—I guess our philosophy is that in many cases regulation is not required. I would contrast what we have been asking for in terms of being wary of further regulation against seeking a level playing field. We do not particularly seek a level playing field because the reality is that markets are very rarely level. What we will continue trying to do in the market is to tilt it in our favour, and we expect Telstra to do the same in terms of tilting the playing field in its favour. We see that that is a market dynamic and should not be a regulatory dynamic.

There is another point on where we compete in the market. There have been a couple of different views on how markets might develop. One view is that fixed and mobile networks will somehow converge and that a horizontally integrated player that plays in both spaces is going to have an advantage. Our philosophy is that there is going to be a high degree of substitution between fixed and mobile. So we see ourselves as competing in a far broader space than just the traditional second-generation cellular-telephony market. We want to eat off Telstra's plate; we intend to do it. We intend to compete with Telstra broadly. So I guess we do not see ourselves as such a niche player.

Mr Withers—Perhaps I could add a comment. I think the term 'level playing field' is actually a difficulty in itself. Fundamentally, we do not know what the level playing field is. We do not know the dimensions of that field. I think there is a real concern that we are trying to predefine what that field is and what it will be in five or 10 years. Our position would be: let us accept that we do not know that, and let us try not to predict what will happen in that space and put in regulation ahead of allowing, if you like, natural competitive forces to take place. That would be our position.

Mr PEARCE—I have a further question following on from that theme, and it is very much from the devil's advocate position. The mobile communications service market is the one that you play predominantly—and I accept your point that Vodafone Australia has to operate as a stand-alone business—but the reality is that Vodafone Australia is part of the largest mobile communications company in the world. So, in effect, in that segment you are dominant.

Mr Stiffe—Not in Australia.

Mr PEARCE—No, but throughout the world.

Mr Stiffe—I think Vodafone would certainly say that it is not dominant. It is a large player in the world, but most markets are considered to be national markets. Only in Europe now is there some consideration, through the European Union, that there is a possibility that there may be a pan-European market. But we definitely operate in individual markets. Vodafone is a large company, but it is not dominant in any way, shape or form.

Mr PEARCE—But it is a very large mobile communications provider throughout the world—

Mr Stiffe—Certainly.

Mr PEARCE—which provides your Australian business with unique advantages over the likes of some Australian mobile communication service providers.

Mr Stiffe—We hope so.

Mr PEARCE—Again from a devil's advocate position, you have significant advantages over some domestic mobile communications service providers, so again there is an argument of a dichotomy arising there too. I read through your submission and, at the end of the day, my key question to you is: what exactly would you like the government to do? What are you actually calling for in your submission?

Mr Stiffe—We are actually asking the government not to do very much.

CHAIR—We can work half a day!

Mr Stiffe—We would just like to make your lives easier for you.

Mr PEARCE—I am pleased that you think the government is doing a lot.

Mr Stiffe—The government, in terms of encouraging development in this market, would be best not to tax up-front. It ought to focus on taxes on profits. Vodafone has invested $2.7 billion in Australia. The Vodafone group, as the investor, has not taken any money out of this market yet. The government has received a little under 25 per cent of that $2.7 billion in up-front taxes. We would have far preferred to see that go into network and service investment. That is an area where we think the government could perhaps do less in the industry. The other area is in terms of creating controls on how we operate our business, through structural regulation. We see that there was clearly a need for some structural regulation to manage moving from a state owned monopoly, which was the old Telstra, into a competitive market, but we are concerned that some of that structural regulation is now extending into new and competitive markets. We would like the government just to let the market develop. We think that that is how our wireless broadband is going to best flourish. Sitting in the background listening to the previous submission, we heard that there are problems with some of the newer technologies because they do not sit neatly against the current regulated services and the current carrier licences and the like. We would like to see a lot more freedom in terms of how those different technologies are taken up, so that the government's choices about regulation do not constrain one technology over another.

Mr PEARCE—Is there any evidence of any government doing that anywhere else in the world?

Mr Stiffe—I think if we have a look at the markets where Vodafone operates, Australia is actually seen as a pretty good model. So do not get me wrong: Australia is a good market, from a regulatory point of view, compared with many others. That does not mean to say that Australia has maximised its position in the world, and it does not mean to say that there are not other things that could be done.

Mr PEARCE—So your submission and your request for the action that you want government to take, or not to take—whichever way you look at it—is not so much based on Vodafone's experience in other international markets; it is based on trying to take a model that you think is working quite effectively and refine it even more. Is that right?

Mr Stiffe—I think that is true. The lessons, though, that we can learn from other markets are that the more you regulate a market and the more you make choices about how businesses run their business, the less quickly they develop. So we see there are lessons to be taken, but they are not generally lessons of how to regulate. They are more lessons of how not to regulate.

Mr PEARCE—Do you believe that it is for the government not to take a strong proactive role in regulation? Do you believe that that is the responsible position for government?

Mr Stiffe—I do. The government already has a number of tools available to it through the Trade Practices Act, in terms of curbing anticompetitive behaviour. We think that the government should, through the ACCC, treat that very seriously and where anticompetitive behaviour develops it should stamp on it. If the government is going to do anything, I think it may be in terms of nurturing smaller companies that are developing software solutions and service solutions rather than telling them how to actually run their businesses.

Mr PEARCE—Thank you.

Mr CIOBO—I was interested in a couple of things. You made the comment that it was interesting to note that 3G had been rolled out in Europe but not in Australia. I got the impression that you felt that a large proportion of that was tied to the regulatory structure. I am interested in your comments on that, if you could go into more detail.

Mr Stiffe—It is partly tied to the regulatory structure, but I think it also has a lot to do with general investment decisions and conditions and also, perhaps, some specific parts of the Australian landscape.

Mr Withers—Maybe I can talk a little bit more to that. I think there are a number of factors driving the move into 3G. One of them is that it is surrounded by quite a lot of uncertainty; that has to be stated.

Mr CIOBO—Is that within Australia or internationally?

Mr Withers—Internationally, I think it is. But there are perhaps further drivers in other markets, such as the need for additional capacity, which are not present here in Australia. So you come down to the fact that the prime driver for 3G in Australia is going to be these new services which we all expect to emerge at some point in the future.

The difficulty we have here—and I think it comes back a little to the previous point—is that when government is looking at regulation not just in the telco area but also in, say, broadcasting it really is crystal ball gazing in looking into the future. We have discussed the point previously that we see a lot of convergence between those two areas in the future. Who should be the dominant regulator in that process I simply do not know. What I do know is that these 3G services that will eventually arrive will somehow cross over those boundaries between telco, broadcasting and probably finance. Therefore, I think that there will be certainly be less enthusiasm to get those networks rolled out while there is uncertainty around regulation.

What is happening at the moment, I believe, is that the current carriers can fulfil their current perceived service needs through the extensions to 2G technology quite well. While this uncertainty exists around how they might be regulated in the future, it is going to hold back a certain amount of investment.

Mr CIOBO—If I understand your point, you are saying that as convergence continues to gather pace you need a regulatory regime that is built in fairly generic terms. Is part IV of the TPA adequate?

Mr Stiffe—Our view is, in general terms, yes. If there are problems then we ought to wait for the problems to arise before introducing specific regulation or access regulation.

Mr CIOBO—One of the arguments that we heard from one of the other providers that gave evidence here was that there needs to be some degree of regulation because for a large proportion of regional and rural Australia it is not commercial to roll out wireless broadband—or other services, for that matter. By entrenching certain characteristics in the marketplace, you can reach a situation where you can find a commercial return. Is there a risk that by having it open slather we in fact end up with further duplication of some telco services and infrastructure, which means that it just turns sour for everyone?

Mr Stiffe—I think that in a relatively unrestrained market there is already sufficient constraint on investment that will protect against unwise investments going forward. I think that the bubble where people are just throwing money at telecommunication networks has well and truly burst.

Mr CIOBO—That is what concerns me. Is that constraint on investment also a constraint on the development of new technology when it comes to applying that to the specific needs of regional and rural Australia?

Mr Stiffe—That is a very good question about the needs of regional and rural Australia and where they will not be met or will not provide a normal commercial return for businesses. There is a place for government there in determining what its social objectives are and then working out how best to fund the development of those networks. But that is a different question from that of the development of competitive markets in those regional and rural areas. If they are not able to be provided with services commercially, then perhaps the government ought to be looking at what it sees as the best social outcomes and determining how best it will fund those, and then the competition will arise in terms of bidding for those funds.

Mr CIOBO—It just seems to me though that the two are actually interrelated because the development of the technology that is required to address and provide a solution to those areas—probably 80 per cent of Australia with 20 or 30 per cent of the population—is directly tied to what you are saying is the principal driver of investment, which is a competitive marketplace and providing a superior product. So if you do not regulate to ensure that you have a situation where you are essentially giving a monopoly or more favourable commercial conditions for investment, while that certainly drives technology on one hand, the flip side is that it actually means that you do not have investment in those regional areas, because there is not the commercial return that people are looking to begin with.

Mr Stiffe—And I think that is where the government has a role to play in helping to fund that.

Mr CIOBO—So what is your view there?

Mr Stiffe—There is a pretty good example that Vodafone was involved in, which was the highway project where Vodafone bid for and won a tender to provide some additional coverage on regional highways that were not currently getting coverage. That is an example of where there was effectively a partnership between the Australian government and private business to provide service. That was not a matter of competition; that was a matter of providing services that would not have otherwise been provided. However, competition is provided for because the prices that we charge customers using those regional sites are exactly the same as we charge in the CBD areas, and that is constrained by competition. Further, one of the undertakings that we were required to give was to offer roaming to other mobile network operators, so that they could also use those sites. So I think that is a good example of how the social objectives can be met while still presenting the benefits of competition.

Mr JOHNSON—Peter, I am interested to hear your comments about the reserve price for spectrum. A witness the other day talked about their reservations about spectrum prices, and in

your submission you talk about the management and allocation of spectrum. Can you give me some thoughts on the reserve price?

Mr Stiffe—Are you asking about the reserve price in the third-generation spectrum auction?

Mr CIOBO—Yes.

Mr Stiffe—The spectrum auction in Australia happened not so long after some very high prices were gained for spectrum in the UK and Germany. We believe, and the Vodafone Group believes, those prices were far too high anyway. But what happened in Australia is that the reserve price for the spectrum was not so much based on trying to get efficient use of spectrum in the market; it was more about what price the government could extract from the industry. So in that case the actual sale prices at auction were barely above the reserve price, and that indicates that the reserve price, rather than the market, actually set the value of the spectrum. We believe that the reserve price should have been much lower and that the market should have been left to determine the price, rather than the government effectively charging a little over a billion dollars for that spectrum sale.

Mr JOHNSON—So you are convinced that market dynamics did not play a role in that, which is, of course, the big thrust of your submission.

Mr Stiffe—That is right. The final prices that were paid were barely above the reserve prices. They really just indicated that there was a bit of coordination going on about seeing who was going to get which lot. But there was no real competition from the price point of view in terms of buying any of that spectrum.

Mr Withers—For a new entrant, it is a further example of an up-front cost that has to be overcome before their business can get under way.

Mr JOHNSON—I can appreciate that, but you have been in the market in Australia for almost a decade and those dynamics are part of our capitalist way of running things.

Mr Withers—Yes, but you have to be a pretty big player in the first place to be able to do that.

Mr JOHNSON—When you entered the market 10 years ago, did you have forward projections—I assume you did—and, after a decade, how do things match up with those projections?

Mr Withers—That is certainly a very interesting question, because I think you could talk to pretty much anyone in the cellular industry and they will tell you that their forward projections were hopelessly pessimistic, if you look back over the last 10 years. Certainly, what we first saw as the growth of the market in Australia has been exceeded many times. In fact, our proposed investment in Australia has been exceeded many times as well. The whole market has grown. We are in a position now where we are holding a far smaller proportion of the total mobile market in Australia than we originally thought we would achieve.

Mr Stiffe—While the market has grown and we have many more customers than we had ever expected to have, our revenues are no doubt higher than we would have originally expected. The returns to shareholders are not bigger than we expected. A contributing reason is that, as well as paying all of the upfront costs of getting into the market, the government still extracts licence fees from us that grow at a faster rate than our revenues. That also puts quite significant pressure. In the last financial year, we gave the government nearly $43 million in licence fees, USO levies and numbering taxes and so on. The previous year, we gave the government $27 million, so we have gone up by about 50 per cent in one year in terms of the licence fees.

Mr JOHNSON—Are those licence fees increasing at a rate that you did not foresee?

Mr Stiffe—Yes.

Mr JOHNSON—And you had no indication or no constructive knowledge of them?

Mr Stiffe—No.

Mr JOHNSON—In my own business, before I came to parliament, we set different scenarios—a best case scenario, a middle ground and a worst case scenario. I assume that Vodafone would have done that.

Mr Stiffe—Yes, indeed, although it is hard to factor into any scenario the fact that the government is going to put your spectrum licence fee up from $7 million a year to $17.5 million in one year, without warning and without discussion. That is one of the risks we face. That is very significant for us, and it does create uncertainty in the minds of our parent company and our investors in terms of what we are likely to face if we continue investing and are perceived to be successful.

Mr JOHNSON—On the ACA: what advantages are there going to be that will back your submission about the transfer of responsibility?

Mr Stiffe—We have argued that all spectrum licensing, including broadcasting, ought to be handled by the ACA. The key advantage to us there is that we think the same rules ought to apply to allocation of spectrum for telecommunications networks as they do to broadcasting networks, because we do see this crossover in future. If they are taxed more or less or are allocated spectrum in a different way, that will create some distortions in how spectrum might be used.

Mr Withers—Exactly. I think we foresee the day when it will actually be quite hard to determine what is broadcasting spectrum and what is telco spectrum in terms of the services that they carry. It used to be the case that, by simply defining the technology and therefore the spectrum that that technology uses, you could pretty much have control over what services sat above that or were controlled by that. I think our view would be that going forward that is not going to be the case. So there is a clear separation occurring between the transport capabilities, which utilise spectrum as a key component, and the services that are provided through those transport mechanisms.

CHAIR—I understand your points about spectrum, but put yourself in the government's position for a moment. If the government was not charging corporations like Vodafone, Optus and others for spectrum—which is a government owned asset, for want of a better description—don't you think the Australian taxpayer would think it was rather peculiar that the government was giving multinational corporations and Telstra free spectrum when, in every other government endeavour, we obviously try and maximise the value of our assets? If the government was to release a parcel of Defence land that was no longer required by Defence and charged for it, that would be entirely reasonable. Of course, it is a barrier to entry—you either have the money to buy the land or you do not have it. But the argument that it should be given out free because it is a public good does not really stack up, does it?

Mr Stiffe—Again, I would like to stress that we are not looking for a free ride. We do not want to have the spectrum given to us. However, we do not think the balance is correct. It is not about whether we pay the government for resources that we use; it is a question of how much, I think.

CHAIR—You are talking about reserve prices?

Mr Stiffe—Yes. If you have a scarce commodity, and if you argue that spectrum is scarce, then a good way of allocating that would be to put it up for auction. So we certainly support the auction process, but we think that the best place to find the price for it is within the market, not by setting a very high reserve.

CHAIR—But a reserve price is not an unusual thing in auctions.

Mr Stiffe—No, it is not. But if you think about the example of selling off some land, generally speaking there are other opportunities to buy land so you can make choices as a business as to whether you buy there or go elsewhere or maybe even go to a different state or something like that. In the case of spectrum and mobile networks, without spectrum we do not have a business. In many cases we are actually obliged to buy spectrum in order to safeguard the future of our business. It is possible, at least to an extent, to hold network operators to ransom. That is what we are arguing against.

Mr JOHNSON—It is almost the nature of the business, isn't it?

Mr Stiffe—It is. Without spectrum we do not have a business.

Mr Withers—The same would go for broadcasting. The point I would like to make is that I do not think we have an equal situation today. The previous submission was talking about the use of 802.11, which happens to use free spectrum. The reason why so many services have piled into that little band is simply that it is seen to be free. There are many big corporations attempting to exploit that. So, just to emphasise what Peter was saying, our position would not be that this resource should be given away free, but that it should be allocated on a fair and equitable basis. That applies across telecommunications, broadcasting and any other service that has a need to use spectrum.

CHAIR—Inherently, one of the disadvantages of the free spectrum is that, because so many people are rushing to fill it, eventually it will not be very useful.

Mr Withers—Eventually it will clog up; yes.

CHAIR—As a consequence those companies will then move to another band, otherwise they will not have the business—

Mr Withers—But there is quite a cost in then making that change.

CHAIR—That is a commercial decision they are making at the moment. It is a case of killing the goose that laid the golden egg, eventually.

Mr Withers—Indeed.

Mr JOHNSON—I just wanted to take up a point that my colleague Mr Ciobo mentioned about the up-front imposition on you. I think Peter referred to that as well. Again, I presume that all of those negotiations were pretty clear at the beginning. What would you have preferred—a lesser percentage? Obviously in an ideal world you would prefer no imposition in the first place.

Mr Stiffe—When Vodafone entered the market, it negotiated with the government to gain a licence. In terms of the spectrum cost, there was an expectation created at the time Vodafone bought its licence. The government has since changed its view on the return that it wants to get from that spectrum. It has the power to make unilateral decisions, and it has done so. That is a concern to us. There are other fees that we have had to pay that we did not have to pay and did not know about when we entered the market. One was numbering fees—the government has determined that it wishes to raise taxes on numbers. It has determined that it wants to raise about $60 million a year from the industry and it has chosen an arbitrary tax on numbers to do so. That is another example of an additional cost that we had no way of expecting to pay. In Australia Vodafone pays about $6 million a year as its share of that numbering tax. In New Zealand Vodafone pays $20,000 a year for numbers, and that is simply covering the administration of allocating those numbers. There are taxes that have been imposed that are arbitrary just because the government thinks the industry can pay.

Mr JOHNSON—I am very sympathetic to your point about those resources being put into research and development and maybe capital acquisition. I was just interested to hear your thoughts on that.

Mr Stiffe—We have spent $100 million in the last nine years or so on recurring licence fees. We would far rather have put that back into the network.

Mr JOHNSON—Is your inference that, in a sense, in being a player in the market, there is no U-turn? You have crossed the river in a kind of sense; you have no choice.

Mr Stiffe—We are here; we are committed to the market. We believe that we can make a return on this business and will make a return on this business. What we are trying to flag, and do as often as we pretty much can, is to say that this is a real issue for us. If the government keeps on extracting more funds out of the industry, it will have a very severe impact. It has had an impact already, but what we are trying to do is to stop that creep.

Mr HATTON—With the chair's indulgence, I note that you have given some relatively diplomatic responses to quite provocative questions from the chair. I will just try to continue in the same vein. Does Vodafone own real property?

Mr Stiffe—What you mean by real property?

Mr HATTON—Do you own real estate rather than lease it?

Mr Stiffe—No. We tend to lease the buildings that we use.

Mr HATTON—Do you own any real property?

Mr Withers—A little bit in Australia.

Mr HATTON—Did you have to pay for that up-front?

Mr Withers—Yes.

Mr HATTON—But you primarily use a lease arrangement, so that with that lease arrangement you are paying on an ongoing basis?

Mr Stiffe—Absolutely.

Mr HATTON—So you have an experience of paying up-front for some real property and ongoing lease payments in the same way that you have an experience of paying up-front for spectrum, which you pay more for. You have less real property than you have spectrum because that is where your business is. You have an experience of paying licence fees on a regular basis as you would pay lease fees.

Mr Stiffe—Yes.

Mr HATTON—Without both of those—spectrum and the leasing—you would have no business. In the same way that, if you did not have real property and you did not have the lease, you would have no business either; you could not conduct it. You pay $253.5 million for the spectrum option here. All of the evidence that we have heard so far indicates that Australia was pretty reasonable. Your argument is that with one-third of the market, relative to Telstra, you pay too much.

Mr Stiffe—No. What we have said is that Vodafone has about 18 per cent of the market; we are about one-third of the size of Telstra. It is an example of how paying the same would impact on us more than Telstra. We are not arguing that we should not have paid the same in that instance. I was asked for an example of how costs and symmetric application of regulation can impact on us more than Telstra.

Mr HATTON—I thought the implication was that that was relatively unfair, that there should have been a different mechanism for the smaller part of the market and that you actually hoped that Telstra had—

Mr Stiffe—We made a choice about the amount that we paid in the 3G auction. Our argument was that the reserve price was too high and so the market did not set the price. In terms of the spectrum I was talking about, the GSM 900 spectrum that we pay a yearly licence fee for, that went up significantly. We were originally paying something like $700,000 a year for it and it went to $6 million. The latest number we have got is $18 million.

Mr HATTON—When was the jump from $7 million to $17 million?

Mr Stiffe—In March 2002 it was $17½ million, in March 2001 it was $6.8 million, and then it goes down to $712,000 in March 1994. In that case, where the government has made arbitrary increases to spectrum and on a yearly basis, it does impact us more than Telstra.

Mr HATTON—You have got 18 per cent of the market and you have to pay as much as Telstra has had to pay for it. Your argument is that in setting the reserve price as high as it was the market only just got above that. How well did the market mechanism work in the UK and Europe?

Mr Stiffe—Again, the market mechanism was significantly distorted. It was created as a last opportunity to buy. There is a spectrum licence in UK that was held back for new entrants, and that created very significant artificial pressures on firms like Vodafone, who had to buy spectrum. If it did not buy spectrum then market analysts would have downgraded the business because it would not be seen to have a future, so it had to buy spectrum, as did its competitors, and that artificially drove the prices up. There is a lot of academic and practical commercial research that has shown that the UK experience was not a good one and did not deliver good outcomes. The reserves there were not set too high; there were other factors that impacted. In Australia the auction mechanism was a good one; it was simply that the reserve was higher than it needed to be if you wanted a market outcome.

Mr HATTON—But the market in the UK and Europe was a fairly pure action of a free market operating. Auctions are. You either go in and bid higher or you do not.

Mr Stiffe—Not quite, because, as has been quite correctly pointed out, without spectrum we do not have a business. If you have got a business and you want to continue running that business, you have to buy spectrum.

Mr HATTON—If you have got an area of industrial land opening up next to a harbour and there are a number of different companies that want to actually take that prime piece of land and they cannot do their business without it, they are in a similar position. It is a one-time option, yes, because you are not going to flog off the spectrum a series of times. I do not think any government has actually done that when it has come up in spectrum auctions, even though there was a moderation over time in Europe.

Mr Stiffe—In the example you are using it seems to me you are talking about an entrant to a market. Where everybody is entering the market, you can make rational decisions about whether the price is too high or not and choose whether or not to buy. If you are already in the market and, say, you own that piece of land and you are given an opportunity to buy another piece of land without which your business will not survive in the future, you are in a position where you essentially must buy it or choose to exit the market.

Mr HATTON—So are the other people who are in the auction, if they are already in the game. If you are moving on from 2G to 2½G to 3G, you are replicating what happened in the first place, aren't you?

Mr Stiffe—Except that you already have billions of dollars worth of investment that you are trying to protect.

Mr HATTON—Was any differential price paid depending upon market capitalisation in the UK or Europe? What I am asking is, let us reverse the situation with Telstra where you have got 18 per cent and Telstra has got a whole stack. With Vodafone in the UK and Vodafone in a number of places in Europe the situation is very much reversed. Did you have to pay a higher price in Europe or in the UK for spectrum based on the fact that you are more dominant in those markets?

Mr Stiffe—There are a number of different models. Typically where spectrum is auctioned it does not matter how big you are, you make a choice about how much you want to spend. There are other countries that charge for spectrum on the basis of turnover, in which case there is a very real link between the size of the business and how much you pay for spectrum. So there are a number of different models depending on which country you are in.

Mr HATTON—So that, differentially, Vodafone, in different markets, has to pay under those different guises?

Mr Stiffe—Yes, that is correct.

Mr Withers—Yes, in the case of the UK what we paid was simply in proportion to what everyone else paid depending on the amount of spectrum we ended up with.

Mr HATTON—Your arguments in terms of getting rid of regulation are very interesting. It is reminiscent of the Wild West period or the period of robber capitalism between the 1870s and 1900 in the United States, when Messrs Rothschild and Morgan and a number of other people wanted to monopolise railways and oil and a range of other things but to do it through market mechanisms—there were pretty pure market mechanisms operating during that period of time.

I suppose the modern equivalent is Microsoft. Microsoft argues that the government should not do anything, that they should be right out of it, and that the Justice Department of the United States should discontinue action and get out of the game and just leave it to the market. If you have a look at that communications market in terms of computer software, there is only one dominant player there. That market is determined almost totally worldwide by that dominant player, which is why action has been taken by the minnows against it. That seems to be running behind that. I think the argument you are putting is a bit strange because governments do actually have to make decisions, don't they?

Mr Stiffe—Sure.

Mr HATTON—In practice, at base, regulation is about standards. If we did not make decisions about standards here, we would have NTSC, television, PAL television, European PAL and Japanese PAL, and we would also have the Canadian system. Before the government

here made the decision about what kind of black and white TV to have and the decision—I think it was in 1975—to go to colour television 20 years behind everyone else, they had to determine what the standard would be and make that a specific regulation for the whole of the market: 'This is what we are allowing in—no-one else can do it.' So it was not an open game, was it, in regard to that?

Mr Stiffe—Don't get me wrong—we do not say government has no place. What we do say is that, in competitive markets, the government ought not act early where there is no market failure. Certainly, in the telecommunications market, the government—quite appropriately—ought to be regulating some of the uncompetitive parts of the market in aiding the transition to a competitive marketplace. But, for new services, rather than try and proactively shape how that market will develop, we think the government would be best to wait. If there is what we call a durable market failure, then the government ought to get involved.

Mr HATTON—But regulation is connected with standardisation, isn't it?

Mr Withers—No, I do not agree that they are directly connected. I take note of the PAL TV example, but what actually happened there was that you ended up with a specific standard for Australia based on PAL but with modifications—and that is good and bad. One of the bad sides of that is it does not create a global market, so there is no market there for Australia to export into because they have a national standard only. Also, you do not get economies of scale from having a global market.

I would like to move to some more modern examples, such as the Internet. The protocols that are used on the Internet are where national standards have disappeared. The last strong example of using a standard to regulate service was probably the introduction of GSM and perhaps CDMA, following that. But I will come back to the point I was making previously: I think we are moving to an era where that predetermination of the service through a standards determination is something we are not going to see in the future. Even if we would like to see it, is not going to be possible.

Mr HATTON—How and why is that the case? The mandating was definitely there pre 3G and the GSM stuff and the CDMA, but didn't the governments and the industry have to make determinations about which way they would go? The US have an analog system. GSM was developed in Europe—the various European governments determined to put together that standard. The European companies making the equipment and providing that equipment had to do all that—making their determinations to an agreed standard. Otherwise, what would we have had instead, and how would it have operated in the future? If there is not that certainty, how is it that companies will put their money down to produce handsets and do the rest? It is very interesting.

Mr Withers—I think we are probably saying the same thing. We do argue that you need that standardisation process in order to develop global markets and drive down costs so that we can all participate in that benefit. The point I would make is that that is not necessarily directly coupled to regulation. We now have far more flexibility in technology. I could deploy GSM in any frequency band I wanted. It happens to have a predetermined frequency band, because the state of technology development 10 years ago meant that you pretty much had to decide where you were going to put it and then decide on the equipment for it. As to where we are going in

the future, mobile devices and other devices are becoming far more flexible in their use of frequencies and suchlike. We are moving to an era where I can create a radio transceiver device that can probably support half a dozen different protocols and different frequency bands. There is a need to actually determine that a particular standard will operate in this part of the spectrum and therefore define that type of service. The technology is breaking down those barriers.

Mr HATTON—The problem had existed in the 19th century. Probably the best example was that there were no standards available and therefore industries could not develop. Take the simple act of sending a fax. Fax machines were available in the 19th century. They were not used much, because you had to have exactly the same fax machine in Manchester as you had in London.

Mr Withers—It is like the gauge of railways, isn't it? That would be another good example. If you do not have a common gauge of railway—

Mr HATTON—Do you think that will be totally overcome by this sort of explosion in investment and research and the quick development there has been of these technologies?

Mr Withers—I think it is an emerging trend. There is a natural trend towards common standards. We see that in the Internet. GSM has become by default a bit of a common standard for 2G mobile communication. There was a bit of vision in terms of those European countries getting together and deciding to put together a standard for the whole of Europe, but since I was involved in that process I can tell you that there was no thought of taking it beyond Europe at that time. It was fortunate that countries such as Australia started taking a look at this and decided to adopt it in an international sense. GSM never actually stood for 'global system for mobile'. It actually used to stand for 'groupe speciale mobile'. When they discovered it was going worldwide, they decided to change the acronym.

Mr HATTON—It is a bit like 'digital versatile discs' rather than 'digital video discs'.

Mr Withers—Exactly, yes.

Mr HATTON—It is an enormous market, because you have the States and you have the South American situation. With the 3G technology, are we going to get convergence and a world market for that or are we still going to have the bifurcation we have had between the States, Europe and Asia?

Mr Withers—I think that is a point of frustration for many in the industry. There was a hope that by the time we got to 3G we could get to one world standard. We seem to have condensed it down to two at this point. Basically, there is the European-Japanese led standard and the US led one. I think we will be living with two, but the advantage is, as I mentioned previously, that the advances in the technologies mean that it is probably going to be economic to produce one device that can handle two standards whereas previously that would probably have been a big inhibitor to that service.

Mr Stiffe—From a consumer point of view, they will not necessarily know that there are two standards. That is one of the key things. The underlying transmission technology is in many cases going to be completely transparent to customers. They will be more interested in the

service and whether the service operates where they want to use it rather than if it is wideband, CDMA, CDMA 2000, 802.11b or whatever the technology is down the line.

Mr HATTON—Whereas currently, if you are going to go with the States, they have 1800 and 1900. So you have dualband but, to get the lot and have GSM, you need a triband phone.

Mr Stiffe—That is right.

Mr HATTON—But that will be a situation that will work anywhere. That will be to the advantage of the companies providing the services as well, because you can follow that person worldwide and more efficiently get the dough out of them.

Mr Withers—Absolutely.

Mr Stiffe—A few years ago, the handsets that were built did not have sufficient processing power to be able to deal with multiple frequencies or multiple technologies. As well as the transmission technologies that we are seeing, the processing power of handsets, PDAs, Compaq iPacs and all of those sorts of things are increasing as well to be able to deal with it.

Mr HATTON—You made an argument about interconnection rates: how that affected you, and government regulation with regard to that. The government has recently made determinations—announced just before, but certainly in, the last budget—in terms of changes to the basic call cost. Has that change to the basic call cost had an effect on your business? Given that most of it is mobile, has it had no effect or is there some interrelationship there?

Mr Withers—I find what is going on at the moment to be quite bizarre. Peter, you can correct me if I get any of the details wrong. I think that we have a situation where we have some regulation on GSM termination, but not on CDMA.

Mr Stiffe—No, that has just been introduced now.

Mr Withers—Going forward, what we will see is that we will have 2G networks and 3G networks out there. Any one particular call might use 2G for part of the call, switch to 3G and then go back again. That is the nature of the technology, so that a continuum of service can be provided. That is particularly important when you think of a 3G network rolling out; it will be patchy to start with until the network has been completed. So you have a situation here where part of that one call is going to come under termination rate regulation, and part of it is not. I do not understand how that can be reconciled. It is an example of putting too much focus on the delivery technology defining the service and not thinking about the service that you are really trying to regulate. I think the regulation is coming in at the wrong point.

Mr HATTON—I return to the chair's first questions with regard to market capitalisation. Here, Telstra is perceived to be the great monster. It is certainly the dominant player in the market. We have had deregulation, and it has still maintained that dominance. The reverse question was: 'What is the market capitalisation of Vodafone worldwide?' You stressed the fact that it is in national bands. Vertically, you are looking at the business nationally. What happens in Australia? It is completely separate from the rest. Isn't that anomalous in a globalised economy? In terms of the equipment, haven't we been moving towards 3G, where you only

really have two standards now, as you have indicated? Haven't we been moving towards that in terms of the way in which companies, by and large, have their own internal communications, administrative systems and manner in which they operate across different countries? Isn't this a strange argument to still put up: 'We're absolutely national companies and we don't really know about what anyone else is doing. We even find it difficult to determine what the market capitalisation is, even though it is a quarter of what it was before. But, for our purposes, there is not one big world market; there are just these niche markets in nations.'?

Mr Stiffe—We are a global organisation; there is no question about that. We do have advantages and we try to maximise those advantages of being a global organisation. In some cases, those advantages come through technology sharing: being able to get service development done in other countries and being able to leverage off that here. There are some best practice advantages that we get as well. In some cases—although it is quite difficult to do at the moment—we also try to get global purchasing advantages so that we get some economies of scale.

But the fact of the matter is that the markets in which we operate are still national markets; they are regulated on a national basis.. We compete against other national players and our customers are generally national customers—they are not international customers. So although we see the benefits of globalisation, and that is why Vodafone has extended its reach around the world, we still operate in national markets; that is just the way life is. We certainly hope to see more advantages from globalisation over time that we will be able to bring to each national market, and I am sure that our competitors will do the same. But it is hard to see, at least in the medium term, a change from the national market approach in terms of pricing, the regulatory regime under which we operate and the types of services that we provide. Each country is culturally different and has a different state of economic development. We would offer some quite different services in Fiji, say, compared with Australia or Germany, and that is just the nature of the business that we are in.

Mr HATTON—So it is slightly reminiscent of Thomas Hobbs's notion of the behemoth or leviathan made of different elements: it is one beast in some sense but separable elements in another.

Mr Stiffe—Indeed. And I think the other thing that perhaps separates Vodafone from a number of the other large players in the world is that Vodafone has always had a history of growing up in a competitive space. In the UK, where we are based, we have about 25 per cent market share; we are a competitor in that space as we are in every other market in the world except one, which is Fiji. So we do not have the background of coming from the state owned monopoly and then being able to leverage off that to grow our business; we have done it from the ground up.

CHAIR—Thank you very much to Vodafone for coming along today.

Mr Stiffe—Thank you for the opportunity.

CHAIR—We went well over time because obviously members of the committee were interested in the evidence that you were giving us, so thank you very much.

Resolved (on motion by **Mr Hatton**):

That this committee authorises publication, including publication on the parliamentary database, of the proof transcript of the evidence given before it at public hearing this day.

Committee adjourned at 10.52 a.m.