

ECONOMICS AND INDUSTRY STANDING COMMITTEE

**INQUIRY INTO THE STATE GOVERNMENT'S ROLE
IN DEVELOPING AND PROMOTING
INFORMATION COMMUNICATIONS TECHNOLOGY (ICT) IN WESTERN AUSTRALIA**

**TRANSCRIPT OF EVIDENCE TAKEN
AT PERTH
WEDNESDAY, 21 MARCH 2007**

Members

**Ms J.A. Radisich (Chair)
Mr G.A. Woodhams (Deputy Chair)
Dr J.M. Edwards
Mr M.P. Murray
Mr A.J. Simpson**

Hearing commenced at 10.18 am

GREEN, DR WALTER
Manager, CEG/ATUG, examined:

CHAIR: Thank you very much for coming. I need to read out some formal information before we proceed. This committee hearing is a proceeding of Parliament and warrants the same respect that proceedings in the house itself demand. Even though you are not required to give evidence on oath any deliberate misleading of the committee may be regarded as a contempt of Parliament. Have you completed the "Details of Witness" form?

Dr Green: Yes.

CHAIR: Do you understand the notes at the bottom of the form?

Dr Green: Did you receive and read an information for witnesses briefing sheet regarding giving evidence before a parliamentary committee?

Dr Green: Yes.

CHAIR: Do you have any questions relating to your appearance before the committee today?

Dr Green: None.

CHAIR: Thank you for your written submission, which we received within the time frame; it is much appreciated. Do you wish to propose any amendments before we get started?

Dr Green: Yes, I have a number of issues I would like to refer to and there have also been a number of developments since the submission was written, so I would just like to update on those.

CHAIR: That will be fairly comprehensive. I will come to that in a minute. I was really asking about particular errors or amendments. Is there nothing?

Dr Green: No.

CHAIR: Your comments will be broader and more general.

Dr Green: I can cover them in my opening statement, so that is fine.

CHAIR: Excellent. Just before we do get to your opening statement, I would like to apologise for two of my colleagues who have been caught up this morning, Mick Murray and Grant Woodhams. They may be able to join us, but we will proceed in any event.

You mentioned that there have been many developments since made your submission. Perhaps you would not mind starting by giving us a general overview of where things have developed since that time. We have a few questions we would like to ask you after that.

Dr Green: The first point is that when I put in my letter I had not obtained all the approvals from ATUG. Those have since been obtained, and authorisation to act on behalf of ATUG for this hearing. Under the telecoms infrastructure reference on page 8 of my submission I refer to changes in procurement policy. I am pleased to say that the state broadband network is in fact the kind of change that I was hoping for, so what I was trying to propose there has actually happened. I await with interest developments on that particular one.

CHAIR: Good.

Dr Green: What I would like to add to that is that I have done a number of studies since the submission and, in particular, focused on what assets the state government has that can be used for telecoms or to reduce the prices of delivery. There are significant resources available, especially in

regional areas, so the state government has a lot more that can be used for telecommunications, that will lower the cost of communications in regional areas and that will enable the community to connect to government. That is a lot bigger than I expected.

CHAIR: What sort of infrastructure?

Dr Green: The second point is that a fibre link goes from Perth down to Dunsborough and is probably going to go on to Margaret River. If you look at the whole south-west development, at the moment you pay exorbitant rentals or charges from Telstra to get down there. Having an independent - in other words, a non-Telstra-owned fibre link - down to even Bunbury will open up the whole of the south-west area. I did a study for the Peel Development Commission. Putting the conduit and fibre next to the Perth-Mandurah railway line, in fact opens up broadband from as far north as Serpentine-Jarrahdale right down to Preston Beach. The impact of just putting the fibre down there is that people can get adequate band at a reasonable price or an affordable price. Bunbury is effectively isolated, yet 16 kilometres away is a fibre that effectively goes on to Busselton and is slated to go through to Dunsborough and even further south, and that is owned by the state. At the moment it is lying idle, yet if you look at the Internet service providers who provide services in the south-west area, the biggest problem is getting access to a decent link from the regions into Perth. It is the sole reason that they have to charge the higher prices and/or are dependent on federal funding to keep those services alive.

The third point is that if the government structures itself carefully, they can utilise all those assets. There are a whole lot of towers, there is land, and there are rights of way in being an anchor tenant in some of these developments. We can have affordable three to five megabit links into homes, and if we use these assets properly, we can change the dynamics of how we develop, certainly the south-west. The second point is that in the Dwyer submission on page 8 Mr Gale referred to the WA ICT development forum when discussing purchasing issues. I am pretty sure he was referring to the WA Information Industry Forum. ATUG is one of the industry associations sitting on that panel.

Item 4 of my points is that in the Dwyer submission they made a statement that OpenSource WA would be kept going, and then they closed it down a few weeks later. I would like to amplify that a little bit later. The software industry development centre, which has been referred to in previous submissions, I see as a development of OpenSource WA. One of the things I would like to say about why OpenSource WA was beginning to work is that in August, in fact just after I had put the letter in, industry people had approached OpenSource WA asking, "Do you have any graduates who have some work experience with you, because we want to employ them?" The track record of graduates going through OpenSource WA is that they do not complete their three-month period there because they are taken into industry. If they do finish their three months, within days - I stress days not weeks - they are in employment. The only one who has not been in employment said that he wanted to take a two-week holiday, but when he came back he had a job.

CHAIR: Wow, that is fantastic.

Dr Green: The Small Business Development Corporation has come back and said, "If you can deliver that kind of information to the small business industries, you will solve a huge problem that they have in finding out what kind of computing tools" - I use the term "tools" - "are needed to help them solve their problems." In fact, the comment was, "If the SIDC does take off, here is my card. Please make sure you talk to me." There are a whole lot of regional people who need to find out how to solve their problems. They know their computer is there, but the range of ways you can go about solving problems and the range of tools to build the software make it very difficult for a small to medium enterprise to actually spend time identifying them. The big companies have the millions of dollars to spend, but if we are going to promote and grow our industries here, then we do need something. I might add that the SIDC concept is not unique; there is one in Singapore. I am also a member of British Computer Society executive leadership group. There is now a similar thing in

the UK where the target is to identify this wide range of free tools and free software that businesses can use to improve their productivity and gains. The British government has put quite significant funds into it.

CHAIR: I introduce Grant Woodhams, our deputy Chairman.

Mr G. WOODHAMS: Good morning.

Dr Green: Good morning.

The other one is that in terms of software engineering I did forward the software engineering body of knowledge book. I would like to quote two very successful government computing projects: RoStar, which is a Western Australian finalist in the IT&T awards this year, and the Department of Land and Information for its land inquiry system. It was a winner in 2005. If you look at how they carried out their projects, they actually followed good software engineering principles. It is not a case of software engineering that has just suddenly popped up; it is that there have been a huge number of failures in computing or IT projects and people have been working over a period of time, asking, "What is the good way to go about it?" The software engineering has come out of the study of what works and what does not work. We now have a very good framework for teaching people how to conduct computing and telecom projects to give them a pretty good chance of success.

The point I am trying to make is that governments should take a lot more notice of software engineering to improve the success rate of IT projects and at this stage, because it is a new topic, it is not well understood or well known within government. Citing those two, more by default and probably with a bit of past experience, they followed good software engineering practices and had successful outcomes, both of which have delivered significant benefits to the state.

[10.30 am]

The last point on a policy issue is that I was at the ATUG national conference the week before last. There was no doubt that Telstra wants to enhance its monopoly. The statements made by Telstra senior executives were quite surprising, to the extent that the state government should in fact promote a competition approach. In other words, coming back to the state broadband network and allowing multiple people to have access to that network are critical to the success and development of the state. Plenty of people at Telstra and its associated consultants or advisers will tell you otherwise. I think a \$15 billion increase in GDP was associated with opening up competition in telecoms. Therefore, the rolling back of the telecoms, particularly the competitive environment in telecoms, would be a huge retrogressive step and because of WA's large size an even bigger effect would be felt. Those are all the points I have. Thank you very much.

CHAIR: We have some questions based on your report to us, so we might turn to those and discuss them. One thing I am interested in, Walter, is your thoughts and comments about the announcement of the sale of Bright. I know you thought Bright had a lot of potential.

Dr Green: I need to declare an interest. I was an adviser in a group trying to buy out Bright. I have also provided engineering consultant services to Bright and its development, so I have an in-depth knowledge of it. Bright is one of those areas that are incredible communications assets to the state government, and that is why I am saying it should not be sold. You get access to a large number of buildings within Perth. It also has the potential to manage and operate or run the state links. We actually looked at it and \$160 000 would connect Bunbury to Perth. I mean, that is a pretty small sum of money at the end of the day, and it would cost something like one hundredth of the price of Telstra for the same service. It was about 1 per cent and we could still make money on it, to operate and run it. It shows you the kind of monopoly rent that is being extracted.

We identified a number of companies in Bunbury that are prepared to be anchor tenants and all of them were asking about the 50 megabit to 100 megabit bandwidth access to run their business. When we looked at what they did we said, "Yes, 100 megabytes is fully justified. I have a feeling you will be growing your bandwidth in the near future". At the moment they are paying exorbitant

rents to get what I would call inadequate connection into Perth. Some of them are now seriously thinking of relocating from Bunbury to Perth just to get decent Internet access.

CHAIR: Really?

Dr Green: Yes. The problem is a lot more serious than people realise. Edith Cowan University, for example, needs a minimum of 200 to 300 megabits connection just to run a university. That is on its wish list and in its dreams at the moment. The kind of service that Bright could manage to deliver to the state government would be a feasible proposition, so there are engineering skills and assets.

The other part that is not widely known within Bright is that we knew that voice-over IP was coming in and would be a useful technology. We actually built up the software and engineering skills where, with the assets that Bright has bought, we in fact could deliver a low-cost voice-over IP connection for government and industry. This is where we bypass Telstra completely and we are talking of less than one cent a minute from Bunbury to Perth; in other words, just about make it an untimed local call of 10 cents and leave it at that. The STD charges from Bunbury are a lot more than that.

Within WA there are what I call the management and engineering skills to enhance it, but we can also deliver these benefits. If you do look at voice-over IP pricing, it is way under what Telstra is charging at the moment. At the moment nobody is supplying that particular sector of the market. In fact, we could have enhanced the service being offered by all our Internet service providers in Perth. There are a lot of hidden assets in Bright which I do not think even some in the telecommunications industry fully understand.

CHAIR: Would it be your contention that these attributes of Bright were never fully explored by government?

Dr Green: Correct.

CHAIR: Could you proffer a reason why that might have been?

Dr Green: I have to be very careful. There was a serious lack of management expertise in the way Bright was managed and run, not so much in the early phase of its construction and development, but towards the end, particularly when Western Power was being split up. They did not know where they were going. The sale process was seriously flawed. I believe there are inquiries going on about what was there and the senior executives who left Western Power and the following day were working for Bright. It was badly managed. I believe if the sale process had gone through, even though I oppose it, the intent was to capture those assets and build Bright into an open access carrier so that we would service all the other carriers, we would not connect any customers other than government, and we would act just like a front or interface to government agencies in exploiting the telecom resources within government. Instead of 20 carriers going to Main Roads trying to get access to a bit of the land, it is better to have one point of contact where they would deal with Main Roads, provide the facilities and then manage that interface with the carriers. It takes a lot of negotiation and you need somebody who understands telecoms to talk to the carriers, which is what the other government agencies do not have. This is where a government-mandated Bright could, in fact, do that job efficiently and effectively.

CHAIR: Thank you.

Mr G. WOODHAMS: Walter, would it be fair enough to say from your submission that you recommend that the state government expand the roles of Department of Planning and Department of Local Government to include planning coordination and provision of telecommunication infrastructure? Would that be a fair summation?

Dr Green: That is correct, yes.

Mr G. WOODHAMS: Having said what you have about the circumstances with reference to Bunbury, will you elaborate a little bit more on how you see the Department of Local Government being involved and what the implications would be for the City of Bunbury, City of Albany, and City of Kalgoorlie-Boulder?

Dr Green: Yes, okay. If we can consider two points in telecoms development, we have what we call brownfields, which are where there is existing housing, and we have greenfields which are the new estates. The first and immediate role is for local government to mandate to developers that they will provide the conduits and pits; in other words, provide the ability to lay cables through the new estates. The cost at the moment is \$2 200 to do that. That is based on current prices.

CHAIR: Per lot?

[10.40 am]

Dr Green: Per lot, and about \$300 to provide the connection to the customer.

Mr G. WOODHAMS: Is that in any location?

Dr Green: Any location; in fact, I am providing advice to developers to do exactly that right now. At the moment, when you look at the cost of a plot of land, which is north of \$110 000, the \$2 200 is, quite honestly, a noise in the whole exercise. The point is that it is not money that the developer can put in his back pocket. By not mandating that you are actually making it more expensive to provide services in the future, which the state will ultimately have to pick up somewhere along the line.

CHAIR: Are there any greenfield developments going on right now that are not growing out just before that?

Dr Green: Yes, there is one just to the south where they were going to put in 500. Because of the fiascos with Bright and the lack of planning, they said, "No, we are not going to do those 500." Now we find out that another 2 000 plots are not going to get conduit for fibres for home, whereas, if that had been mandated by local government, it would have happened.

CHAIR: I have been under the impression that for the past five-plus, possibly 10 years, that was the standard.

Dr Green: I am talking about last year.

CHAIR: That is disappointing.

Dr Green: Quite a few of them are just saying that it is too hard. Coming back to your other question on where the Department for Planning and Infrastructure needs to get involved. If I can say, I come from Kalamunda and there are two main roads up to Kalamunda - Kalamunda Road and Welshpool Road. The deadly part is that one shire will build fibre conduit up to Welshpool, but Kalamunda builds its half up Kalamunda Road. We need a metro plan for the key trunk routes, which is then mapped out through all the shires. I see that as the biggest stumbling block and good reason why the shires are saying, "Well, hang on, we don't want to waste our money building something that we can't use." We desperately need that metro plan. The same thing applies to your Bunburys and the same thing applies to your Kalgoorlies. It then makes it easier for the developers to say, "Yes, we know where to build the main conduit from our little estate onto the main highway. At the moment, they do not know where to go. I have quite a number of discussions with developers where they say, "We can put fibre in our little estate but we've got nowhere to connect to." Again, one of the things that I have found very disappointing is that Bright had cable close to a number of these estates that had been developed, but because of the turmoil they said, "No, we're not going to connect them." The final outcome was that the estate developer said, "Well, if I can't connect it, why should I put it in?"

Mr G. WOODHAMS: I might be somewhat confused, and pardon me if I am. You were talking about Bunbury and some of the disincentives for businesses to be operating in Bunbury. Would you apply the same circumstances to domestic users of the technology, if you were developing an estate in Kalgoorlie, Geraldton or Carnarvon or wherever it is?

Dr Green: Yes, I would. In fact, it is a problem in Victoria, in Sydney and throughout Australia. The City of Whittlesea took a very significant initiative and mandated fibre in, but they then also got hold of one of the main carriers in Victoria and made arrangements with it to connect to a backhaul. A local government is now acting like a carrier. Although I endorse and support what it has done, with a bit of planning that should not be necessary. The other thing is communications today in my view are as important as water and electricity. At the moment, they plan for those -

CHAIR: Ports, roads, broadband -

Dr Green: I believe they need a focus to look at the metro and state-type arrangements, whereas the shire can, in fact, deal with the local arrangements. The other point that I would like to emphasise is that 80 per cent of the cost of providing telecommunication services is in civil infrastructure, such as conduits, pits, buildings and masts; and less than 20 per cent is the electronics.

Mr G. WOODHAMS: That is what the \$2 200 buys? Is that what you are saying?

Dr Green: The \$2 200 buys the physical infrastructure, yes. The actual cost of connecting the electronics is \$300 - this is what I am trying to say, and local government is good at that kind of infrastructure. They are good at building roads, putting a conduit under the road and putting a conduit under the pavement. A number of them have pavement development programs. If they had a plan of what they would do with laying out their conduits for communications, they could attract people to put in fibre to the home. Despite what Telstra is claiming, my experience and the experience last year in the fibre network is that fibre is cheaper to the home than is copper.

Mr G. WOODHAMS: Once again, pardon my ignorance, but who bears the responsibility of developing that infrastructure at the moment on a greenfields site? Is that a shire or a council responsibility? Who does that sit with?

Dr Green: It is a developer's responsibility.

Mr G. WOODHAMS: In conjunction with the local council?

Dr Green: Well, the local council simply mandates it. That is part of the criteria for developing it. Yes, the owner of the property ultimately does pay for it, but he pays for the electrical connection and the water connection. There is nothing new in it. It is just a service that is now becoming essential for modern day life.

Dr J.M. EDWARDS: It is probably vaguely related. Recognising that the work you did for the Peel Development Commission you did for it, so you may not be able to fully answer, were there lessons there that could be passed on to other development commission?

Dr Green: Oh, yes.

Dr J.M. EDWARDS: Is the work completed and is it public?

Dr Green: The work has been completed. The Peel Development Commission has submitted its report. It was looking at the development of the Peel area in its entirety, so there were population studies and all that. One of the attractions was that it is a good location for those people who wish to move out of Perth and who can deliver their services using the Internet. It was a question of how we deliver that. The fibre into Mandurah was on an open-access basis, plus reserving the required bits of land. In other words, you will see the whole plan for how you can deliver services in the Peel development region from Jarrahdale right down to Preston Beach. I have an invitation to go

down on 1 or 2 April, where I think the South West Development Commission wants to do the same thing.

Dr J.M. EDWARDS: Right.

Dr Green: Certainly, having done work for the Mid West and the other development commissions, what has been done in Peel is a good model to work on and to plan with for future developments. In fact, it was a really interesting exercise. It was the first time I had been paid to sit down and work out what is the process, what can we do and how can we do it, and fit it in with the emerging technologies.

Dr J.M. EDWARDS: Was that because they asked you the right questions?

Dr Green: No. They more or less said, "We want to build Peel into an attractive area for people to move into. Can you advise us? What do you think our future tenants would need? How do you believe that should be delivered?"

Dr J.M. EDWARDS: Right. That is good.

Dr Green: It was based on about six weeks of work.

CHAIR: That is short and sharp. I have a couple of questions for you about your comments on the digital content industry. One of your suggestions is to encourage contact between small to medium enterprise digital content developers and source Western Australia for digital content tools and development. How actually do you think government could encourage this kind of interaction?

Dr Green: One of the problems in the digital content industry, and it is still quite a serious problem, is that you need massive amounts of computing power. One step is a project I have been watching, which is using - I use the term - grid computing where you get multiple computers, but there is another development where you use a single computer and four graphics computing engines, and this builds a very powerful tool for digital content developments. I take the case of a student project at Murdoch University, where it took the student six hours to produce a basic image of about three seconds. This same engine, which costs not much more, would do the same thing in about four or five minutes.

[10.49 am]

One of the things that inhibit digital content developers is the fact that they create an idea and it takes six hours to see the result. If you can see the result of your idea in three or four minutes, it is still in your mind and you can go back and change it and you have a sort of rapid development cycle, whereas after six hours you have forgotten a lot of what you were trying to do and you then recreate it. There is access to efficient computing power, and this is where IVEC is doing a good job. I believe that there is a lot we can do to solve what I call the immediate needs of that and reserve IVEC for some of the bigger and more complex problems. When I got somebody to talk to me about it, I was quite surprised at the size of the digital content industry and our contribution. Again, I quote one thing from my Bright expertise: a group that was in South Perth was moving 250 gigabytes of traffic a day. The digital content industry moves a lot of stuff. People in the industry get it in from the moviemaker or whatever it is they are working with; they then process, render or do whatever they have to do; and then ship it out. The guy then looks at it and says, "No, this is not right" and sends it back for reprocessing. This is three years ago, by the way; this is not something new. So getting back to it, build our bandwidth, give them the decent tools to work with and I believe we have an industry that we can grow.

The other thing that is important is encouraging and supporting the conferences, because that is where we get the people from overseas and indirectly, the recognition that Perth is a place you need to talk to. Bandwidth and computing tools or power I see as our two main bottlenecks. Our creativity and the competence of our people here is great.

CHAIR: Is there any estimation of the size of our digital content development industry?

Dr Green: There are about eight or nine reports and they all give different answers, so it is in the millions, significant.

CHAIR: How about actual people or SMEs?

Dr Green: The one company I have just quoted had six people in it. It has to be north of about 50 or 60 people, but there is another aspect to digital content and spatial imaging in that the mine companies go and do an exploration actually creating how you look at that ore body in 3D. That is not even touched.

CHAIR: Was it IVEC doing some of it?

Dr Green: IVEC is doing some of the work.

CHAIR: The potential is huge.

Dr Green: The potential is huge and to me we need 10 or 12 IVECs, not just one. There are huge opportunities specifically for us in our mining and a lot of that work actually has a direct impact on biotechnology. We are not doing it just for the mining; it actually goes into all the other ones.

CHAIR: This is our other colleague, Mick Murray.

Mr M.P. MURRAY: My apologies for being late. Good morning.

CHAIR: Can you just go over again how you nurture and make the leaps from the creative content and the good ideas and initial development. Where exactly do you think state government should be in assisting it?

Dr Green: This is where the Software Industry Development Corporation comes in, which is providing access to the tools in the first place; so supporting that and then using that as the avenue to sponsor the relevant conferences, because that body would have a good idea of what is significant. There are a lot of people who want to organise conferences. We want to target those who are going to enhance the state. DOIR do a good job of this at the moment and you could leave it there or you could move it into the software industry development centre. The other one is promoting the state broadband network and mandating the open access for all carriers to have access to that backhaul network. I might add, in talking to carriers they have all said, "If you can get something like that going, then we can drop prices and increase services." In summary, it is the conference support, the tools and the broadband access.

Dr J.M. EDWARDS: This is more of a philosophical question reflecting my own interests. Where do you think Blue Sky Research versus research commissioned for a very specific problem is going to fit in the spectrum, because presumably sometimes you start doing a project but find the applications are totally unexpectedly?

Dr Green: Can I refer you to a computer policies options document that I prepared, because I think that answers your question? If you look at the computer tools, at the top is "create new tools". That is where your Blue Sky Research comes in. In other words, a good example is that there is an American university in the digital content area and they wanted to simplify the creation of movement of humans or objects. So taking a completely new approach and putting markers on arms and legs, they then get a person to act out the sequence. In a 3D environment they can pick all that up then fit the body or shape of what I will call alien, because it is not human, around those particular points and get it to act. That was done in a university just to see if it would work if it is possible. That is creating a new tool and that is what your Blue Sky Research is. Your developed and improved tools are where your targeted research is. In other words, you now have a new tool, it may not be useful - in fact, I guarantee it probably will not be useful to the public or people who are in the commercial area - but then your targeted research takes that concept to make it now useful for industry. That is where I see the Blue Sky being useful.

Dr J.M. EDWARDS: Who funds that when making it useful for industry?

Dr Green: I would say the Blue Sky needs to be funded by government because nobody else will, but the developed and improved tools should be a combination of some government and some industry joint funding, which is the best model for that next stage. This is why I am saying that you should promote the innovation centres and your university policies to include that. A lot of them in fact need to be given some guidance.

Dr J.M. EDWARDS: I was in Queensland recently and they were talking about a boot camp for PhD students for this whole area, where they take them away for a week and talk to them about their ideas, a bit about business, marketing and networking.

Dr Green: I have said this before, and I have said it to a few vice-chancellors: universities are very good at creating intellectual property but they are absolutely useless at developing it, marketing it or taking it to the next step. The other thing is that only 20 per cent of the value of the final product is in fact in the IP; so the boot camp is to educate the guy. You might have a bright idea, but do not think you are going to be given a million dollars and you can go and buy your Porsche. As I say, for me the next step, which is the hard bit, is making it into something useful that people can use or make useable, for example, and also meeting a market need. The next step is to actually go into production, which includes marketing, setting up a corporate plan and getting all those things up. Again, this is where the state's offices overseas are useful. I have been quite amazed at how some of the academics here did not even know that the state had offices overseas and that they did all this work. This is why I am saying that pulling together your software industry development centre is not only looking at it, but also trying to get these guys to say, "Well, look here are the tools."

[11.00 am]

Mr G. WOODHAMS: Would it be fair, Walter, to build on that with something else that I think you recommend that the government undertake; that is, just to précis it, funding the showcasing of WA digital content products and services overseas. I assume that is a reasonable sort of assumption to make. Given that, what would you identify as an ideal showcase? What would you say would be the best place for someone to go? If I had a product that was worthwhile, where would you say I should take it?

Dr Green: Let us take an example recently in the UK. In Birmingham there was a basically digital content-type symposium exhibition. It would mean a person in the London office going up there having a booth to showcase what WA can offer.

Mr G. WOODHAMS: The state office in -

Dr Green: The state office and the London state office. I tried to call in there when I was over there two weeks ago to get a better feel for what they are doing, so that when I talk about them I at least can say, "Yes, I know what they do." There are a number of opportunities. There are conferences and exhibitions; in fact, some conferences do have an advertising theme. Even with somebody going up there for a day, because these things only last a day, it is worthwhile having that presence. He may get only one or two inquiries but at least he is getting inquiries and feedback.

The second part is what I see in the SIDC. People will only visit a website if they have a reason to go to it. One of the things I believe is missing in the World Wide Web is places where you review open-source software and give a critique or say, "This is how you make it easier to work." You can see that coming. Google now hosts open-source software. It has opened up its Google code search which, yes, we would use, thank you very much. Google is hosting the open-source software that has been developed. A lot of good work was done with OpenSource WA to make it easy to use. A lot of the stuff comes down is Blue Sky stuff, which is still not easy to use. All they did was make it easier to use.

In addition, you put next to it all the companies and their particular products. We are going to drag them in with the open-source review but then they will see the WA products and that covers anything from Autumn Care, which is an old age person's management, to Member IT, which is

how to run associations efficiently and so forth. We could put all those on there and that is again part of the mandate of the software industry development; the idea being that if we can get people to come there, the first thing they are going to find is WA solutions and that will promote our exports.

Mr G. WOODHAMS: Where does the developer of digital content go to identify its opportunities in that Birmingham convention conference you described? If I was a developer, where would I go to know that that was on, or should it be the responsibility of state government to say, "Here are your opportunities"?

Dr Green: I am going to say right now if you are in the digital content industry, you will know that there are two conferences in the US that you have to go to. The problem is they buy and use the tools that everybody else in the world is getting. They then have to compete effectively worldwide. The American and the British are now making their enhanced computing tools available, which will give the US and the UK employees a better chance in the digital content market. We need to be doing that to enable our guys. The answer is we do not really need to tell them where to go; that information they will find out fairly well. Again, organising and running conferences here, and I believe there is one at the end of the year, is an ideal way. It gets the local guys involved and they will meet the people overseas.

To answer your question, probably yes, sponsoring a conference in Perth is probably all the state government needs to do in promoting that growth. I believe that with the rest of it, depending on their particular niche market in the digital content industry, they will sort out who their contacts are. However, we also need to advertise what they are doing in other countries. As I say, the UK and the US are actively promoting and trying to make available supercomputing facilities for the digital content industry.

CHAIR: Are there particular magazines and periodicals dedicated to this stuff?

Dr Green: Digital content still comes under about three different publications. I do not want to say it does not have its own unique publication but there are other bodies of knowledge in which digital content creation comes at the moment. The graphical interface is one but that handles a whole range of graphics. Digital content is just one small sector of it. Those in the industry coming out of our universities are getting all the background and access to research and contents. I believe it is the role of universities to provide that. It is a difficulty for the universities, but we need to fund the seed capital for these conferences. In some cases they do not make a profit or break even, but basically that donation covers that sort of loss-making situation. We can do more by attracting people. At the moment the impression I am getting is that there are a lot of people talking about it but there are not many people doing it. We do have an opportunity in WA. I have certainly been impressed with the stuff that I have seen coming out of here.

CHAIR: You are obviously aware of our terms of reference, Walter. We are now getting to the stage where we are finalising our draft report and trying to finish the inquiry. Is there anything that we have not covered in our conversation today that you are interested in or expert in that you think you should share with us?

Dr Green: The only small point that I think is fairly critical is that a lot of the mining development that goes on in WA is in the northern part of the country, and at the moment if you want to buy a slow broadband link it costs you a quarter of a million a year from Telstra; that is their price. Telstra created a marketing situation where even though they give you a 40 per cent discount, you are going to pay \$800 000 per annum for that less than adequate broadband link. It is vital that the government seriously consider planning and implementing a competitive or non-Telstra-controlled fibre link to the north. We need to open up.

I have just had a case where I put in a service on a mine with voice-over IP and we found we could do it cheaper via satellite than buying the service through Telstra. That is frightening. When you look at the benefits to the state from our mining industry and all the activity up north, we do need to

change the dynamics and pricing of services up there. We need an independent link up the Dampier pipeline, making sure we have access to that area and that there are no Aboriginal rights and all that kind of thing. Providing anchor tenancy is the kind of role that Bright could play in attracting finance partners and everything to build that link and operate it to the benefit of the state, plus you would open up the whole northern part. The concept of having to go to satellite to get a cheaper solution I find really backward.

CHAIR: Are there any other final questions?

Mr G. WOODHAMS: No, thank you.

CHAIR: Thank you very much for coming in today. We really appreciate you sharing your time with us and contributing to our efforts on behalf of the industry. I just have a closing statement that I need to make.

A transcript of the hearing will be forwarded to you for minor corrections. Please make the corrections and return the transcript within 10 days of receipt and if it is not returned we will deem it to be correct. Thank you very much for your time.

Dr Green: Thank you.

The hearing concluded at 11.08 am
