



COMMONWEALTH OF AUSTRALIA

JOINT COMMITTEE

of

PUBLIC ACCOUNTS

Reference: Internet commerce

SYDNEY

Thursday 6 November, 1997

OFFICIAL HANSARD REPORT

CANBERRA

JOINT COMMITTEE OF PUBLIC ACCOUNTS

Members

Mr Charles (Chairman)

Mr Griffin (Vice-Chairman)

Senator Coonan
Senator Faulkner
Senator Gibson
Senator Hogg
Senator Watson

Mr Anthony
Mr Peter Baldwin
Mr Beddall
Mr Broadbent
Mr Fitzgibbon
Mr Georgiou
Mrs Stone
Mr Vaile

The terms of reference for this inquiry are:

The Committee shall inquire into and report on the impact of internet commerce on:

- (1) the administration of the Australian taxation system and the implications for Australia's tax base;
- (2) the international competitiveness of Australian businesses, particularly small and medium enterprises, with the emergence of the internet as a retailing medium; and
- (3) government industry assistance programs, Customs administration, and the quality and accuracy of Australia's economic and trade statistics.

In conducting its inquiry the Committee will consider:

- (a) the expected growth in internet commerce;
- (b) the findings of and solutions proposed by the Task Force on Electronic Commerce established by the Commissioner of Taxation;
- (c) the quantity, value and type of goods entering Australia under the duty and sales tax free limit, and the commercial entry thresholds, administered by

the Australian Customs Service;

- (d) the appropriateness of the existing duty and sales tax free limit, and the commercial entry thresholds, referred to in paragraph (c) and the implications, costs and benefits of any alteration to these limits and thresholds;
- (e) the commercial opportunities (both domestic and export opportunities) afforded to Australian firms by the growth in internet commerce;
- (f) the current frameworks for consumer protection and the protection of intellectual property;
- (g) the opportunities for Commonwealth agencies to improve services to the business sector and to the general public arising from growth in internet commerce;
- (h) the extent to which the Government's potential responses to the growth in internet commerce are affected by international agreements or conventions; and
- (i) the policy approaches being taken by other countries and the scope for international cooperation.

WITNESSES

ADAM, Mr Darren, Taxation Adviser (Multimedia), Telstra Corporation Ltd, 11/231 Elizabeth Street, Sydney, New South Wales	201
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EHRET, Mr Terry Dale, Associate Director—Information, Technology and Application Standards, Standards Australia, 1 The Crescent, Homebush, New South Wales 2140	221
KELLY, Mr Paul, Director, IT Standards, Office of the Privacy Commissioner, Human Rights and Equal Opportunity Commission, GPO Box 5218, Sydney, New South Wales 1042	231
LYLE, Mr Roger, Associate Director—Communications Technologies, Standards Australia, 1 The Crescent, Homebush, New South Wales 2140	221
LYNCH, Dr David, Director of Policy, International Banks and Securities Association of Australia, Level 12, IBSA House, 2 Bligh Street, Sydney, New South Wales 2000	242
MARSCHALL, Dr Richard Anton, 10 Gumnut Close, Blaxland, New South Wales 2774	251
SIMON, Mr John, General Manager, Internet Platform and Content Services, Telstra Multimedia Pty Ltd, 3/157 Walker Street, North Sydney 2059 ...	201
SMITH, Ms Lindy, Director, Privacy Policy, Office of the Privacy Commissioner, Human Rights and Equal Opportunity Commission, GPO Box 5218, Sydney, New South Wales 1042	231
TOMPKINS, Ms Susan, President, Australian and New Zealand Association of Antiquarian Booksellers, PO Box 279, Cammeray, New South Wales 2062	260

JOINT COMMITTEE OF PUBLIC ACCOUNTS

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SYDNEY

Thursday, 6 November 1997

Present

Mr Charles (Chair)

Senator Coonan

Mr Beddall

Senator Gibson

Mr Griffin

Senator Hogg

Senator Watson

The committee met at 9.32 a.m.

Mr Charles took the chair.

CHAIR—The Joint Committee of Public Accounts will now take evidence as provided for by the Public Accounts Committee Act 1951 for its inquiry into Internet commerce. The committee will now resume from where it left off yesterday. Today the JCPA will take evidence from Telstra, Standards Australia, Office of the Privacy Commissioner, the International Banks and Securities Association of Australia, Dr Richard Marschall, and the Australian and New Zealand Association of Antiquarian Booksellers.

Before swearing in the witnesses I will refer members of the media who may be present at the hearing to a committee statement about the broadcasting of proceedings. In particular, I draw the media's attention to the need to fairly and accurately report proceedings of the committee. Copies of that statement are available from the secretariat staff present at the meeting.

ADAM, Mr Darren, Taxation Adviser (Multimedia), Telstra Corporation Ltd, 11/231 Elizabeth Street, Sydney, New South Wales

BURKE, Mr John, Group General Manager, Taxation, Telstra Corporation Ltd, 35/242 Exhibition Street, Melbourne 3000

de JONG, Mr Peter, Deputy General Counsel, Telstra Multimedia Pty Ltd, 10/157 Walker Street, North Sydney 2059

SIMON, Mr John, General Manager, Internet Platform and Content Services, Telstra Multimedia Pty Ltd, 3/157 Walker Street, North Sydney 2059

CHAIR—Welcome, gentlemen. We have received your report and have read and digested it. Before we start to ask you questions about your submission, would you like to make a brief opening statement?

Mr Simon—Yes, we would, Mr Chairman. Firstly, thank you very much for this opportunity. Telstra does appreciate the opportunity to discuss the submission in relation to electronic commerce that has been presented.

There are two key points that we wanted to raise in this introduction. We want to comment on the debate about electronic commerce and the issues of tax avoidance and law enforcement. I think there is the implied assumption that electronic commerce users are seeking to avoid the taxation base and taxation law.

Our position is that the Internet proposes a whole new range of opportunities for Australian business and Australians and that it is yet another distribution mechanism and distribution channel to reach the world. Australia is well placed to take advantage of the information age as we move forward. Our people are well respected globally for our human capital. It is an area that we really must capitalise on.

The whole issue here is one of coming up with a balanced legislative framework that really allows us to take advantage of that, no matter whether you are a large organisation or small business. The issue on the table is coming out with a balance of legislation that enables the progressive development of Australian business and Australian opportunities to really reach the globe.

CHAIR—I am sure my colleagues have plenty of questions about the statements you have made about ATO's proposals, or options, in their report on taxing the Internet. Last week in Canberra ASTEC, the Australian Science Technology and Engineering Council, expressed to us serious reservations and concerns about bandwidth capability, particularly between here and the States and here and South-East Asia. We would like your comments on that, on what you think your responsibility is—or other carriers are—and on where we are now and where we are likely to be in two years time.

Mr Simon—Telstra is continually involved in capacity planning, as is the rest of the industry. Cable capacity across the Pacific is not necessarily just a Telstra responsibility. We have an ongoing plan that goes out into the future, well into 20-year investment cycles. It is true to say that the growth of the Internet has consumed cable capacity—everyone is aware of that—and it is continuing to grow. The rate at which cable can be rolled out is physically restrained by the various projects and investment plans, but they are well under way. Importantly, we should not just look at cable but at new technologies, such as low-orbiting satellites. There are new technologies in the pipeline that will increase capacity.

From our perspective we are also looking at other initiatives which involve techniques such as content caching and content mirroring. That is, basically taking content that is popular from other areas, such as the States, and caching it on local servers and local hardware in Australia. What that will do is free up some of the bandwidth whereby users are currently pulling down individual pieces of content in each session.

We are looking at a range of initiatives, not only new cable deployment or new satellites—I think that is an industry responsibility overall—but also looking at specific opportunities for mirroring and caching popular content in Australia, therefore freeing up bandwidth. This group here are not the experts on capacity, cable and access. We come here more from an Internet commerce perspective. We are happy to take any more questions on this subject on notice and to get the relevant authorities in our respective groups to respond to your comments.

CHAIR—You can understand this has become a very broad ranging inquiry, perhaps broader than it was originally envisaged. But it is true to say that if we cannot play because there is not enough cable capacity then our growth prospects are going to be slowed, is it not?

Mr Simon—I think the forecast of no cable capacity is probably overexaggerated. There is capacity. The technologies are continually advancing, which will allow us to make greater utilisation of capacity. We have seen this for a long time. A telephone line used to be restricted to 1,200 baud modems, and now we are using 56,000 baud modems over the same medium. The same is true with cable capacity. There are continual compression techniques, a new technology that will enable expansion and optimising the capacity that is there.

CHAIR—Since you are not the experts, would you mind going back and having your technical people respond in due course to us on the questions that were raised by ASTEC?

Mr Simon—We will do that.

CHAIR—The committee, through the secretariat, will respond to your people and tell them exactly what it is that we would like them to respond to.

Mr Simon—Okay.

Senator GIBSON—Yesterday we had evidence about the current system in Australia for the handling of credit cards and contrasting what the banks are doing with credit cards here in Australia with that in the states and in Europe. I will take the US example of where the banks are actually standing by the credit cards and basically verifying the transaction and standing behind the individual commercial transactions. The banks in Australia, according to evidence we were given yesterday, are not doing this. Is Telstra considering entering into this market?

Mr Simon—Telstra, you may have seen the papers in early October, launched an initiative called SureLink, which is a business to consumer electronic payment service. I must say that, in launching that service, we have not entered the banking business and are not intermediating with the banks. We basically interconnect to the payments network and what we really do is electronically commerce enable Australian business. So we take small business, medium business or large business web sites and we enable them to be able to have real-time credit card authorisation. So, to your comment about being able to verify that it is a valid card and that the holder has the appropriate credit limits, we are able to go into the payments network just like any merchant would. So our system just looks like an EFTPOS terminal, effectively. That is really kicking off and we see that as one mechanism to enable Australian business to take advantage of the Internet and move into commerce.

Mr BEDDALL—Can I follow that through. There was a point made yesterday by the Internet association that, despite the same cards—Visa and Mastercard in the US—being able to give real-time legitimate authorisations in the US, it cannot happen here; the banks will not do it. The fact is that you do this high-tech Internet transaction and then you get on the phone, ring up and get the authorisation number.

Mr Simon—With some services, yes.

Mr BEDDALL—Is Telstra getting involved in that? Telstra has already been involved, I think, with Visa or Mastercard with the Telstra card which—

Mr Simon—There is a Telstra Visa card, yes.

Mr BEDDALL—So Telstra is sort of into that a little bit. Has Telstra looked forward to the business opportunities, its strength being the fact that it can clearly identify who it is because it has all that information on its database?

Mr Simon—First of all, I think it is false to assume that we hold all that

information on our database. We hold certain information, but we do not hold information with regard to cardholders—

Mr BEDDALL—No, but you know who a person is; that is what I mean. I live at a certain address and you have that data; so it is a real person. Then you have to do the other checks as well.

Mr Simon—Yes. The issue of authentication is an issue on the Internet, and it is one of the inhibitors of electronic commerce. That issue is being addressed through the use of digital certificates whereby electronic certificates are issued by an authorised party, a trusted party. That certificate is signed and then a set of electronic keys are used to basically encrypt any transactions or messages that are used. We are certainly moving into that business through being a certification authority. We are in the business of providing a secure payment service that works in conjunction with the Australian banking network and we are in the business of an issuer of certificates for organisations who want to then identify their users. Then those users will hold a certificate issued by that corporation.

Senator GIBSON—If I can get back to the card transactions, following on from David's questioning: the difference that was put to us yesterday was that in the states the individual banks are standing behind the card transaction immediately; whereas here the retailer has to wait quite a long time to see whether the transaction actually goes through and it is taking the risk of non-performance.

Mr Simon—That is true in some systems, but there are now systems in place where that is not true. In the case of SureLink, the merchant gets real-time advice that the credit card authorisation is valid. So it is no different from you walking into a supermarket and swiping your card. It is the same process.

Senator GIBSON—So the merchant is actually getting payment?

Mr Simon—At the time of purchase when the person hits the buy button, the transaction is authorised against the real time database for valid credit, and the amount is available.

Mr BEDDALL—And the risk is carried by the credit card company?

Mr Simon—The transactions today are MOTO, so they fall under the same legislation as the mail order and telephone order legislation set.

Mr BEDDALL—The Internet association were telling us that they were carrying some hundreds of thousands of dollars of bad debt because, while there was authorisation when the transaction took place, the card was later ruled invalid, and the banks or the credit card companies were not honouring such transactions. But you say you have now got this system in place.

Mr Simon—That is right: there are technologies available that solve that.

Mr BEDDALL—If I am the local cigarette shop and I want to sell cigarettes on the Internet, how do I know that I can do that through Telstra?

Mr Simon—You become an accredited SureLink merchant and, as a result of that, you are able to have the transactions for a consumer path through SureLink, which will plug into the payments network and get real time credit card authorisation.

Mr BEDDALL—Regarding signatures, again we had suggestions yesterday that perhaps the federal government should take on board introducing legislation to stand behind electronic signatures.

Mr Simon—I think what you are talking about there is the concept of having a universal or a single trusted party in Australia that issues certificates—similar to, say, the Passport Office. That is potentially one approach. That could be using a sledgehammer to crack a nut. There are many organisations who can actually issue certificates, because most organisations hold information with regard to their customer base or their users.

The key and fundamental issue about digital certificates is how and when a certificate is issued. Do you issue a certificate just because someone sends in a piece of paper or fax saying, ‘I am John Simon and my address is X; please trust me’? There are those systems in place today globally, and they call them class 1 certificates. In reality, they are not worth anything, because there is no means of certifying who that person is.

What really needs to be done is to have a means by which someone over the counter—maybe as the equivalent of the concept of the 100-point check—presents some form of ID at a bank or at some point over the counter, at which point that can be checked and a certificate can be issued on line through the Internet. At that point, the certificate is valid. It is signed by a trusted party. Trusted parties could be Telstra, a bank or a large organisation that holds the trust of the end consumer in the brand on it. So there are many ways to do that.

Senator COONAN—Would the certificate be updated at the time of the transaction, in effect?

Mr Simon—The certificate can be stored in your browser. It can also be stored in your smart card, and so it could be that you hold a smart card in your wallet with a certificate sitting on there. The time period of the certificate is really up to the authorising party. We normally recommend that you would probably reissue it every year. There is the concept of a certificate revocation list, so that the certificate of authority—and this is a service that Telstra is offering—holds a database of valid and certificates that have been revoked.

Senator COONAN—A bit like the actual physical credit card list, to see if you are on it.

Mr Simon—It is the same concept. You have a revoked certificate list; and therefore the systems, when a transaction is presented, can check against that revoked certificate list.

Senator GIBSON—Is Telstra doing this now?

Mr Simon—Yes, we have a system that is actually being used. Our first customer is the New South Wales TAB, which is providing a service to its members to allow on-line Internet betting.

Senator GIBSON—And are other major players offering similar services?

Mr Simon—Other CA services? Yes, there are companies that are globally providing these services. Companies such as Verisign, Visa and IBM will move into that space, and Australia Post is positioned to provide services.

Senator GIBSON—Yesterday we were told that the Victorian government is proposing introducing legislation to basically do this with state legislation out of Victoria; hence the suggestion was that perhaps the Australian government ought to consider doing the same on a national basis.

Mr Simon—It all boils down to whether you think we should have one certificate in our wallets or whether it really does not matter. I have the view that, in your electronic wallet, whether that be your browser or your smart card, a certificate is just a record of data. You will hold multiple certificates. You could have your Telstra certificate, which lets you get into your Telstra systems to analyse your phone bill and order something. You could have, for example, your banking certificate, which lets you get into your home banking system through the Internet.

Having multiple certificates is not really an issue. I believe that, over time, you will have cross-certification of those certificate holders. Again, I will use the example of a bank. Westpac may say, 'We'll accept a Telstra certificate because we know they perform a high level of authentication before issuing that certificate.'

CHAIR—I want to go back to what David said, because I am a bit confused here: there are too many balls flying around through cyberspace. Say that you get a simple transaction: an individual gets on the Web and orders a fishing reel, quoting the Mastercard number, Visa number, AMEX, Diners or whatever. Who is the primary? Each of those somehow is associated with a bank or a group of banks, but who is the primary certifier that is able to say that the card has the capacity to pay for those goods?

Mr Simon—The short answer to that is that it depends on which technology you are using. The issue is that there are multiple technology sets available. They basically boil down to two sets. Firstly, you provide the intelligence in the consumer's computer equipment. One standard you have probably heard of is SET. Have you heard of the SET? SET works on that principle: if you have a browser, it encrypts everything and sends it through. So your information is encrypted and it goes through to a SET payment gateway, which would be Visa or someone of that ilk. At that point, they would certify that the credit card details are valid and that the dollars are in the account. The Internet service provider has really nothing to do with that; they are just carrying the traffic. They cannot see anything and they do not get involved in that: they are just providing the service of transmission.

The other approach is the approach that SureLink uses, where you provide a back-end mechanism where all the intelligence sits in the back end and nothing is transported over the Internet. We do a one-off capture of the user's credit card details. They are held behind a firewall in a secure environment. From that point on, whenever the user wants to buy something, we send the consumer's credit card details in an encrypted channel into the EFTPOS and payments network.

The details never go over the Internet, and the merchant never gets any of the consumer's details. That is another security item. You reduce the risk of back-office fraud from the merchant's side, because they never actually get to see any of the details. So there are multiple means of doing that. In both cases, the ISP does not do anything; it is the payment gateway operator which could be the Visa or the SET authorised payment gateways. In our environment, as I mentioned before, we just plug in to the payment financial network. It is actually the bank running the payment clearance systems and the real time credit card authorisation that validates it.

CHAIR—So what they said yesterday could be valid, that it is basically the banks in Australia that are making the difference for us versus the Yanks?

Mr Simon—Yes. But it is fair to say that the way the banks operate here is very different from the US banking system, with its varying state boundary legislation, et cetera.

Mr BEDDALL—It is much more secure for the person purchasing.

Mr Simon—I believe it is more secure, because you have a much more integrated secure payments network across the major banks rather than disparate islands of banks in the US running their own.

Mr BEDDALL—In the US, all the data is just running across the Internet, is it not? It is encrypted.

Mr Simon—Again, it does not have to be. It depends on whether they have used the former technology I mentioned, where the intelligence is in the client browser and then they are then sending it over in an encrypted channel, or on whether they are using the technology base that we have adopted initially, which is putting it all in the back end and never transmitting anything over the Internet.

CHAIR—I understand that the NAB is only a week or two away from on-line banking services, and the others are bound to follow very shortly—or so we are advised. If that is true, will that help solve this problem for Australia?

Mr Simon—I am not sure what the banks are going on-line for. If you are referring to providing access to your banking accounts over the Internet, that will obviously provide greater convenience and service to the banks' account holders. It is not necessarily going to address how a merchant in Adelaide provides a secure and safe environment for its consumers and clientele. But, clearly, it would be fair to say that, if the bank has already moved to providing its services over the Internet, it must have the environment, the platforms and the technology to be able to extend that out.

With SureLink, we have addressed providing a secure, safe environment for the merchants, as a new benchmark in the form of consumer protection for consumers, by taking the approach of saying, 'We don't want to transmit over the Internet. We'll do a one-off registration capture'—which is through the Internet, I must say. The very first time they sign on, they sign on over the Internet. They place their information in a registration process, which is encrypted, and from that point onwards that information is never retransmitted again.

Senator HOGG—My interest, from what I have heard so far, goes to the effect of all of this on employment. Do you have any idea of the impact that all this technology will have on employment within Australia? Obviously, there is a real capacity to move the services offshore and thereby dismantle a whole infrastructure that may exist in Australia. Have you got any concept there?

Mr Simon—I do not have any information or figures that are quantitative in terms of any forecast that will help. I look at it, and I think many people look at it, from the other side that says that Australia is well regarded for its human intellectual capacity and its multicultural skills. We see large multinational companies setting up, in Australia, customer service operations to service Asia-Pacific. I think the Internet actually will allow us to take advantage of that because, all of a sudden we can fulfil the prophecy of the smart country in providing human services to many organisations globally, whereby customer service facilities and technical response facilities can basically be seamlessly integrated to any centre and any help desk in Australia.

It is just one opportunity that we did not have before. All of a sudden we have the capacity: we have a good technology base; we are a multicultural country that speaks

many languages; we can provide services to a range of organisations and a range of countries all centrally located in Australia. These tend to be knowledge services, as opposed to human capital services. So there is an immense opportunity as we move forward into the year 2000 and beyond to really grow Australians' employment in the knowledge industry and in service industries by using the Internet to bring customers and services to us.

That is the opportunity that we have really got to grasp. We see that now with small companies. Trumpet Software in Tasmania, through the Internet, has done fantastically well. Sausage Software is writing its programs and marketing them internationally—all because of the Internet. It would not have been possible before.

Senator HOGG—But are they high growth areas for employment? Whilst they might be niche companies in their areas, are they going to be labour intensive, in a sense?

Mr Simon—It depends on the definition of what is labour intensive. Certainly, the service call centres are labour intensive. Running American Express's help desk for Asia-Pacific employs a large number of operators and a large number of knowledge workers in locations. It requires infrastructure, buildings and technology; and so there is a lot there. Medical science, long distance medical services and long distance education are all very possible: through the Internet, the linkage of voice data and video, which is becoming more and more a reality, can open up those channels.

Senator HOGG—Can I then take this back to a very simple level for myself? I would imagine that it goes back to what you were talking about earlier: our cable capacity for the passage of data either way. What percentage of traffic currently would be over cable as opposed to satellite, and will we see a shift from cable to satellite in the future?

Mr Simon—I could not give you, off the top of my head, the information on what percentage of our data goes through cable versus satellite. I could say that I know that by far the majority goes through cable, mainly because of cost and performance. But the development of satellite technology over the past four or five years has progressed very rapidly. With the low orbiting satellite technologies, the cost per channel has dropped radically, and will continue to drop. I think you will start to see emerging satellite options move pretty quickly over the next five or 10 years.

Senator HOGG—I would imagine that it is easier for us to monitor cable transmission as opposed to satellite transmission. Is that correct?

Mr Simon—It is not my field of expertise, but I would say—

Senator HOGG—If commerce and trade are going to be conducted over this medium and if at some stage there is a notional idea that we will monitor the trade, it seems to me that if there is a physical thing such as a cable, we can monitor it a lot more

easily than someone who is tapped into a satellite. Is that correct?

Mr Simon—I do not think so. If you are talking about monitoring the volume of data transferred, there should be no difference because you still need those control mechanisms in satellite or cable. If you are talking about monitoring transaction types, then that is a totally different system. That type of thing would impose a huge overhead on whoever has to monitor it. That basically starts getting into privacy issues of identifying what is going over the cable or what is going through the satellite. I think that is a dangerous area to be moving into to start getting down to monitoring and identifying individual transaction types.

Senator HOGG—Reasonably, that means that the Internet should remain a free trade area without the invasion or the viewing of transactions by government?

Mr Simon—I believe so. I think the obligations that would be created in viewing transactions, in monitoring transactions and in reporting would be huge, particularly for small to medium businesses in Australia.

Senator HOGG—It is interesting because there could be whole range of financial, commercial and business transactions that could take place over the Internet which we, as a government or as a nation, would have no purview of whatsoever.

Mr de Jong—I think it is fair to say that the Internet is subject to interception by the law enforcement agencies, provided they have a warrant through the usual procedure, in the same way as an interception of a telephone line. It is not exactly a totally free area. The authorities can, with the appropriate warrant, intercept messages over the Internet. Technically it may be difficult but legally they have that ability.

Senator WATSON—Your report was mildly critical of the ATO approach in trying to assess sales across defined geographical borders as likely to add a lot of complexity as well as in the some of the compliance things. It would appear, reading between the lines, that perhaps a GST type approach would overcome a lot of the difficulties with the current wholesale sales tax which can either be an inhibitor or an accelerator to certain types of businesses depending on the level of sales tax that could apply. But even GST is vulnerable given that we operate in an area of the Asia-Pacific which is fairly low in these sorts of tax rates on services and commodities. If we put too high a value on a GST, wouldn't that tend to push transactions offshore which can easily be done through Internet type of trading? What is your approach to overcome some of the difficulties that have been raised by the ATO? We want this business to remain as far as possible within Australia and at the same time we want a not unreasonable amount of tax to be collected. Obviously, it is a threshold question. Some traditional approaches are no longer applicable. How do you think we should be tackling it?

Mr Simon—It is a question of balance and recognising that there is existing

legislation and trying to work within those legislative frameworks rather than superimposing a brand new set over the top of the existing legislative frameworks.

Senator COONAN—How do you get over problems with domicile and source where you can locate your transaction offshore if there is a better environment?

Senator WATSON—Should we be working within these frameworks? Shouldn't we be bold enough to be lifting the veil and saying, 'There is a better way to approach this?'

Mr Simon—I think we should always be looking at a better way to approach it. Darren might want to make some comments on jurisdiction and domicile environments, the issues with the Internet at the moment. Clearly imposing a GST which just creates a higher fee on the goods would probably cause more international shoppers not to shop, buy or trade in Australia, although on the Internet we are seeing that users are gravitating towards brands. People still want to know that who they are buying from or transacting with is someone that is trusted and has a reputation.

Therefore, if we can create a framework that still supports the trust and branding of organisations, whether small or large, I do not believe organisations will have a need to shift their residence, their service or their base offshore. We are seeing that, where consumers are now presented with a range of web sites to go to—and the range is quite daunting because they really do not know who is behind those web sites—they are starting to look for recommendations. We are starting to see initiatives globally where consumer group organisations are putting their seal of approval. In the US, an organisation has planted its seal of trust. It says 'This is a respectable merchant according to our analysis', and they put their little seal on their web site.

Senator GIBSON—Who is that?

Mr Simon—There are several initiatives coming through called TTP, which I think is Trusted Third Party Internet service providers. There is an organisation called Better Business on the Internet. These are consumer advocacy groups who are taking on this third party role of reviewing merchants and placing their stamp of approval.

Mr BEDDALL—The whole problem of tax is something that has to be grappled with. Have a look at this GST scenario. A GST export is zero rated. Someone from the US who is buying off an Australian web site gets it tax free but an Australian buying off the same web site would pay the GST. The incentive is for more people to buy Australian because the global market will make sure the price is competitive, but the tax will be zero rated for someone buying from Australia. The other way round, there would be an incentive for an Australian to buy from the US.

It challenges the whole fundamental thing about national boundaries. At some stage

a government is going to say, 'Where is the national interest protected? How do you protect the national interest?' That is probably the crux of much of what we are talking about here—trying to get to the situation where, as some people say, you just open it up for the massive free trade market. That is fine if you happen to be a US company. You not only have all the web sites but the capacity to manufacture as well.

The other angle with the GST is that, for the first time, services will be taxed. That opens up a whole range of other things domestically. You can download software from the United States to Australia tax free, but you cannot download Australian software, which is what we are very good at, without paying the tax. Those are some of the issues. You may have some thoughts about solutions.

Mr Simon—I guess the paradigm does get inverted when you start talking about electronic delivery of goods. When you get into the delivery of hard goods, even if someone can buy a good from another country at a cheaper cost, there is the shipment cost and all the things associated with that. There are a lot of other issues that need to be considered. Where we start getting into the paper view concept of buying a micro-transaction for a piece of information, those issues need to be looked at.

CHAIR—Doesn't David pose a really significant problem? I was thinking of asking the same question he did. Let's say you want to buy an accounting package produced by an Australian company. They put it up on the web and you can download it here, so you would pay the wholesale sales tax. They say it is cheaper for the Yanks because we can send it to the United States to another site and you can buy it from that site. You can get it in and nobody knows. You have bought it at the lower international price, not the Australian price. There is no way, under God's name, that you are ever going to figure out how to solve that, is there?

Mr Simon—I guess it comes back down to the ability to have some auditable trail as to where transactions have been initiated from and where the B party has allowed that download to take place.

CHAIR—If we have got five million of 10 million people with PCs or access to the Internet and they are all running around out there in cyberspace buying things, the government is not going to go into all those homes, is it?

Mr Simon—No, it does not have to go into homes but it can certainly get reports.

CHAIR—It cannot even figure out if you had somebody mow your lawn and you paid them cash.

Mr Simon—Yes.

CHAIR—How on earth are they going to figure out that you have bought an

accounting package which really originated in Australia from Cleveland, Ohio, via the Internet? You have got to be kidding!

Mr Simon—That is right.

Mr BEDDALL—That is the real point. What we are very good at as a country is software and accountancy packages and a whole range of things.

Senator COONAN—Service things.

Mr BEDDALL—We sell a lot of that stuff offshore. The largest computer programming package for students in Japan is an Australian developed program from North Sydney. If someone wanted to learn how to type Japanese, why would you buy it from North Sydney and not buy it from Japan where it is sold? None of these things are taxable—they are just not. We are into export. There is albeit an income stream back to the original intellectual property developer, but it is sold in the US. What hopefully we would be able to do is sell millions of software packages from Australia to people on the Internet because they can download tax free—and that is where a GST zero rating would be better than a wholesale tax. That is a good argument for your GST.

Senator HOGG—Can I also pose another type of problem which the Internet has brought about? A printing firm in Queensland buys a widget, for example, in this case a printing press, which costs \$30,000, from an Australian based company which has a parent company in Switzerland. The Australian company buys it from the parent company in Switzerland who in turn buys it from the manufacturer in Switzerland. The Australian company found out that they can get on the Internet now and buy it straight from the manufacturer but not as the assembled product—in pieces to assemble it themselves.

The product that they were buying for \$30,000 they can now buy for \$7,000. Instead of spending \$300,000 a year on widgets they spend \$70,000. Whilst the intermediaries have been getting their cop out of it so also has the taxation system. So the Internet system has broken down the international barriers that exist for Australian companies. One might say that is positive but one might also see the negative aspects in terms of government revenue and in terms of employment in Australia. I presume that as the Internet grows this will just proliferate and impact more upon us than we may well ever have expected. What is your answer to that?

Mr Simon—I think any electronic channel will question the value of the middle man, unless that middle man actually adds value. If there is no value by the middle man the middle man will disappear—it has to be. I think everyone agrees with that. A middle man that shifts paper around and fills out a form and allocates a tax code or a cost code, whether they are an import agent or an export agent, is probably not going to add that much value when it could be done through an intelligent system which can automatically calculate that information and present that to another party on the other side of the globe.

I think that is where Australia does have the advantage. I think Australia is good at added value through its services, its software, its computer systems, its science and its medical research. That is why I think we really have to focus on the service element, fostering Australian business and services through the Internet and reaching out. Hopefully, when the distribution channel is compressed in the example that you just gave, it is an advantage for Australian business because if they have bought that widget now for \$7,000 the costs of manufacturing may have just gone down a whole heap. At least they are now as competitive as the other person who bought it for \$7,000 in Thailand or Japan. I think it does present opportunities, and I think it will also present risks.

Senator HOGG—It will also impact on government revenue, whether it be through wholesale tax or whether it be through a goods and services tax or whatever form of taxation one might like to think of. I am trying to speak generically there.

Mr Simon—It will obviously impact in that environment where they have lost revenue, and it should gain government revenue for these new services and new industries that it is creating.

Senator GIBSON—Can I go on with the point about growth in services, with which I agree. There has been evidence that there is a tremendous growth in world demand for such technical services, which to date we have been good at in Australia and we should foster and encourage. Do you see shortages in skills availability in Australia, or are there any things that the federal government can do to encourage growth of supply of such skills? What is your view?

Mr Simon—I can only talk about the skills in our industry. Certainly at the moment there is a huge demand for Internet and commerce related skills, and understanding and being able to apply the opportunities and the technology to business. That has really been as a consequence of the huge rapid increase in demand over the last five years, and the education system simply has not been able to spit out enough graduates and enough educated college students with those skills. Everyone has been caught, I guess, to some degree by the rapid emergence of this thing called the Internet and the opportunities that it has provided. If anything, the government really needs, in our perspective, to foster education development in those areas, in information technology and science.

Mr BEDDALL—Probably the terrifying thought is that the Internet might lead to a much higher personal tax rate because the only way to get the revenue is to tax the individual.

Senator COONAN—Mr Adam might be the appropriate person to explore this with. What is your view about whether or not you might be able to overcome some of the global problems of Internet commerce by trying to look at in a geographical location—say, the Australian jurisdiction—what you can really capture? It seems to me the only

thing that you could really identify might be a payment. Do you see any room for exploring the payment system and incidents where an individual or a firm or a company makes payment as perhaps the only thing that might take place in this jurisdiction? It might not take place in this jurisdiction but, assuming it does, do you see that as an area that might be explored?

Mr Adam—It is certainly a way. The concern which I have had about a lot of the press about the Internet and electronic commerce is that it presumes that there is a culture of tax evasion or tax avoidance. I do not necessarily see that the Internet, unless people are intending to use it for that purpose, will necessarily increase it. It is a new distribution mechanism, as we have said before, but it is probably, in terms of international transactions, for example, no different to what we have been doing with mail order for a long time. The concern we have had with the tax office report, for example, is that it is focused on the compliance type issues of identifying participants in electronic commerce, once again presumably from the context that there is a presumption that people are intending to avoid tax or use the Internet for some kind of tax evasion.

The jurisdictional issues that you talk about are real, but they are nothing new. The tax office, in their report, made the comment that the rules for source and derivation of income were designed in an era which did not cater for this. That is very much the case, but I do not know that it necessarily invalidates those rules. We maybe need to examine the application of those rules to the new technologies. That may require bilateral or multilateral cooperation internationally, but we need to recognise that is not going to happen overnight.

Senator COONAN—Do you mean through the treaty system? How would you suggest that be approached?

Mr Adam—Obviously the OECD is going to be the main forum and is where these issues are already being discussed and will continue to be discussed, but that may not necessarily lead to anything soon because the Europeans have taken the approach of the bit tax and the US are heading away from that. I think their approach is probably the better one in that I do not think we should necessarily be looking to tax anything on line which would not be taxed in an off-line environment, because otherwise you are looking to inhibit the growth of electronic commerce and provide impediments to it when it really provides an opportunity for a lot of growth for us.

Senator COONAN—The problems with that are, firstly, a timing one and, secondly, every business will minimise their tax. There is a big difference between deliberate evasion and available minimisation.

Mr Adam—Certainly.

Senator COONAN—There would not be the taxation adviser industry that there is

if people were not interested in minimising their tax. Don't we have a real problem that this technology is all galloping ahead at such a rate that we are not really going to be able to wait for the OECD or anyone else? How do we deal with this, as a government interested in being pro-active, in looking at the problems and trying to come up with solutions?

Mr Adam—Good question!

Senator HOGG—Will we find a solution in 15 years time—10 years too late?

Mr Burke—I think the difficulty that you raise is in international transactions by and large. In some instances it may be a related party and you may have some controls that you can apply there. A lot of it you may be able to do unilaterally. But when you are into bilateral and multilateral sorts of transactions you have got the overall jurisdictional and sovereignty issues in other countries to balance.

Mr BEDDALL—But Telstra is one of those organisations that has learned to deal with multi-jurisdictional situations. You have settlements on traffic, at least, and that is something that is a very complex thing—as does Australia Post. These are not concepts that are unique. The source of revenue may be harder but it probably will harmonise world tax regimes. If you get harmonised world tax regimes then you start to get to a situation where wherever the revenue is generated then you can start to have settlement. I do not know how the US will do it. It is the only one in the world without a GST. It will probably do very well. You have handled, in the commerce side, very complex issues about the traffic.

Mr Simon—Import/export—I totally agree. I guess that might be an avenue when electronic commerce transactions get to a point where they are a large enough amount to balance against the non-electronic commerce transactions.

Mr BEDDALL—It is not inconceivable that at some stage down the track, as traffic flows, there will be a way to capture the dollar amount of traffic that is flowing rather than the detail like how much has been going through the Internet per day. Technology should be able to do that at some stage.

Mr Simon—Sure, we can do that. Ultimately, all this has to go through some form of clearance system and it is the clearance system that can then identify that. That is what they do today. They certainly can track those types of transactions.

Mr BEDDALL—You can understand the Europeans. They go in for the easy option: if you do the bits then it is easy—whack a tax on it. I think they will probably end up in a little fortress Europe with nobody trading with them, and their economies will continue to contract, because these are the solutions they always come up with. That is why they have economic decline.

Mr Adam—It is not a particularly equitable solution in any case because the number of bits is in no way representative of the dollar value of the transaction, if there is a dollar value attached to what is flowing.

Mr BEDDALL—What we know that runs on the net is probably living off immoral earnings.

CHAIR—Would that tax be inequitable? Would it be regressive? Would it slow the industry down?

Mr Adam—It would be very difficult to say with any degree of certainty whether it would be regressive, progressive or whatever, because there is the potential where you could have, for example, high pay-per-view type services where the transaction could be 1c per page—a lot of traffic being generated. Alternatively you could then have goods or services being downloaded over the net running into hundreds of thousands of dollars, which can just happen in an instant, and there is very little traffic involved. Yes, there is the potential for it to be extremely regressive, but there will also be circumstances where it may not be the case.

Mr Simon—A professional body might charge you \$50 for their personal advice while you might want to pay 20c for a pay-per-view 10-second view of the winning try in a football game. The amount of video image and bits that gets transferred for that is 100-fold more than the information that has been presented by a professional adviser.

CHAIR—We had a witness yesterday afternoon who all but said that Agamemnon is all but upon us; that the whole international tax system will dissolve into chaos.

Mr BEDDALL—Or be rationalised.

CHAIR—Yes, or else somebody better get out and fix it pretty quickly. You did concentrate to some degree in your submission on tax issues, what would you think of those sorts of views?

Mr Burke—I think that is a utopian view, to say you will have a totally harmonised worldwide tax system; it is impossible. I think I know the person who made the comment, so I will leave it at that.

CHAIR—That ruined that line of questioning.

Mr BEDDALL—In any moves towards a harmonised type of taxation, there may be differential rates. You may have some sort of value-added tax that for some strange reason is galloping across the world. It is possible then that each country would have variable rates and that adjustments would be made. Senator Watson has made the point a number of times that if we go into Internet trade with Asia and we have got a GST, they

are all about three per cent to six per cent, so sitting at 12 per cent the Australian rate is probably not in our best interest.

Mr Burke—I do not know what comment to make to that. It is true when you get the disparate rates, but I suppose in one sense it is an input to business but it is a cost the consumer has with any GST, and depends upon the total mix on how to fix the consumer at the end of day.

Senator WATSON—Do you think there will be global blocs and, say, a European approach could be entirely different from the Asia-Pacific approach, which is a low jurisdiction?

Mr Burke—You have got two trends there. You have got the EU, which is really looking for a unified sort of approach. Asia is still rather disparate in the way it is approaching it but, as I recall, most of Asia, and I cannot remember the exact term they use, were looking to get a unified system for a lot of the countries in Asia.

Senator WATSON—A part unified system.

Mr Burke—Yes. So there are differences in approaches. If you get a uniform rate out of Europe, I do not think you are going to get that; you will still get the different VAT rates in the different countries. You will still get the different VAT rates or GST rates out of those parts of Asia that have a GST.

CHAIR—One of the things I just thought of that we should ask you, because we are getting close to finishing, is that in the view of some our take-up rate of Internet commerce will not be as representative as our take-up rate of PCs, mobile telephones or VCRs. Do you believe that that is true? If so, what are you doing to try and help encourage companies to get on-line, get with it?

Mr Simon—It is true, and there are statistics and information to prove that it is true. I think we all know Australia has a high adoption rate of PCs and that mobile rates are one of the highest in the world per capita. I think Australian business is lagging behind countries like the US by a solid two years in this area. Why has that occurred? I am not sure. Some of the reason, I think, is a lot of the overplaying of the insecurity of the Internet. That has been hyped up and probably damaged our take-up rate. I think the Internet is no more insecure than the current physical channels that are available today with bricks and mortar in stores. And I think we have tended to focus on the exception of fraud and then applied that exception as being the norm.

What are we doing about it? Telstra is doing things such as I mentioned. Our Telstra world registry service is in the business of issuing electronic certificates to try and commence the adoption of certificates to help authentication. Services such as SureLink enable merchants, small and medium Australian business, to get a presence on the Web in

a secure environment and at low cost and be able to trade on the Internet. So we are active there. We have been in the electronic commerce business for a long time in the forms of EDI, the sort of initial technology with business to business, albeit that tended to be more domestic business to business. I think now the Internet really allows us to go international, global, business to business and business to consumer. So our whole focus has been providing a valued-added service above Internet access to really remove the obstacles for business to get on-line, starting from services such as our Web hosting facilities, where we provide the facilities for an organisation to get its Web site built and managed, all the way through to electronic commerce services.

Mr BEDDALL—The take-up rate in Australia of PCs, mobile phones, faxes and these things is often quoted, but the reality is they are a quantum leap in technology. There are a lot of failures as well, such as laser disks. Australia said, ‘We do not want it. It is not a quantum leap on a VCR.’ Unless Internet shopping is a quantum leap on the supermarket or the mall, then Australians will be reluctant. It may be different in business-to-business. But for the broad spread of Australians, unless they can see a quantum change that is beneficial to them, as it was with VCRs and mobile phones, then I think the Australian people will be very cynical. You can demonstrate that.

Mr Simon—I think Internet shopping is one aspect of commerce. You only need to look at Australian corporate websites. Most of them are still in the brochure-ware mode. They put their presence on there which is marketing. There is little application use. Forget shopping; there are not even customer service facilities. Informational and transactional services are not commonly available in many Australian corporate websites. They are moving that way. They are now moving very quickly to make up some of the lost ground. I think we will make that ground up, but right now we are behind.

CHAIR—When the NAB goes online with online banking, isn’t that going to make a huge different in terms of psychology?

Mr Simon—Yes.

CHAIR—I would have thought that as soon as business out there catches on—and the other banks will follow suit almost immediately because they will have no choice.

Mr BEDDALL—As long as it is not one of those things where you have got to sit there and press a button. I hang up on those things.

Senator GIBSON—Yesterday, the industry’s association was speaking very optimistically about the future and the growth of services from Australia, looking outwardly. They were critical of the ATO’s report for basically looking inwardly and chasing minutiae. The association’s advice to us yesterday was, ‘Don’t get caught up in looking backwards and chasing minutiae. Make sure you keep focusing on the future and looking outwardly.’ I get the same impression from your submission. Is that a fair

comment?

Mr Simon—I believe so. You can always say, ‘There is risk and there are problems.’ But I think we are presented with far more opportunity. The challenge is how Australian business and Australians are going to take it up and capitalise on the opportunity that is presented. Our market can grow well beyond the 17 million very quickly by the use of the distribution channels and the Internet.

Senator GIBSON—Are there any particular impediments that are facing the industry and the growth of electronic commerce through Australian business and exporting out of here that the Commonwealth government can address in the near future? Are there any urgent things which should be done?

Mr Simon—Anything that can be done to progress the movement of business to the Internet is the first thing. It is really the business-to-business that is going to drive the whole Internet development and option. Therefore, if there are any obstacles to that, such as security options or legislative frameworks imposed on top, those things need to be very carefully examined.

Senator GIBSON—Are there any? You tell us.

Mr Simon—At the moment, I think the biggest impediment is the security scare: the aura that everything is dangerous. I think we are now coming over that hump. Most organisations now realise there are other tools, capabilities and technologies to get over that. I think the next 12 to 18 months will be a critical time to see business progress there. The recommendations from today’s meeting are really going to set the future framework. That is where we need to look forward.

Senator GIBSON—We can encourage the government to spread that message basically through Australian business?

Mr Simon—Very much so.

CHAIR—Thank you, gentlemen, very much. It has been most enlightening. We really appreciate your advice and we will get back to you for technical answers to our technical questions, probably through Australia Post.

Short adjournment

[10.46 a.m.]

EHRET, Mr Terry Dale, Associate Director—Information, Technology and Application Standards, Standards Australia, 1 The Crescent, Homebush, New South Wales 2140

LYLE, Mr Roger, Associate Director—Communications Technologies, Standards Australia, 1 The Crescent, Homebush, New South Wales 2140

CHAIR—Welcome. The committee has received your written submission and your additional submission, dated 5 November 1997, and attachments. I invite you to make a brief opening statement before we ask you questions about your submission.

Mr Lyle—The basis of our submission is that, for international competitiveness reasons, Internet commerce needs to be underpinned by a whole range of technical standards. Standards Australia, in its role as the peak non-government standards setting body, has a long history in setting standards in electronic commerce. There are some examples given in our submission. We certainly look forward to continuing that role, especially in the international forums. Because of the globalisation of electronic commerce, inter-operability is a key issue if we are to succeed in this area.

CHAIR—On page 1 you discuss some of the additional threats to privacy created by electronic payment systems. Have you any statistical or anecdotal evidence of the problem itself and of its significance? There have been some—including Telstra, who just talked to us—who believe that some of the rhetoric and hype surrounding the potential lack of security and lack of privacy may have slowed electronic commerce in Australia.

Mr Lyle—Our role is basically to facilitate standardisation processes. As an organisation we are not involved in the actual transaction of electronic commerce itself, so we probably do not have particular ‘war stories’, if you like, of instances of breaches of privacy. But there is a community perception of privacy concerns. My colleague Mr Ehret has had discussions in general on privacy issues with the Privacy Commissioner.

Mr Ehret—Privacy is addressed in specific application standards for information technology. At the moment we are coordinating with the Privacy Commissioner inasmuch as the commission is looking at putting in a framework for privacy and we are standing by, if you like, in the same capacity as we appear here, as a support mechanism for providing a structure to produce an infrastructure if it is seen by the committee that that infrastructure is required.

Mr GRIFFIN—Would you like to comment on the current standards and classifications in relation to electronic commerce in these circumstances?

Mr Lyle—In what areas? As I said in our supplementary submission, South

Australia has been very much involved from the early days of electronic commerce. We have been involved in EDI standards, which the previous Telstra person was talking about, which was basically business to business. What we are now moving into is nearly business to consumer type standards. In that, Australia actually has been at the leading edge in the development of EFT standards. Australia had the first national EFTPOS network, and that was based on standards developed within Australia ahead of international standards. Some of those standards have been adopted internationally; some have leapfrogged us.

Also in our supplementary submission we talk about the development of public key authentication systems, which I think Telstra talked about earlier. This is very much a key enabler of electronic commerce. One of the documents in this supplementary pack here gives a description of public key systems, which the government has recently acknowledged as being an important key to electronic commerce and is in the process of setting up an advisory group to give advice on how such a system will be put in an operational fashion. That is being done under the auspices the new National Office of Information Economy.

Mr GRIFFIN—When you look at the Internet, one of the things that concerns me is that question of developing standards not only within Australia but also, because of the international nature of the commerce, the question of the global circumstances. I understand from your submission that you see a role that possibly could be played by your organisation in terms of that. I guess the thing that worries me is how realistic you think it is that we can actually get standards in place internationally that will actually deal with the sorts of issues that are coming up through the Internet.

Mr Lyle—As I said in our submission, we are very much involved in the International Standards Organisation and IEC, the International Electrotechnical Commission. They themselves have another body called JTC1, which Mr Ehret can talk further about, which is focusing very much on a lot of these issues. So it is not only here in Australia; all the countries are trying to solve these problems. I have attached—you may have already seen this—the US policy on electronic commerce. Very similar issues are being addressed elsewhere. With these international fora, only by participating can you get there to influence those standards to make certain that they are in place.

Mr GRIFFIN—I agree with you on that. I guess what I am concerned about are two things. One is the pace of change and what implications that has in terms of getting something current and reflective of what is required. As you know better than I, it is moving all the time. The second thing is the question of the nature of international forums in terms of actually developing regulatory regimes, if you like, and the difficulty in getting uniformity around the question of standards and conditions. I used an example at an earlier hearing of shipping: there are many forums which do quite a good job on the question of international shipping, but the fact of the matter is there are still the Liberias and the Panamas of the world which basically roger the whole system in the process.

Mr Ehret—I suppose the counter to that would be that you also have standardised container sizes for shipping, et cetera, too. So it is a plus-minus situation. As far as IT is concerned, and in fact as far as standardisation is concerned in general, it has become an issue in both local and international standards bodies that standards do need to keep pace with rapidly changing technologies.

A method is being developed which is an attempt to do that, and it is proving to be somewhat successful in its initial attempts. That is a publicly available standards situation where a private consortia can put forward a standard that they develop on a technology that they are willing to make public, and that could be adopted as an international standard which, in turn, allows for uniformity across local adoptions.

Mr GRIFFIN—Is that sort of approach getting broad international support?

Mr Ehret—There are a number of PAS standards currently in place.

Mr GRIFFIN—Are they doing the job, do you think?

Mr Ehret—It is very early days. I think you may be aware of the Sun Java issue regarding a publicly accessible standard. That is drawing to a conclusion and that appears to be successful. There are a number of standards in information technology architecture subjects which have been developed by consortia and adopted.

Mr GRIFFIN—What should the Australian government be doing?

Mr Lyle—Certainly, what the government has been talking about with regard to setting up a framework of public authentication systems is a significant enabler for electronic commerce.

Mr GRIFFIN—So we are moving in the right direction?

Mr Lyle—Absolutely. Getting a focus on electronic commerce through the National Office of the Information Economy—it does not actually exist at this moment—seems to be a very good move forward.

Mr GRIFFIN—Is there anything else you would suggest should be done at this time?

Mr Lyle—I do not think so. Alluding to part of the question behind your earlier question, all standards organisations are looking very closely at their processes. Standards Australia is no exception. We realise, especially in the area of communications and information technology, that the standardisation processes traditionally have been rather slow—where you have got turnover of technology of probably 18 months or two years or something like that, and that is more the average time to develop a standard.

Obviously, new processes have to be developed and that is what has been happening on the international side. JTC1 that Mr Ehret was at recently is going through this process. We are going through this process. A lot of these standards here are voluntary now. They are sort of technical specifications, if you like, between interacting systems. What is probably more difficult is the government to government agreements on legal frameworks and things like that, which is being held under the United Nations I understand.

Mr GRIFFIN—Do you think that is progressing?

Mr Lyle—That is something we have not been directly involved with. The Attorney-General's Department has been more involved with that side of it.

Mr Ehret—I think it is safe to say that, from a corporate point of view within Standards Australia, we hold no opinion regarding what the government should do per se. We are a facilitator that offers a service in order to assist where a structure is required. We have the means, the wherewithal and the processes in place to bring together disparate areas of a common topic and get some form of consensus out of it that brings structure to whatever system you are trying to put into place.

We are not for a moment trying to advise you as to what that system should be at this stage—especially within the terms of reference of this hearing—but we are simply advising that the means of providing the structure for that system if it is required are certainly in place and they are available. In this area, we believe they would be of great assistance. They have been of assistance in business to business commerce in the past. We are holding the EDI fact register for Australia at the moment within Standards Australia, which is still being used on a business to business basis.

Senator GIBSON—You were listening to the Telstra people when I was quizzing them about authentication and electronic signatures. I just remind you that yesterday we had evidence from the industry association basically urging that the Commonwealth government take the step of basically being behind and encouraging registration of such signatures and standing behind, if you like, or branding it. Then the Telstra gentlemen this morning said that they were in favour of various organisations having their own signature and authentication process. From where you sit and the work you have done on this, would you like to comment on those two views? What would you advise us?

Mr Lyle—I was not proposing to give you a presentation on this document but basically it looks at a strategy of having a peak body, whether a government instrumentality or a government-endorsed instrumentality, as being the peak of a pyramid of certification, if you like, as being the issuer of digital signatures so that there are issuers underneath that. Keypost is Australia Post's authentication system. One of the things we are concerned about is unless government actually gets in and effectively mandates a system in one form or another, you are going to end up with disparate systems which are

not interoperable.

Senator GIBSON—So you are saying it is an urgent matter for NOIE to get this strategy under way and implemented as quickly as possible.

Mr Lyle—Absolutely. My understanding is that the government is trying to get some answers on this by March or April next year.

Senator GIBSON—Thank you.

Senator HOGG—Concerning the role of your organisation within the APEC framework, what are you doing there? I noticed something in your supplementary submission here this morning. Could you elaborate on that for us? Is that the fora in which these issues are going to be solely resolved or is there a multiple number of forums in which these things will be resolved?

Mr Lyle—To answer your last question first, at multiple forums. With regard to our involvement with APEC, I attended the recent APEC telecommunications working group meeting in Wellington where as part of the business facilitation strategies which are being looked at for enabling regional trade, they see this as a significant issue. They have basically taken this document of ours as an input into looking at what needs to be established within public key systems within the region to make certain they interoperate. Steve Orłowski—I think he may have appeared before you from the Attorney-General's department and who is on our standards committee—is making very strong representations on having this type of framework implemented elsewhere.

Senator HOGG—So if it is implemented, on what basis would it be implemented? Would it be as some sort of multilateral agreement?

Mr Lyle—Probably separate organisations with common protocols.

Senator HOGG—So we are not looking at government to government agreements, we are really looking at this as being a facilitation of business to business arrangements?

Mr Lyle—There are two levels. There is the technical standard so that you get protocols working, similar message formats. But there needs to be a legal framework in which these things operate so that you get non-repudiation of messages and things like that. For example, if I send you a contract electronically, that must be able to be legally enforced. That obviously requires government to government negotiations on that type of transaction. So there is a legal framework which needs to be a government to government arrangement, I would imagine, which is obviously outside Standards Australia's area, but obviously we are involved in standardising the technical interfaces between systems.

Senator HOGG—How close are we to agreement on that interface?

Mr Lyle—It is still early days. The standards for supporting this draw upon some existing standards, but things like message formats and the processes for authenticating across national boundaries have not been agreed to. I suspect that what is going to happen is that it is probably going to start out on a bilateral or trilateral arrangement and other people will buy in. It is not going to be a big bang approach.

CHAIR—The standards that you listed in your submission are, of course, all technical issues. Governments all over the world are trying to sort out how to split the tax cake. Dollars disappear up into cyberspace and arrive down somewhere, somehow. Does Standards Australia have any role to play in how those transactions affect tax, where tax is collected and how much is collected or is that a totally intergovernmental forum?

Mr Lyle—It is interesting you mention that because Mr Ehret's group was involved in looking at standard formats for the interchange of government information. The Privacy Commissioner frowned on that.

Mr Ehret—Not necessarily.

Mr Lyle—This was common database descriptors in government information.

Mr Ehret—It still is, there are some occurrences as we speak. There is a standard being developed for client data validation which sets up the structure of how data is interchanged between clients. That would lead to a means of monitoring that data; there may be tax implications in that. It comes from a technical structure that we would set up on the way the actual data interchange takes place. We focus on the technical aspects of it. It is a matter of applying those to the uses that you require.

I will give you another example that was not in our submission. At the moment we are very heavily involved in an overarching health system standard. If I describe what we are doing you may see parallels in how it could help you. There is an overall health system standard which has been adopted worldwide called HL7, which gives an architecture of how all data interchange within the industry should occur. We are in the process of providing various application standards for aspects of that; pathology being one, billing being another. That puts into place the technical structures that derive from the architectural standard which gives the overriding effect of what should be happening.

It is a matter of application as to how you can use the information that is contained in those standards. There could be structures built into the technical infrastructure that is contained in the standard which could perhaps include tax assessment issues. That is something that would come to us through the committee; it is something that would be required from our stakeholders, our stakeholders being representative of the community in general including government and business users.

Mr GRIFFIN—Would you give us a couple of examples of what that system

would do?

Mr Ehret—One of the things the system is doing is setting up a structure for the interchange of pathology information which is going to minimise the possibility of corruption in the movement of information from one area to another, for example between local GPs' offices, between one pathology lab and another, or between a hospital and a pathology lab. The essence of it is to maintain the structure of the data in such a manner that it is not corrupted or lost. Privacy issues come into it as well to make sure that the data is protected from certain ingress from unwanted areas.

Billing is the same situation. There is a structure for billing which is being put into place which, again, structures the data in such a way that there is no possibility of corruption. It is protecting the information that is there and making sure it gets from one place to another in a format that is readable. It is an interoperability issue and, again, privacy comes into it in the fact that it is structured in such a way that it cannot be corrupted.

CHAIR—Looking at the issue of electronic funds transfer in the very broad context of electronic cash or whatever you like, it seems to me that a huge range of new mechanisms is being developed constantly to accomplish this. Mondex is one which is to come on stream in Australia before long. You talked about eftpos before, which is already antiquated technology, I suspect. Telstra tells us that they have a new system which provides an electronic screen so you can bury your credit card or other financial information behind the screen and access in and out simply to verify that there is money there and not who you are, or where you live or what your tax file number is.

In the United States the mechanisms are more open, we understand, but much more advanced in terms of certification of credit card details—not necessarily secure, but quick and assessable. How on earth do you write a standard to cover all of these potentialities, modalities and the future, which is probably still very much unknown?

Mr Lyle—Usually technical standards in that sort of area are looked at application by application. There is no global way of describing electronic funds transfer in a general sense. Mondex is a very interesting one in the sense that I can transfer money off my Mondex card to you directly with a thing that looks like a little calculator. It does not go through any system and the only thing you can monitor is when you have to log on to a bank eventually to get money to load up on to the card. That is the only point where you can try to monitor by downloading transactions and things like that. They are quite different types of technology.

You can go from the stored value cards which have been trialled in various places recently—up in Newcastle—where you can use them at newsagents and small value transactions, through to more sophisticated things like Mondex, through to much larger high value transactions which require different sorts of security. It is horses for courses, in

a lot of ways. There is nearly a continuum of options, depending on the risk of that transaction. They are all going to be standardised differently.

CHAIR—Are you writing a standard on Mondex?

Mr Lyle—No. As far as I understand it, it is a proprietary system. There must be some interfaces which are publicly available because they have to interact with computers used for on-line systems. There must be something which is publicly available, but the actual internal workings of it are probably a proprietary standard or proprietary solution.

CHAIR—How far do you think we are away from an international agreement on a standard on electronic signatures?

Mr Lyle—I think Mr Orlowski is the better person to answer that question. He is much more involved in actually attending the international meetings on this. Certainly, the United Nations organisation is looking at the legal aspects. In my view—and this is only a personal view—the international legal framework that makes these things work, which have to be agreed on some multilateral basis, are probably going to take longer than the technical side. That is a personal opinion.

Senator GIBSON—Is the PKAF strategy that you have proposed any different to parallel activity that is happening in the USA?

Mr Lyle—I think in the USA they have a different philosophy. This is looking at a unified national system of public key authentication. My understanding is that they are looking at a number of disparate systems which must have some interworking at a high level. But my understanding is that in the US they are not looking at a single body responsible for public key authentication systems.

Senator GIBSON—We are a tiny part of the world. Aren't we in the end going to be basically driven by whatever standards are adopted in larger economies?

Mr Lyle—In general, that is true. We are a standards taker rather than a standards maker. But I think it is fair to say that Australia generally in standardisation has had a greater influence than its population. In the International Telecommunications Union, which is the other large standardisation organisation, the ISO and IEC, we have been very active and have had significant success. Also, if you can be at the leading edge of things, it obviously opens up possibility for intellectual property developments here in Australia.

Senator GIBSON—So you are basically saying to us that we should be encouraging the government to move along in this direction and to be at the forefront of these developments?

Mr Lyle—Absolutely. We are certainly not trailing. We believe that with these

types of discussion papers and things like that we are actually promoting a direction that other people are looking at following.

Senator GIBSON—Is there any risk, though, that we will head down the wrong track?

Mr Lyle—Like the Betamax versus the VHS?

Senator GIBSON—Yes.

Mr Lyle—That is obviously a risk of new technology. These are concepts rather than necessarily technology based.

Senator GIBSON—Sure. I understand that.

Mr Lyle—You are right. You have to be there with your eyes open.

Senator GIBSON—That is a good way of putting it.

Mr Ehret—May I add to that as well. Betamax versus VHS was a marketing issue as well as a technical issue. That has got to be understood. I just wanted to give an example. Most international standards, I think it is fair to say, do not start with a blank piece of white paper. They start with a national standard from somewhere that someone has developed, and that, by common usage and sheer quality, becomes recognised as what should become an international norm. There are instances where Australian standards have been adopted as international standards, and we are in the process in the IT area in some records management areas of having Australian standards currently adopted as international standards. So it is not beyond the realms of possibility that we can do this. We are doing it.

Senator GIBSON—Are we in front in developing this sort of strategy relative to everyone else?

Mr Lyle—We are certainly up with the leaders; put it that way.

Senator GIBSON—Who are the other leading countries?

Mr Lyle—My understanding is that Malaysia has got a legal framework which actually permits this to happen. I am not aware that they have actually got a system operating, but at least they have crossed that threshold. Most countries do not mandate these types of transactions to be able to make them legally enforceable.

Senator GIBSON—Do you have any comments about any other country?

Mr Ehret—There is a European directive on privacy, and I am not sure how the issue of privacy in that directive overflows into this area, but there is a possibility it may. I do not have details.

Senator GIBSON—Is Australia having to follow along and tie in with the US economy, basically? These things have been driven from there.

Mr Lyle—That is right. We are not going at cross-purposes here.

Senator GIBSON—That is the important point I wanted to find out.

Mr Lyle—But there are a lot of cross-linkages. It is not only just being developed in Australia but there is a lot of communication, including face-to-face meetings. As I said, the Attorney-General's Department has been very actively involved in pursuing this.

CHAIR—Thank you very much, gentlemen. We appreciate your input. I do not know how you are going to keep up, but good luck.

Mr Ehret—We are not bored.

Mr Lyle—I think one of the major problems, of course, is getting the industry expertise. One of the things we find is getting people to actually contribute to the development of standards. It is a real issue.

CHAIR—We will contribute by giving you a copy of our report when we print it.

Mr Lyle—Great; excellent.

Senator GIBSON—Do you mean by that that people are not keen to contribute, they do not have the time or—

Mr Lyle—Businesses are obviously wanting to make money. There is a generic problem I think that standard setting is not a boardroom issue, unfortunately. We are trying to raise that it is a strategic issue for business to participate.

CHAIR—Thanks again.

[11.25 a.m.]

KELLY, Mr Paul, Director, IT Standards, Office of the Privacy Commissioner, Human Rights and Equal Opportunity Commission, GPO Box 5218, Sydney, New South Wales 1042

SMITH, Ms Lindy, Director, Privacy Policy, Office of the Privacy Commissioner, Human Rights and Equal Opportunity Commission, GPO Box 5218, Sydney, New South Wales 1042

CHAIR—I now welcome representatives of the Privacy Commission to today's hearings. Thank you for coming to talk to us today and thank you for your submission. Would you have a brief opening statement you would like to make before we start to question you about your submission and some of the other things that we have learned in the last few days?

Ms Smith—Thank you. Yes, we would like to take the opportunity of maybe putting on the record just a little bit of information about privacy. We are aware that perhaps the submission by the Privacy Commission is the only one that has really directly addressed privacy issues so far, though I understand there are some more submissions being prepared that will address these issues. Because of that, I thought it might be useful if I tried to give the committee a bit of an idea about the background to privacy issues in Australia.

What we would like to reflect in the submission and the sorts of messages we want to get across today is that the Internet represents a threat to privacy, but the concerns that we and others have raised about privacy have not arisen from the development of the Internet, nor from electronic commerce. Australians are very concerned about privacy and have been for some time. Our point is that these concerns need to be addressed and, until such time as they are, it is likely that consumers will not take optimum advantage of the benefits of electronic commerce.

The general concern that Australians have with privacy has been shown not just in major events such as the Australia card debate or the reaction earlier this year about government outsourcing of IT services. The Privacy Commissioner's office has conducted a number of surveys over a number of years, and also Mastercard commissioned one last year which produced similar results. These show that privacy is consistently rated by the respondents to these surveys as one of the most important social issues today. Nearly 80 per cent think that computers have made it easier for confidential personal details to fall into the wrong hands, and the least trusted with our personal information are organisations trying to sell something, such as mail order companies, retail stores, insurance companies and other financial institutions.

It does not mean that Australians are anti-technology or that they have something

to hide. We are becoming a little bit less concerned about the amount of information kept on us. I think we are pretty realistic about that, but we are getting more concerned about controlling its use. Around nine out of 10 people say that, when information is collected, they should be told exactly what it will be used for and they should be asked their permission first before their data is passed from one organisation to another. Most people do not mind companies using their personal details as long as they know about it and can stop it.

When we are looking at the Internet, there are some more recent surveys about what Internet users think. A survey was conducted in April and June this year, and that covered about 8,000 people. That found that privacy was the second greatest concern to users, after response time. These kinds of findings echo those that have been found overseas. There is a company called the GVI. It is an organisation that operates out of the Georgia Institute of Technology, and it has conducted a number of surveys of users of the Web. Its survey over April-May this year, which is its seventh survey, covered 20,000 people. It found that, for them, censorship was the biggest issue but then the second most important was privacy. Among women, privacy was the most important issue. They found that European respondents were less concerned about privacy than American respondents, probably because of the European privacy laws.

An interesting thing also revealed was that, in circumstances where people are logging on to Web sites which then seek further personal details—where you have to register your personal details in order to get more information from that web site—they found that 40 per cent of the respondents had provided false information in response to those sorts of requests. Women and the young are more likely to provide false information when asked to register with those sites.

The most widely cited reason for not registering is that the terms and conditions of how the collected information is going to be used are not clearly specified. Users also felt that it was not worth revealing the requested information in order to be able to access the site. Over 62 per cent report that they do not trust the collecting sites. Most people prefer anonymous payment systems. They feel strongly that people ought to be able to have private communications over the Internet, and they feel that the Internet needs new laws to protect privacy.

These concerns, interestingly enough, do not arise from bad experiences. Another survey, conducted in June in the US by a polling firm, found that only five per cent of the users surveyed had actually had their on-line privacy invaded. But 63 per cent said that they would only supply data if they knew how it would be used, and 60 per cent said the government should pass laws on how personal details should be collected and used. More than half were afraid that their Internet surfing would be tracked without their knowledge. These are people who are pretty well educated on what the Internet is all about, but they still have very serious privacy concerns.

In Australia, our privacy law is not adequate to meet even our own standards. Australians have been wanting improvements to our privacy laws for a while now. Our surveys show that nearly all Australians believe government should pass legislation to protect privacy and that privacy laws should cover both government and business activities. Price Waterhouse conducted a survey of 120 of Australia's biggest companies last year. They found that two-thirds favoured the introduction of a national privacy act to regulate the private sector or oversee industry specific codes.

What this means is that at the moment we have no system in place to protect privacy on the Internet. If people find they are being unfairly monitored, that their data is being collected and compiled and sold to others without their knowledge and consent, there is no recourse.

But Internet related privacy issues cannot be considered in a vacuum. They need to be placed within this broad framework of privacy protection generally. This can be a combination of regulation, self-regulation and privacy enhancing technologies. Law is not currently being pursued by the federal government, though it has been mooted by the Victorian government as part of its strategy to promote electronic commerce and government on-line services. As the federal government is not currently pursuing law, the Privacy Commissioner is pursuing a process of consultations to gauge what interest in establishing a self-regulatory system there is in the private sector.

Whatever system we establish within Australia, it has to be consistent with international moves as well. If we want to foster electronic commerce, we need to foster international cooperation and keep in mind international expectations. There is no point in producing a national scheme that does not engender the trust of overseas consumers and companies. That is all I want to say by way of general introduction.

CHAIR—Thank you for that. In your submission you talk about the EU directive on the protection of individuals with regard to processing of personal data and free movement of such data. Have you any idea of the extent to which that legislation has tended to impede development of electronic commerce? In that same context, how can Victoria's proposals possibly work, within a state framework, within a federation, within a world where cyberspace is free.

Ms Smith—A good question. Firstly, the EU directive does allow for sectors of an economy—sectors of a country—to be considered to have adequate privacy protection. So, if Victoria wants to go ahead separately, it can do that. There are also sectors within our economy that have approached the EU directly to see if, for their sector, they would be considered to have appropriate privacy protections in place. We have not got any response to that yet. But these proposals have been put forward to the EU.

In terms of the effect of the EU directive on electronic commerce, I do not have

any data on that. The thing to remember is that in Europe they have had privacy laws in place for up to 20 years and a lot of these laws have prohibited the export of personal data where adequate protections are not in place.

The EU directive came about, firstly, to ensure the protection of rights—it is as much a human rights document as a trade document. Secondly, because these privacy laws existed, there was a desire to ensure that, at least within the EU, information could flow freely between the EU member states. Then they wanted to make sure that, if it flowed outside the EU, the rights of EU citizens would still be protected.

The data protection laws that have existed over the last 20 years have in the past been used to prevent or regulate transfers of things like employee data, medical information, mailing lists, telecommunications information, airline passenger details, credit data, immigration records and archival information. These are laws that have had teeth. They have been applied to different degrees by different countries. The fact that this kind of data has come under scrutiny does not mean that it has been prohibited from being transferred but that there has had to have been some kind of arrangement put into place—either under a contract or a treaty or another kind of arrangement—to allow the dataflow to take place.

CHAIR—If Victoria proceeds and if companies operating in Victoria—because that is all they can hope to control—find the rules and regulations onerous, what is to stop them simply moving their web site from Victoria to New South Wales or, indeed, the Cayman Islands or anywhere else?

Mr Kelly—Essentially, nothing will stop them from doing it.

CHAIR—What effect would the legislation have in Victoria, except to reduce electronic commerce in Victoria?

Ms Smith—I think it would help electronic commerce. It would encourage electronic vendors to move to Victoria, because they can say, ‘Victoria is on the white list as far as the EU is concerned.’ Just by being located in Victoria, they can show that they can receive personal data from Europe. It is to their advantage. If they moved outside, they would have to negotiate separately if they wanted to get this data.

Senator GIBSON—I will read the section on privacy from President Clinton’s July statement. It says:

The Administration considers data protection critically important. We believe that private efforts of industry working in cooperation with consumer groups are preferable to government regulation, but if effective privacy protection cannot be provided in this way, we will reevaluate this policy.

Earlier in that, they say they will work with other countries—with key trading partners—to

develop and build up support for industry developed solutions to privacy problems. What is your view of that?

Ms Smith—The approach that the United States is taking is not too dissimilar from what the Privacy Commissioner is trying to explore within Australia. The main difference is that their approach excludes any kind of central data protection body, independent of government and of business, that can look into compliance issues and provide help and support to individuals. That is actually a very important criterion when it comes to looking at having an adequate privacy protection standard as far as the EU is concerned. So that is the United States's problem.

Another thing to keep in mind with the United States's approach is that my understanding is that the President has not been happy with self-regulatory approaches so far. He has said, 'I will give you 12 months. In 12 months time we will see how well you have done in developing a robust, self-regulatory scheme. If you have not done enough, we will consider regulating.' That provides some kind of impetus to encourage businesses to try to develop good schemes, but I am not sure what the results have been so far, in these few months.

Senator HOGG—Just following on from Senator Gibson's question: in your submission, you referred to the fact that the government did not proceed earlier to extend the Privacy Act this year. Part of the reason seems to have been compliance costs. What would be the compliance cost in putting in place a regime to protect privacy on the Internet? Is that one of the real debilitating factors against some privacy legislation being put in place?

Ms Smith—It is a difficult question. We have heard the problem of compliance costs being presented as a reason, but we have not received much evidence about that. We have heard from the New Zealand Privacy Commission. New Zealand has had a privacy law in effect since 1993 covering the public and private sectors, but the compliance costs have been minimal.

We are aware that companies have been operating in Europe for up to 20 years under privacy laws and seem to be operating okay. We are not really sure whether compliance under a self-regulatory scheme would cost any less than compliance under a regulated scheme. We just have not been presented with any data about that. We have not got a clear answer about the self-regulatory scheme even from our series of discussions around Australia over the last month.

Senator HOGG—So do we have no hard evidence as to what the costs associated with compliance laws would be at all, anywhere in the world?

Ms Smith—Not that we are aware of. I imagine the reason is it just varies so much. If you are a small business that does not really deal much with personal

information at all, apart from perhaps your employees' pay records, then the compliance costs would be very small. It might just depend on what sort of business you are in. That might be why we just cannot get a clear idea as to what the compliance costs would be.

CHAIR—How do you measure the loss of opportunity costs—

Ms Smith—That is right.

CHAIR—If people just do not take up the technology because they believe the regulations are too onerous or they shift location because of it?

Ms Smith—And also the people who do not take advantage of the technology because their privacy will not be protected. It is very hard to measure it either way.

Mr Kelly—It is always very difficult to measure things in the negative. I think the only meaningful thing they could do, in order to get some handle on it, would be by survey as to how many people have not taken up an opportunity because something was not in place.

Ms Smith—I do have some figures from a survey by Price Waterhouse—the one I mentioned before. Of 130 of Australia's major companies, 79 per cent of those that responded felt that only minor changes to their business practices would be necessary to comply with privacy legislation. Nearly two-thirds of the companies—most had sale figures in the billions of dollars—believed it would cost them less than \$100,000 to conform to any privacy legislation, which is less than one thousandth of one per cent of sales revenue.

CHAIR—You talked in the submission about the working party in the EU. Indications were that some of the issues would be transfer of sensitive data all the way down to transfers involving the collection of data in a particularly covert or clandestine manner. Is the Internet any different from commerce anywhere else?

Mr Kelly—It is slightly, in that all of the information on the Internet is presented in an electronic form. It makes it far easier to collect. Having collected it, it is easy to store, copy and put aside for detailed analysis and data mining. The path which information is going to take on the Internet is out of the control of the user, so people can get access to that information in an authorised manner. Somebody could have access to a computer site where the information is going to be routed through or parked for some time. Their access privileges will allow them to access the information. In order to protect it, obviously it has to be encrypted some way, otherwise it is capable of being intercepted on its path.

CHAIR—While you say it is easier to collect the data and consolidate it and move it around, is it not also easier to protect it than it is in the paper world?

Mr Kelly—I would say no. In the paper world there is a limit to how much information you are intending to protect. Granted that tools are being developed at a very rapid rate in order to safeguard electronic information. As long as they are applied to it, then it can be protected probably more rigorously than paper information, but I do not think anything is probably as rigorous as a paper document in the bank vault.

CHAIR—If I write a cheque to buy a good that I do not want anybody else to know that I bought, there is an absolute paper trail that can be followed. If, however, I take cash from the bank and I buy a smartcard and I pay for this good with the smartcard, nobody—but nobody—knows who in the heck paid for it, just as if I had paid cash, except that my fingerprint is not available any more but it was on the cash.

Mr Kelly—I think if you wanted to take those precautions the best thing to do would be to obtain the cash and pay for it in cash.

CHAIR—But the smartcard will give you the same protection.

Mr Kelly—The smartcard will leave some trail that you have paid for something. There will be some electronic trail on your smartcard.

CHAIR—Is that necessarily so? Aren't some smartcards simply a stored value chip? It does not say who I am, what my address is, or my phone number or my bank account number or my tax file number.

Mr Kelly—No, granted the stored value card will give you that degree of anonymity, but even that would not give you as much certainty as paying for it by cash because there would be some record that your smartcard was debited by a certain amount of money on a particular day. That may not be put down to you, but your cash transaction would be totally anonymous. Your stored value card would be nearly anonymous. If there was a connection between you and the card and there was a connection between the card and the transaction, then it would be possible to make that link between the transaction and you. If there was no connection between you and the card and it was a totally anonymous card, then there is no way of connecting the transaction to you. But as long as you can be connected to the card, then eventually the transaction you make with that card can be traced to you.

Senator HOGG—It would be like getting marked bank notes where they had the serial number of the note that they had given to you.

CHAIR—If you operate in Mondex, I accept that there is a trail because, generally speaking, it would depend on a bank account to feed into, but not necessarily because you can move money around all over the place electronically on your stored value chip. But if it was a supermarket issued smartcard or a Telecom issued smartcard—there might not be a name on it at all—you simply pay \$10 for the card, which you can stuff in a parking

meter or in a telephone box and then you throw it away. You can mutilate it so your fingerprints are not on it. You cannot get rid of your fingerprints off the cash.

Ms Smith—Absolutely right. I think certainly from a privacy point of view, the use of the anonymous stored value cards is something that does not raise major privacy issues. In fact, it is the sort of technology that we would be quite happy to see promoted.

CHAIR—One of the things that we have heard that we are trying to come to grips with—and we will be talking very shortly to representatives of the banking industry—is that the systems in place in the United States for certification—signature verification, if you will—of a credit card number that in fact it was authentic and there was value behind it to make that transfer does occur on a very regular basis electronically and instantly.

In Australia, we have been slow to get the banks involved to take up the technology—or at least it is claimed by some that verification of credit card details has not proceeded at the pace it has in the United States, which perhaps is one of the limiting factors of why we have not yet taken up electronic commerce to the extent that the Yanks have. Do you have any knowledge in this area or comment about the privacy concerns of the kinds of systems of verification that are in place or will be in place tomorrow?

Mr Kelly—What I can say on this issue is that some electronic banking type systems that are being developed actually do enhance people's privacy. One in particular. I do not know if it has been mentioned to you before, but there is a protocol called SET, secure electronic transaction. Under this protocol, if we have got the customer, the merchant and the bank, the merchant needs to verify that the customer has got sufficient funds to cover the transaction that is being made. But the merchant is unaware of the customer's banking details. The merchant can check with the bank, and then the bank remains unaware of the customer's purchasing details. So under a situation like that, the customer's privacy is enhanced. We certainly do favour the development of techniques along those lines. I would also like to say that we do not see privacy as an issue inhibiting the development of these things at all.

Ms Smith—They seem to be more like security and authentication type problems rather than privacy problems. As far as we are concerned, anything that facilitates people's confidence that they are dealing with the person they think they are dealing with and that the transaction is going to be kept secure is ideal. It is a part of privacy, but it is not all that privacy is about. But as far as we are concerned with these sorts of transactions, anything that encourages good authentication and security we would support.

Senator GIBSON—So you support Standards Australia's strategy approach?

Mr Kelly—Yes, we support their framework.

Senator HOGG—Just going back to your submission, you refer there to a lack of

general privacy standards applying to the private sector in Australia. You say:

It therefore raises questions about the impact on the international competitiveness of Australian business.

What evidence do you have of that? Can you provide us with it?

Ms Smith—If you are looking at specific examples, we do not have any. Eighty per cent of the Internet transactions out of Australia are with American companies, so it is very hard to get examples in Australia of Australians who have had difficulties with electronic commerce with Australian companies. Not many companies are involved and not many Australians are involved, so we are looking at a very small set of people. So we have not got specific examples. No-one has rung the Privacy Commissioner's office and said, 'We want to get involved in electronic commerce, but we do not feel confident.' We can only rely on the sorts of surveys that I quoted from at the beginning to give an indication of people's general anxiety about privacy and particularly the effect of computers on privacy.

Senator HOGG—So how does this affect our international competitiveness?

Ms Smith—It affects it in that, if you are dealing with people, particularly in countries which do have privacy laws in place, and if Australia's reputation is not as a country which has got good privacy protections in place, then the assumption is that consumers overseas will be thinking, 'If I've got a choice, I'll go with a local company, where I know the privacy laws will be good, rather than trade with an Australian company, where we fear our data could be misused.' I think that would be where it would come into play.

Senator HOGG—So which countries would view us as being not necessarily good to trade with because we do not have privacy laws in place? Which people in which countries? Do we know?

Ms Smith—The nearest one might be New Zealand, where the Privacy Commissioner has already raised concerns about transfers of data to and from Australia with the private sector. Of course, there is also the 15 member countries of the EU.

Senator HOGG—What about the burgeoning market of Asia?

Ms Smith—Hong Kong has comprehensive privacy law. I think Malaysia is looking at it as well. Japan is looking at it.

Senator HOGG—Do we have any evidence, either empirical evidence or anecdotal evidence, to show that this is a concern for them and thereby reduces our international competitiveness?

Ms Smith—The only anecdotal example I have actually had to do with somebody trading with Europe. It was an Australian company which is a major retailer and which also has a major direct mail service and wanted to expand that into Europe via the Internet and was finding it very frustrating because he was unable—as he felt—to penetrate the market as well as he wanted to because he could not get his customers to reveal their credit card details and other personal information to him. He approached the Privacy Commissioner and said, ‘What can we do about this?’ That is the only direct experience we have had of someone experiencing concerns.

As far as Asia is concerned we do not have any anecdotal evidence. But, again, there are not many Australians involved in electronic commerce overseas. Also, I do not know why anyone from Asia would contact our office about having a problem anyway. We just do not have any information we can give you about that, I am afraid.

Senator HOGG—What I am heading to is: is it likely that the lack of general privacy standards applying to the private sector will see that being used as a non-tariff barrier by some nations against us?

Ms Smith—That is certainly a problem that has been raised with Europe in particular. I think that the US has been particularly concerned about that and, I understand, is trying to have the issue raised with the World Trade Organisation, which Europe apparently welcomes because they want the whole thing aired. But it has not been resolved yet; there has been that suggestion.

As far as the Europeans are concerned, we know a bit more about them because the dialogue has been much more open than it has been with Asia because the Europeans have got this directive in place. As far as the Europeans are concerned, they say they are not trying to export their system and data protection; they are not expecting everyone to have the same laws as they have. They just want people to take steps to ensure that the personal data they receive from Europe is protected to an adequate standard. That is all they are asking for. Whether it is through self-regulation or regulation, they are looking for some kind of action to be taken.

I think the European countries themselves, as a result of the EU directive, have had to review and upgrade their privacy laws as well. I guess they are saying, ‘We’re taking all this action; we’re looking for some kind of measure of equity somewhere else.’ Whether it is actually a real trade barrier, I do not know.

CHAIR—You are not saying, I hope, that Australia has a poor reputation internationally for protecting its citizens’ privacy?

Ms Smith—No, I do not think it has a poor reputation. It is certainly not up to international best practice, but it is not a poor reputation.

CHAIR—Thank you very much. We appreciate your submission and your report. We will try to get a report somewhere around May or June of next year. This thing has turned into a very broad ranging inquiry I can tell you; everything from technology to privacy and tax in the middle—and it all started out about tax. There are a lot of issues there and we will try to produce a comprehensive report that perhaps makes a bit of a difference. Thank you very much.

[12.05 p.m.]

LYNCH, Dr David, Director of Policy, International Banks and Securities Association of Australia, Level 12, IBSA House, 2 Bligh Street, Sydney, New South Wales 2000

CHAIR—Welcome, Dr Lynch. We have received your submission. Would you like to make a brief opening statement before we ask you questions about your submission?

Dr Lynch—Thank you. The International Banks and Securities Association represents investment banks operating in Australia. They are predominantly foreign owned banks but the association also includes a number of Australian owned banks. The area of operations of these banks is primarily in the wholesale markets. With some exceptions, they are mainly involved in corporate advisory activities, fund raising—activities at that level—and less so with taking retail deposits and facilitating transactions like credit card payments and the like.

By way of background, I will make a couple of points. I know you have received a lot of submissions and it is difficult to refer to the detail of all of them. Looking at the banking sector, just to place it in perspective, it is undergoing change at a number of levels both in organisational form and through the appearance of conglomerates in banking. Product differentiation between different types of institutions is narrowing. You have globalisation, and the current trend in GATS negotiations in trade and financial services is opening up the financial markets at that level. So commerce and Internet banking sits within that framework. It is one element of a process of change. It is an important element, but there are a number of other things happening within which this sits.

From our point of view, looking at this process of change, we think it is better to try to manage the change rather than have events drive things on an ad hoc basis. Looking at managing the change we see government and industry interacting, primarily through taxation and regulation. They are the two primary mechanisms through which the government and its agencies interact with the investment banking sector.

Wholesale markets at the moment are open to international competition, substantially. Retail markets are less affected by globalisation. Foreign banks certainly participate in the market and add competition, but they are based in Australia, whereas Internet commerce changes the geographical dimension of some of those activities.

Our comments on tax and regulation in the submission are driven by those factors. It is very much with a view to looking at the international competitiveness of the financial sector here that we have concerns in relation to financial institutions duty. We spent some time talking on that. Also, in the context of regulation, we do note that the Australian Taxation Office and the Australian Securities Commission have a corporate law economic reform process in train and therefore there is a process in place to address some of the

issues which we have raised here.

CHAIR—What effect, if any, do you think that the imposts of FID and stamp duty on share transactions are having on our international trade today through electronic banking, and how serious are your concerns?

Dr Lynch—Our concerns are serious. Just turning initially to the impact of FID as it stands at the moment, we represent foreign banks operating within Australia and we basically, as their representative body, see many of the problems they encounter in attracting parts of their global and regional operations to Australia. FID, as it stands, is a significant impediment. It is probably the most frequently mentioned problem.

A point that is significant is that similar taxes just do not exist anywhere else in the world. I think there is one country that is an exception to that. Basically, financial institutions duty or a transactions tax of that nature do not exist. Therefore, at the first stage there is a cultural issue to be addressed for financial institutions looking at operating here.

Secondly, the manner in which FID itself operates means that you are not looking at one FID regime but you are, in fact, looking at one for each state and territory with the exception of Queensland. So, if you want to locate your operations here and you are going to operate within the national market, you have a range of regimes to accustom yourself to.

A further problem is that the principles upon which FID is based are poorly set. Consequently, you get a number of problems that arise in connection with an interpretation of legislation and the actual implementation of the law. Sometimes it is unclear how you should actually treat fairly basic transactions. Therefore, when a bank reports its balance sheet back to its parent, it may have a contingency attached to it which is based on uncertainty of a tax nature.

There is a range of mechanisms which currently affects our ability to attract regional business. Having said that, investment banks do not actually pay an awful lot of financial institutions duty. The main concern is actually the compliance cost of demonstrating they do not have a liability and ensuring that they meet their full obligations in respect of that.

In the context of Internet banking, that is an issue where you are looking forward because at this point in time, as I mentioned, the wholesale markets are quite open to international competition through various means—primarily through globalisation of markets which has already occurred. The Internet and the use of the Internet for banking transactions, as it stands at the moment, is primarily a bit like a notice board. You can place your foreign exchange rates and advertise your services through the Internet but there is not very much pure banking being done through the Internet.

The indications we get from material we have seen on technological development is that it is not too far away before you will have the facility to undertake secure transactions through the Internet. That depends on two things. It depends on security and trust, and they are both interrelated. Once security is in place then you will find that trust will develop from users of the Internet. In that situation we would see a difficulty for banks operating here where they have a tax liability attached to their transactions which does not exist anywhere else, given that the Internet is not geographic specific.

Also, if you look at the banks that might offer Internet facilities, you are talking about banks like Citibank, Chase Manhattan, ABN, major European banks and major world banks which retail customers at the sophisticated end would feel comfortable dealing with. They already do to some extent already.

CHAIR—Do many banks worldwide operate on the Internet? Do they provide banking services?

Dr Lynch—There are some that are called virtual banks but, frankly, at this point in time the industry is at a stage where it is advertising its wares through the Internet. There was a report quite recently that a provider guaranteed that credit card transactions would be secure from fraud. It will take some time before developments of that nature occur and we can have widespread Internet banking. I am not a technological expert but the information I am receiving is that they are not too far away from that.

CHAIR—Are you familiar with the clearance system in the United States?

Dr Lynch—No, I am not.

CHAIR—In the submission, you said that Internet banking and other Internet financial services are rapidly emerging and have enormous potential. You have just told us that you are not aware of any bank in the world that is yet operating on the Internet and yet we understand that the NAB is only a couple of weeks away from going on-line with fully secure banking services.

Dr Lynch—That is right. I am aware of ‘virtual banks’, as they are called, and of banks like Bank America which have developed this SET technology that allows secure transactions to take place. I think you are seeing at this point in time not a widespread offering of products through the Internet, but you are seeing the emergence of these products. It is a nascent market. From my point of view, looking at financial sector development and how products develop over time, once the trust is established in the Internet as a secure mechanism, at that point you will see product innovation, which will bring in the wider population to that market and will capture that market for retail banks.

Senator GIBSON—Before you, this morning, Standards Australia left us copies of their strategy for a public key authentication framework in Australia. They basically also

said that the Commonwealth government is intending to pursue this approach in the near future. Are your banks in favour of that approach?

Dr Lynch—That is not an issue we have discussed in terms of standards. We would take it that the establishment of standards is a necessary part of the infrastructure for the provision of Internet transactions, on the basis that users have trust in them. But, in relation to those specific standards, I cannot comment.

Senator HOGG—You mentioned that you are mainly involved in the wholesale market. Will the Internet cause the wholesale and the retail market to come together and be almost indiscernible?

Dr Lynch—I do not think so. I say that because the product lines which are being provided are quite different. I will give you an example. If you are looking at foreign exchange trading, at the moment for larger Australian corporates that operate company accounts here and overseas, over half of the Australian dollar trading takes place overseas already. The volume and size of transactions and the nature of the products which are being used by corporates, which are quite sophisticated, are different from those from retail.

Having said that, in looking at the area of derivatives, it is more common for consumers to have capped home loan interest rates and so on, which are basically options on top of ordinary housing loans. So there is a convergence, but I do not think they will be the same markets.

Senator HOGG—The reason I asked was that, at page 3 of the submission you have tendered, you say that, as a result of the Internet, banks will become more innovative in terms of products and services offered. What will be the products and services that will become available through banks but that are not now available? Will that be on a national basis, or on an international basis? What impact could we expect it to have?

Dr Lynch—The sorts of products which will emerge will be based on existing products. Banking is dependent on intermediation, collection of deposits and facilitation of payments. You are talking about the provision of services through new mechanisms in some cases and you are also talking about a widening of the product range. I will give you examples. One is quite simply the payment of regular bills through the Internet: that is quite feasible. Another is in terms of investments. Through the Internet, it would be feasible for retail investors to directly invest offshore, to more effectively use programs provided by banks to manage their investments and the like.

It is difficult to anticipate what the full range will be, because that is what the innovation process will throw up. But there are certainly areas of vast potential. As it stands in Europe, from speaking with one of the Dutch retail banks, I know that they can currently provide portfolio services for their investors through the Internet; basically you

can update and monitor your investment portfolio.

If you look at what financial services are about, there are three or four elements to them, ranging from transactions to investments to managing risk. In each of those areas, the Internet has potential. Remember that the fundamental driver of financial markets is information. Lending is based on an information asymmetry between the borrower and the depositor, an asymmetry which the bank fills. The Internet is a very effective mechanism for dissemination of information. The difficulty comes, though, with the volume of information which could be pushed out at investors. In terms of developing the Internet, that is where the role of financial institutions could change. This is very much hypothetical and looking forward, but it is not inconceivable to my mind that, at some stage in the future, providers of products and services through the Internet would need to be rated so that you had security of delivery and quality and so forth.

If you look at the kinds of processes which you want in order to provide a rating system for those types of providers, banks are well placed to do that in terms of their existing knowledge and so forth. Looking towards provision of new services, if I were in banking I would be thinking strategically in that kind of direction. My role might change, but I would be using a skill base in which I have got a currently competitive advantage—basically like a credit rating agency for smaller entities, in the same way that Standard and Poor's and so on do for countries and large corporates.

Senator HOGG—Does the sort of scenario you have described mean that a number of people would be looking to do their banking offshore in the future, as opposed to onshore? If so, what impact would that have in terms of taxation and other issues for the Australian government?

Dr Lynch—Let us go back a step. One of the difficulties which foreign banks had in offering services at the retail level in Australia was that they did not have branch networks. In the current situation, a branch network can actually be a bit of a burden, because it is a high cost activity. Really, there could be greater penetration through foreign banks. As for whether people will actually actively look for it, it is a mixture of supply and demand: if they provide the right services, yes. But it takes time to develop these.

I mentioned the European Bank. One of the questions I put to them was, 'Are you going to offer those sorts of services through your operation here?' They are not currently a retail operator here, but it seemed to me that the types of products they were developing would be useful here. Their response was initially no, because they had to get it right at home first. But yes, there is potential there.

What concerns me a little is that, if a saver or an investor or whoever is using a bank, one of the key factors in determining which bank they actually use is the cost of doing so. My concern with FID is that, if you have to pay financial institutions duty on your transactions here, that will disadvantage operators from Australia, relative to those

overseas. There is a range of factors which will determine why an individual uses a bank, but certainly that is a significant concern.

Politically—it is a state government issue, by the way, but I think it is relevant in the context of what you are doing, so that is why I mentioned it—there is an issue of progressivity in tax. Not all taxes have to be progressive; nevertheless, you do not want a tax in place where basically the more sophisticated, high net worth individuals and corporates can simply avoid the tax by using Internet sites, which are offshore and outside of the tax regime.

FID has two problems. Firstly, it is a state based tax, and the state authorities have found it difficult to operate FID in a national environment. Things like double duty for close jurisdictions have been difficult to deal with. There was a consultative forum last year to see if we could get common definitions for simple things like a receipt into an account, and that failed. When you then place FID into an international environment, if it is not working effectively within the national environment, internationally it has certainly got severe problems.

In relation to FID, we recognise too that the states derive substantial revenue from FID and you cannot just get rid of it. That is why we say that you are looking at a process of managing change, of looking forward and seeing what the risks are to the tax base and seeing how you can accommodate that.

Senator HOGG—I have one further question. In your submission, you referred to a small number of virtual banks being located on the Internet. What exactly is a virtual bank?

Dr Lynch—A virtual bank is a bank which exists on the Internet only.

Senator HOGG—On the Internet only?

Dr Lynch—Yes.

Senator HOGG—What is its asset backing and so on? Where is the governance of that organisation from? Or is it something that knows no national boundaries and has international mobility in terms of its assets and resources?

Dr Lynch—Two banks exist that I am aware of, and one is based in the US. I am not sure what its relationship is with the US supervisors.

Senator HOGG—Is this another area that we need to look at?

Dr Lynch—An issue of concern which struck me through my analysis of this was that, because Internet commerce is an international activity, it will require an international

response to it. There is a mention there of the work by the ATO and the work by the ASC with international organisations, and that is critical for producing a multilateral response to this. It affects not just banks but also, for example, investors who are offered products through the Internet for which there may or may not be suitable prospectuses. There, you are into setting standards internationally for prospectuses that would be offered through the Internet and 'accredited.' So there is an element of the regulators and the authorities taking action.

There also will have to be a significant element of development of consumer understanding of both the advantages and risks of dealing through the Internet. And that is where this rating process becomes very important. There was a recent CLERP paper, for example, on international accounting standards. One of the advantages which we would see in their adoption is that you are moving in a process towards prospectuses being provided which would use the same basic quality and type of information in each country. That would allow investors to make qualitative decisions about the status and quality of different investments. That is quite a forward looking move, aside from the advantages it provides at the moment.

In answer to your question, I think it is critical that there is a multilateral approach to this in all countries, whether it is within the framework of the OECD or the Bank for International Settlements, or through organisations like IOSCO, the International Organisation of Security Commission, so that they do develop a coordinated response to it. There will be countries which will not sign those agreements, and that is where education comes into play and also where the rating comes into play, to identify to investors that there is less security attached to those types of products.

CHAIR—Are all your members on the Internet?

Dr Lynch—No; I cannot say which ones are not; but, in terms of operations within Australia, a number of our banks would have a few dozen people working, and so they are not substantially large operations and their relationships with their clients are at an individual manager level. So there would not even be a need for them to move on to the Internet in the short term. They are not looking at accessing a wide market. On the other hand, you will have banks such as Citibank who have both a retail and a wholesale operation and they would and do develop Internet products.

CHAIR—Barclays? Chase Manhattan?

Dr Lynch—Yes. But Chase Manhattan in Australia is primarily an investment bank, which is different to the international. One of the matters that I have been trying to tie down through our members is to what operation extent they will actually draw upon what has been developed in their home base to apply it here. For example, if a bank like one of the European retail banks that currently operates an investment bank here were to operate in Australia as a retail bank, it would be a fundamentally different operation to

what is already here. So, consequently, looking to see what is happening here may not be a good indicator to see what will flow through in the future.

CHAIR—But today, if I called up Chase Manhattan, would their web site likely include interest they pay for money at 24-hour call?

Dr Lynch—I cannot answer that; I am not familiar with their site.

CHAIR—But it is unlikely that I could negotiate such a transaction with any of your banks automatically on line?

Dr Lynch—At this point in time, yes.

CHAIR—You mean no.

Dr Lynch—Yes, it is unlikely.

CHAIR—And you are not aware of which of your companies will be moving in that direction and how fast?

Dr Lynch—There are a number of banks, such as Bank America, which are involved internationally in the US market developing products and have been reported as moving to implement those products within Australia, so I am certain that products will flow through. When you talk to individual banks about what they may or may not do, there is some element of commercial confidentiality and they are less open than otherwise.

CHAIR—Thank you very much for both your submission and for coming to talk to us.

Dr Lynch—Just as a parting comment, I think the inquiry is very worthwhile. I heard you mention earlier that the scope of it was becoming quite wide. It does not surprise me too much to hear that; it is such a big issue.

CHAIR—It has grown like the Internet—exponentially. We can't stop it.

Dr Lynch—If there is further information you think that we can provide you, please contact us and we will certainly endeavour to do that. Thank you for the opportunity.

CHAIR—To a degree it sounds to me like the four majors in Australia are going to try for what your members do. As they come on line, I would think that your members have no option but to consider that.

Dr Lynch—Not many of our members operate in the retail market. For those that

do, yes, and they are doing it. The likes of Citibank are very innovative. But for the others, it is very much a strategic decision as to whether they see a comparative advantage to moving into the retail market as distinct from wholesale markets where they can offer niche products and particular expertise.

CHAIR—But still even in those markets I would have thought that lots of smart players will be looking at their screens rather than operating on the telephones in a few months or years down the track.

Dr Lynch—Yes. Bill Ferguson, the managing director of Citibank, was quoted as saying that foreign exchange dealers will go the way of lift operators. Looking forward in terms of what people do and what different functions are within the sector, that will inevitably happen and there will be changes which are quite fundamental. Unfortunately, it is very much a forward looking process, so you cannot be conclusive in anything you say about where it might end up.

CHAIR—Thank you again.

Luncheon adjournment

[1.33 p.m.]

MARSCHALL, Dr Richard Anton, 10 Gumnut Close, Blaxland, New South Wales 2774

CHAIR—Thank you for coming to talk to the committee and thank you for your submission. In what capacity do you appear today?

Dr Marschall—In a private capacity.

CHAIR—Would you like to make a brief opening statement before we ask you questions about these weighty matters to which you have referred?

Dr Marschall—Yes, I would like to make a statement concerning Internet privacy and security in addition to my earlier letter. There is no privacy in Internet communications. All the traffic is routed through unsecure servers, where it is relatively easy for professionals in information technology, signals intelligence or electronic warfare to tap into it or redirect it. All the tricks of electronic warfare, developed over the past 50 years or so, work in the context of Internet communications.

Encryption of Internet transmissions is subject to the same difficulties as encrypted military communications, with a further fatal flaw that strong encryption schemes—in other words, those that might actually be effective—are banned in the G7 countries. Virtually all proposed commercial encryption schemes, including those for electronic money, are based on the decomposition of large numbers into prime factors being considered a difficult or time consuming mathematical problem. However, increasingly powerful algorithms have been published in the open literature addressing this problem and the corresponding code cracking. It is extremely likely that mathematicians with experience in military communications intelligence research for the major powers can break such codes relatively easily, or will be able to do so in the near future. It would be grossly naive to trust any significant level of commerce to such a scheme.

CHAIR—In your brief paper you stated very strongly that the capabilities of the Internet are dramatically overstated. Would you like to tell us a bit more about that?

Dr Marschall—The transmission media for which the Internet communications occurs to the ordinary home is phone wire, which is a twisted pair. That then is brought into trunk lines for the phone company, which is usually a co-ax. The larger multiple trunk lines have now been condensed into the fibre-optic. These transmission technologies of how much data or communication capacity that you can get over a twisted pair of wires, over a co-ax or over a fibre-optic are well developed and have not materially changed—over at least the past 10 years in the case of fibre-optics. In the case of co-ax and twisted pairs, the amount of effective usable bandwidth has not changed much over 20 years. Occasionally somebody has some new algorithm or something that they push at an

extra five per cent. But there are going to be no dramatic breakthroughs there. There are fundamental physical limitations on the communication capacity of the existing data bearers.

CHAIR—Are you saying that as more and more web sites are added it will take longer and longer to get to them?

Dr Marschall—That is right. There are claims that an undefined miracle in technology is supposed to occur that is going to allow very high bandwidth communications to the ordinary home. Some people even claim this would occur over ordinary phone lines. This is simply not true. To increase the bandwidth to residences you would have to put in different data bearers—expensive data bearers; I speculate that most people would be unwilling to pay for them—and the corresponding trunk lines in the system would have to also increase in data bandwidth, and so on and so forth.

It should also be pointed out that phone communications, the existing phone line systems that have been put in, count very much on phone usage being an intermittent operation. You call somebody and it is relatively random from who you last called and over a large number of people there are all kinds of statistics that can be taken advantage of that allow you to seldom get a busy tone on the phone line because you pop in and pop out.

As you have increasing numbers of users on computer communications that remain logged in, they occupy the communications channel and they do not relinquish it again, or not usually for a period of hours. That is quite different from the average phone conversation, which is only a period of minutes. So, it consumes a much higher bandwidth of the phone telecommunications infrastructure, which ultimately will have to be paid for.

Senator HOGG—We heard from a witness this morning that low level satellites are coming in to their own now as a replacement for physical cable that has been laid. What is your response to that?

Dr Marschall—They will add bandwidth; there is no question about that. The frequency of these satellites are now up in the several gigahertz range. It is straightforward to compute how many full-time information channels that is. But the fact is that it corresponds to several co-ax cables or a few fibre-optic cables. They pick up an additional advantage with satellites in that theoretically—at those high gigahertz frequencies—you can beam up quite narrowly to the satellite. You can make your area, your covering split up in the cells in the way cellular phones work but then you would need a staggering amount of satellite capacity up there in very close proximity. It is probably unrealistic to assume that there are going to be orders of magnitude of improvement in daily communications in bandwidth made available. There will probably be a doubling, tripling, quadrupling but it is extremely unlikely that there will be a hundred times more.

Senator HOGG—Is there any difference in the degree of security between transmission along a land based cable as opposed to satellite transmission? Is one less secure in terms of the data? I presume the problem with the encryption that you are talking about is that it would need some sort of intervention, some sort of accessing. I am trying to find out whether the accessing is more easily done where there is a land based cable as opposed to satellite transmission or is it the same?

Dr Marschall—The weakness in an Internet security as opposed to just telecommunications security is that the Internet communications are routed through basically unsecured servers. There are Internet servers on the hub and those servers are accessible by large numbers of people. The telecommunications companies, the phone companies of the world, also have large computers that control their switching for normal telecommunications. Access to those computers is restricted to a very small number of people at any one site—usually one or two.

That is not the case with Internet servers: it is not eavesdropping on the traffic stream so much as it is the servers themselves, by the very set up of the Internet, with common Internet transmission protocols that are fixed. It was never designed to be a secure format. That is where one would tap in.

Senator HOGG—Pardon my ignorance in this area, but do all users of the Internet, whether they be large corporations or whether they be humble individuals such as I, have to go through similar servers or—

Dr Marschall—That is correct. They all go into the same network.

Senator HOGG—So the major banks would all go through a server, as such. They would not necessarily go through the same server as me but could I assume that they go through a more secure server?

Dr Marschall—Not if they are using the Internet per se. Right now, banks, large accounting firms, and some large multinational corporations and law firms, have international computer networks that communicate over a variety of telecommunications assets but they are not designed to be open to the outside world and they control the computers at both ends. So their only vulnerability is in the transmission, say, by coax, by satellite, or whatever, but they are at least controlling both ends of the system. The Internet relinquishes almost all the control for the communications to this Internet infrastructure, which is not under their own direct control.

Senator HOGG—But would not most major organisations such as the major banks build some sort of fire wall between themselves and the server to protect the integrity of the data that they have?

Dr Marschall—Fire walls do nothing to protect the integrity of data being

transmitted over the Internet itself on a transmission path. They are supposed to stop intrusion into their own computers through the Internet. They are of very limited effectiveness in that category. For example, defence department computers in most countries are prohibited from being hooked to any external network if they are to carry classified information. So defence security analysts have already worked out that any network that is hooked to the outside world is always vulnerable. It is just the level of vulnerability.

Senator HOGG—Your criticism is that there is nowhere on the Internet that is secure and, primarily, your criticism goes to, as I see it, the issue of the privacy of the individual or the company that may well be transacting its business on the Internet.

Dr Marschall—There are multiple issues here. There are the communications over the Internet, as the Internet, as opposed to computer communications, per se, over the telecommunications network. Computer communications over the ordinary telecommunications network—which is how large corporations and banks communicate presently and which is not over the Internet—where they pay for their own phone calls and they control their own servers, is relatively secure. They use reasonably knowledgeable information technology professionals and it would require the dedicated services of serious professionals to break into that communication stream but it still happens.

Automatic teller machines in the US went up in popularity then rapidly decreased as people found they could spoof the machines and get them to empty their cash. It will probably happen here also. The Internet itself is basically a scheme where people think they will reduce their phone bills, particularly long distance bills, and throw their daily communications onto an insecure basically public utility network that they are not being charged the full expense for. It is that network that is fundamentally not secure.

Senator WATSON—Would you give us some of your background? You say you are one of the scientists who founded or pioneered the Internet 20 years ago. Have you had a continuous involvement? Is your company involved with the Internet at the present time?

Dr Marschall—No; my company is not involved with Internet in the sense of conducting any Internet commerce or providing software. My company provides instrumentation for the geophysical and mining industries.

Senator WATSON—Given your involvement with Internet, why did you opt out? As a pioneer in such a fast growing industry, I would have thought that there would have been tremendous opportunities for you to stay there.

Dr Marschall—We repeatedly look at and see whether there is any way we could use it in a legitimate fashion, and there are potential uses for putting up catalogue pages

and advertising on the Internet. E-mail, in my view, is undesirable because if you have e-mail communications it is easily eavesdropped by your competitors. Then they can go after those same customers plus they can tell what your communications would be, even if they are just incoming sales inquiries. The problem is that they can even view who is viewing your catalogue and tell where they are coming from. If they are really determined, they can make it so that the next thing that people see is their catalogue instead of your catalogue.

Senator WATSON—So you do not see it being widely used in future, despite the initial euphoria for the Internet by businesses?

Dr Marschall—I see knowledgeable users of the Internet falling off of it despite, in some cases, euphoria. The more technically astute users never had that euphoria.

Senator WATSON—Would you be surprised about the banking network using it extensively, given the issues that you raised?

Dr Marschall—It is a very disturbing trend.

Senator WATSON—It would almost be enough to break banks, if someone broke the encryption, would it not?

Dr Marschall—Yes; I am saying that encryption can be broken.

Senator WATSON—What was the reason for banning some of the encryptions that you raised? Surely you would want to get the most secure type of encryption that was around. What was the policy for that?

Dr Marschall—There is a strange trade-off here. If the communications were in fact secure in a host of ways, besides being able just to read it or not read it, then you have the problem that criminal transactions and tax evasion can occur with impunity. There is nothing that can be done to stop those transactions. There are law enforcement groups that are advocating only weak encryption schemes, but that leaves the system open to another whole host of criminal activity. What I raised in my earlier letter was that these issues had been examined at a high scholarly level.

For many years, people looked at ways of potentially commercialising the Internet and it had been decided against for precisely these reasons. It is only lately that certain political efforts of a large consumer software manufacturer have influenced the process to try to commercialise the Internet.

Senator WATSON—You refer to bad operators who can hurt all businesses in various ways and you go on to list about half a dozen of them. Have there been any cases where these bad operators have been brought to court? Have there been any laws that have

been adequate in terms of being able to pick them up?

Dr Marschall—Fraud laws regarding electronic fraud in many parts of the world have been strengthened.

Senator WATSON—Including Australia?

Dr Marschall—I am not aware of that being strengthened in Australia. It is unlike other media that leave a physical record such as in the case of mail fraud where there is a physical record. The Internet leaves no physical records and crosses international boundaries freely. There is, effectively, little that can be done to stop those behaviours. For example, if some company that is unethical wishes, their home page can be located in one country, their catalogue page that somebody flips to or a page of the catalogue can be in another country and their ordering form can be in yet a third country. By judicious choice of countries that do not have treaties with each other and countries that are outside of many aspects of the civilised economy, that makes the transaction effectively impossible to enforce, even for relatively large dollar sums. For minor dollar sums, there is nothing the consumer can do.

Senator WATSON—Would you foresee the fraudulent taxpayers and the criminals using the Internet quite freely? Could their transactions not get caught by counterintelligence or something from other companies or by other people? If they are dealing themselves in large sums, cannot they be at risk by the smart operators? There is just a question as to the degrees of vulnerability.

Dr Marschall—To some degree, companies that are trying to do business on the Internet are trying to publicise the behaviour of bad operators and where they are. The thing is it is so easy on the Internet to create slick looking home pages that can have any physical location.

Senator WATSON—Can you name some of these bad operators? How extensive are they or is it just one or two?

Dr Marschall—There is an organisation that is active in monitoring Internet fraud and I will give you their Internet address. They are at www.fraud.org/internet. They will provide a multitude of examples for you.

Senator WATSON—We would probably have to pay for that though, wouldn't we?

Dr Marschall—No, that would be free.

Senator WATSON—That could be useful.

Dr Marschall—While we are discussing other sites and groups to look at, the Sixth Conference on Computers, Freedom and Privacy was held from 27 to 30 May 1996 at MIT. The title of that session was ‘Electronic money: threat to law enforcement, privacy, freedom or all three’. The proceedings of that conference would also be worth examining.

CHAIR—I want to revisit something that John went on to. I am personally aware that the NAB is ready to go on-line with on-line banking. Considering its earlier experience with EFTPOS and the whole Australian banking scene agreement to go into automatic teller machines, ATMs, and the very high success and take-up rate of those machines and their apparent security, why on earth would an experienced major international company—and I would remind you that their assets now are more than 50 per cent out of Australia—with its headquarters in Melbourne be going on-line on the Internet for banking services which it guarantees to be secure for its customers, if it was not confident it could maintain its business with integrity?

Dr Marschall—They may be confident, but I am willing to bet the directors of that company do not understand the technologies involved.

CHAIR—Their people have been developing the software and the hardware interfaces that allow them to go on-line and to be confident that they are secure.

Dr Marschall—They may be confident, but they are going to lose their shirts.

CHAIR—Do you know more than the combined knowledge and experience that is in a banking organisation that has been around for a long time and that has grown internationally exponentially over the last few years?

Dr Marschall—No, I am not saying that. I am saying that organisations have been tending to listen to what they want to hear and ignoring the communities that are experienced in electronic warfare and in eavesdropping. They want the Internet and the notion of easy money to be made on electronic commerce to be true. They want it so badly that they are going to ignore any voice that says, ‘Look, guys, you have a set of fundamental problems here.’

CHAIR—I would not have thought being able to have a look at my bank statement and authorise automatic electronic payment of my telephone, gas and water bills represented any kind of easy money. I would have thought it represented perhaps a release of some overheads by the bank and a more convenient method of banking for me since I can do it at midnight at home rather than having to physically go to the bank during the day when I am either busy or, in fact, in Sydney instead of in Melbourne, where I belong.

Dr Marschall—What you are describing, though, is not really Internet commerce so much as—

CHAIR—It is, because I enter it through the Internet—absolutely.

Dr Marschall—The transactions you are describing are only where you have pre-approved with your bank for the bills to be paid—such as when you pay the phone company or when you pay your utility bill. No-one can step in, effectively, and—

CHAIR—No, but I can enter new ones on-line while I am at it.

Dr Marschall—That becomes a risk. Right now, if they are just doing it with recognised utilities, that is probably not so much of a risk. When it becomes available to pay for any transaction anywhere in the world, it will be a severe risk.

CHAIR—Even though I have a code name?

Dr Marschall—Yes. Let me give you one example where somebody can break that. You might not want the media to report the following comments.

Senator WATSON—We will see how we go.

Dr Marschall—I am about to tell you how you can fool ATM machines and fool a number of these transactions.

CHAIR—Could you write that for us and put it in a confidential submission, please?

Dr Marschall—Okay.

CHAIR—Would you mind doing that—a confidential submission—and sending it by registered post? We will hope that it is secure.

Dr Marschall—Okay.

CHAIR—I am reminded of the students at Latrobe that put in the magazine how to make a bomb—or a some such ridiculous thing—but anyway they are in heaps of trouble. I do not want that kind of trouble, thanks very much.

Dr Marschall—But the fact is those methods are well known in the defence communications area. You can spoof those communications the same way you can spoof defence communications systems. It is a standard thing in electronic counter measures. You can talk to your experts in DSTO, and the like, and they will provide you with a multitude of examples.

CHAIR—All right. If you will send us that submission, we will certainly follow through with it.

Senator HOGG—Yes, I will read it with interest.

CHAIR—But you are not going to tell your kids, are you?

Senator HOGG—No. I will read it with interest.

CHAIR—We are going to have to move on—we are on a tight time schedule this afternoon. Thank you very much for coming to talk to us. We look forward to that additional information with great interest, I can assure you.

Senator WATSON—Have you offered your service to the National Australia Bank?

Dr Marschall—I might just do that.

[2.05 p.m.]

TOMPKINS, Ms Susan, President, Australian and New Zealand Association of Antiquarian Booksellers, PO Box 279, Cammeray, New South Wales 2062

CHAIR—Thank you for your submission. Would you like to make a brief opening statement, before we ask you questions about your business and the Internet effect?

Ms Tompkins—This has been a whole new area of business for Antiquarian Booksellers. I think selling books is particularly suitable for the Internet. Most people who have bought books in the past are used to receiving booksellers' catalogues, which have a certain sort of jargon to them, and they would be familiar with reading those.

What has happened only in the last year is that there are a number of databases—one in Canada, one in the States, and one here in Australia; I think they are the only three—that have something like a million books up on line, and you can search them by author, title, subject, publisher and date. If you want a book by Ian Fleming, for example, you can put in his name and the title of the book, and you can see all the booksellers in the world who have a particular title for sale. You then just click on there and you will be told something like, 'This book is available from Bibliophile,' which is my shop. You click on there and there is an order page, and you send an e-mail direct to me.

As I have said, it has just been a huge new market for us. Retail sales have been pretty grim in the last year, and it really has been a great fillip to that—and I think it will get bigger. The sorts of search engines they have across these databases will become more sophisticated. It is easy to access them and I think, as more book buyers get on the Internet, the level of sales will get larger.

CHAIR—So what you have for us is a good news message, unlike some respondents to this inquiry who believe that Armageddon is about to descend upon us, because—

Senator WATSON—Particularly the banks.

CHAIR—there is no security left in the world, the banks will all go bust, there are problems with security and privacy, there is no bandwidth, there is a lack of proper technology and a problem with not looking to the future. Instead, what you are telling us is that your members are grabbing the new technology and the new capabilities with both hands and running with them.

Ms Tompkins—There are some reservations with that. We, as a professional association, are slightly worried about the cowboys who might do such things as have happened in America. There, for instance, somebody downloaded someone's home page, doubled the price, put it on their own home page and then tried to sell books that did not

belong to them. Then, presumably, when they had a sale on their home page at twice the price, they bought the book from the original owner. That person was prosecuted. That has not happened in Australia, to my knowledge. That is one thing that is a slight problem.

The other problem is whether you can trust these people. Somebody might have some books for sale but might not know much about how to describe them or what is a reasonable price—not the price perhaps so much as perhaps there might be plates missing or some such thing and, therefore, it might not be a desirable book to buy. What we, as an association, are trying to do—and we have just had a big international meeting here—is put an icon next to all members of the professional association which is affiliated to the international one. So looking at a list of titles by, say, Ian Fleming, if there is an icon next to that dealer, you know that they should be able to be trusted. It is slightly more problematic with people who are not members of a professional association.

The other problem that we see with it is that there are some dealers, for instance, who put a tremendous amount of research into their catalogues and also have very beautiful books, say, which might look very expensive—and I am thinking of one dealer in particular. He is not going to go on the Internet, because he thinks he will lose his intellectual property. There is no way in which you can control that, of course. So he is just not going to go on because he thinks, firstly, he will look expensive and, secondly, the enormous amount of money that he invests in research will be able to be pinched by anybody else. So there are some reservations with it.

CHAIR—If I decided to set up a new bookshop and I walked in and bought a hundred titles from that particular member's stock to get my own original stock, and if I did that with several more, is that any different from buying them on the Internet?

Ms Tompkins—No, but I think—

CHAIR—And would he not sell them to me?

Ms Tompkins—Yes, he would. But what you would be doing is perhaps paying a premium for the fact that you have a lot of background to them. They only sell expensive books, and you have a lot of background to those books, and they may have some provenance, or something like that. So there is nothing to stop you doing that, except that you would not be able to resell them because they have already been priced. So the chance of making any money on them would not be high.

CHAIR—Then why should he be concerned about going on the Internet?

Ms Tompkins—He perhaps has invested \$20,000 or \$30,000 a year in employing people to do the research, and then someone else has the same book and can just pinch all that research; he does not feel like giving that research away.

CHAIR—Fair enough.

Senator HOGG—As an organisation, do you have a complaints home page where, if someone is dissatisfied with the service that is being given by your organisation, or one of the members of your organisation, over the Internet, the consumer can register a complaint and your organisation will address that complaint? It may not be a valid complaint; it may, in effect, expose the sort of scam that you raised before. I just wonder how the consumer's interest can be protected when we are dealing with something that transcends national and international boundaries. How do you protect the name of your organisation, as such, on the Internet?

Ms Tompkins—ANZAAB, which is our shortened name, has a home page and you can send e-mails direct to it. We have never had any complaints. We, as an association, have had complaints about our members in the past, and we have an ethics committee that deals with those complaints, depending on their nature. But, no, we do not have a complaints page. We get very few complaints. I have been on our association committee for six years at various times, and I think we have had two complaints in that time.

Senator HOGG—Yours is not the sort of organisation, I would image, that would end up before the various consumer departments in the various states. So I am not trying to advocate that. But if you are dealing with something that is relatively expensive and, let us say, as you have described, there is a page missing and the person wants to complain about it, do you have a mechanism by which you deal with that?

Ms Tompkins—We do have a mechanism. Presumably, we could expel a member if we thought they were behaving in a way which was against general professional ethics. That has never actually arisen. I can tell you of a few of the complaints we have had, if you are interested. In one case there were two pages missing, and 15 years later the person who had been sold it tried to get the person to take the book back and pay the current price. We just sort of—

Senator HOGG—Not even we would do that!

Ms Tompkins—We sort of settled that, and they had discussions. Another complaint we had was that someone thought that someone had bought a book from them and they had not been paid enough for it. There is a case at the moment that is in the courts about something similar to that. But, as I say, we have an ethics committee, and they look into these things. But, to my knowledge, in the last sort of eight or nine years, that has only been called to look into things twice. But there is no mechanism on the Internet. If anybody had a complaint, they could make it through the ANZAAB home page, I imagine.

Senator HOGG—Do your members accept credit card transactions over the

Internet?

Ms Tompkins—It is the only way. I get a lot of orders from the Internet and, unless it is a customer I know, which on the whole is not so, I accept the credit card and check that before I send the book.

Senator WATSON—How do you check that? By phone?

Ms Tompkins—Yes, I check it by phone. I do that anyway. If someone walks into the shop and buys something that is over \$250, I think it is, I check that on the phone. I do exactly the same thing with the Internet. You have a mail order sheet.

Senator HOGG—What about the issue of privacy of people's details being sent over the Internet? Is there any expression of concern on the part of consumers?

Ms Tompkins—I suppose something like 10 per cent of the people would send their credit card details on e-mails, by fax or by phone. I think they have rung on a few times. Most people just send it. I would have received 500 credit card particulars from overseas, I would say.

CHAIR—Really?

Ms Tompkins—Yes, I get two or three orders a day.

CHAIR—From overseas?

Ms Tompkins—Yes.

CHAIR—In that regard, because you said the level of business is increasing, do you have any idea of the percentages?

Ms Tompkins—One dealer told me, and I think he was exaggerating, that 25 per cent of his business went down the Internet. I would think that was an exaggeration. I would think my own was something like 10 per cent.

CHAIR—Is that 10 per cent that you were not getting before you went on the Internet?

Ms Tompkins—Certainly. I have had a lot of orders from South America, which is somewhere I would obviously have no reason to get any customers from. There is a lot from America. People have had them from Namibia, Turkey and Iran—all over the place. It is quite exciting.

CHAIR—I would think so.

Ms Tompkins—It just builds up, because I had an order from Brazil by someone who collected books on the Marquesas. I specialise in the Pacific Islands and I sold him everything I had on the Marquesas. This was when I just had the home page, before I actually was up on the database.

Senator WATSON—You said people send you their credit cards. They would only send you their number and details. They would not send you the card itself, would they?

Ms Tompkins—No. But we do endless mail orders. When I put out an ordinary hard catalogue, people ring up and order and I just take the credit card over the phone. I keep all these particulars on my computer, of course. If someone hacked into it, I would not have thought it was worth their while. People just give their details to you.

Senator HOGG—Just on the point that you raised there, is the Internet fast replacing your hard copy catalogue that might have gone out?

Ms Tompkins—No, I do not think so. I find—and other people have perhaps got different experiences—that most of my sales on the Internet are probably under \$1,000. I sell books for \$10,000 out of my catalogue, and they are from people who I know and have probably met and had dealings with over a number of years. They realise that what they are going to get is what is described. I have not sold a book for that level.

I was talking to a colleague this morning who had just sold something for \$4,000 over the Internet, and I am sure people are doing that. I think my hard catalogues still go to a lot of people who would not be on the Internet. My mailing lists are built up over 20 years. I do not know; they do not order by e-mail even. I sell a lot overseas. I sell a lot in Germany, Sweden and places like that. They are not people who order on the Internet. I am a very specialist dealer, so you tend to find the people. I have exhibited in book fairs in Cologne and places like that, so you tend to attract the people who are interested in your particular sorts of books. Currently, it has nowhere near replaced my hard catalogue.

Senator HOGG—Do you find your Internet users are typically younger people?

Ms Tompkins—I do not know; I have never seen any of them.

Senator HOGG—I accept that. Would you have any way of knowing?

Ms Tompkins—No. Quite a lot of them are academics. I have no idea.

Senator HOGG—So you have got no idea of the socioeconomic background of the group, the age strata or anything?

Ms Tompkins—No. On the whole, people who buy my antiquarian books tend to

be middle aged and upwards, because they have got the disposable income, I think. But, there again, I do not know why people buy books.

CHAIR—You do not understand the psychology of your market.

Ms Tompkins—I do really. But being a collector is quite a different thing from being a reader. Someone I know has just given to the state library here 1,200 different editions of *Don Quixote*. That is real collecting. It is one of the big collections in the world—42 different languages. The profile of people who buy antiquarian books is not easy to put your finger on.

Senator HOGG—Does transacting over the Internet create any different circumstances in terms of taxes or customs or whatever else it might be?

Ms Tompkins—No, because there is no sales tax on antiquarian books. So, as far as I am aware, I cannot see that it has any implications for that. We will fill in those export forms on the back that says the value so that whoever collects that information can see what value of books is going out, but I cannot see any tax implications. We cannot avoid declaring it because it is all by credit card; there is no way of collecting cash.

CHAIR—Are you aware of people—because you are in the trade—that have bought books from Europe and have been subject to a VAT?

Ms Tompkins—No, we are not. In England there is no VAT on books anyway.

CHAIR—Isn't there?

Ms Tompkins—No, they are exempt. So that is not a problem.

CHAIR—That would not be true in New Zealand, though.

Ms Tompkins—No.

CHAIR—Nothing is exempt in New Zealand, except financial services.

Ms Tompkins—I buy books in New Zealand and have them sent. If you are sending things out of the country, you are exempt.

CHAIR—Not exempt, zero rated.

Ms Tompkins—I have not done it such a lot, but some other dealers have bought a lot of books on the Internet as well, mostly from America. I might quote South America, but the biggest trade is America by far. More people are on the Internet. That is what is interesting. There are not so many from England. I do not think there are nearly so many

people with computers in England, yet they would be the biggest book buyers in the world. That is where we hope they are all going to get computers soon.

CHAIR—How long have you been accepting orders on the Internet?

Ms Tompkins—I have had a home page for about 18 months. These databases, which are the main source, have been going for about a year.

CHAIR—You have not had one bad credit card deal?

Ms Tompkins—No.

CHAIR—That is not bad, is it.

Ms Tompkins—But then I do not have any bad debts anyway. People who buy antiquarian books intend to pay.

CHAIR—Would you mind telling us what it cost you to set up the home page?

Ms Tompkins—I am a bit of an exception. I gave someone two games of golf where I play golf. It is an expensive golf club. So it cost me about \$200; that is the green fees for two rounds.

CHAIR—It was not horribly expensive, was it.

Ms Tompkins—No.

CHAIR—It did not cost you \$10,000 and you—

Ms Tompkins—I do not know what it would have cost me normally. But he was keen to play golf, so he said he would do it for that.

CHAIR—We will not quote that!

Senator HOGG—As well as transacting the actual sale across the Internet, do you find it an important vehicle for communicating with your client or potential client to make a sale? You may well find that there are a number of e-mail contacts backwards and forwards and then ultimately that might clinch a sale. It gives you a different medium that you would not have had before.

Ms Tompkins—Yes, certainly. That is where one of the nuisances—

Senator HOGG—And the quickness of it.

Ms Tompkins—Actually it is time consuming because you get people asking you to look up the index and see whether their great grandfather was listed, that sort of thing, which is time consuming. But on the whole, yes, that is right. It is very quick; whereas before you might have wanted to offer something to an American university, you would write to them and you would wait until they got around to writing back to you. So certainly it has accelerated business enormously. It is a huge benefit from that point of view. On the whole, it has been just a great boom to us.

CHAIR—You have been a delightful witness and it is terrific to hear success stories. We are indeed most pleased, absolutely.

Ms Tompkins—It has been interesting for me to appear before you. Thank you.

CHAIR—Thanks very much.

Ms Tompkins—Seriously, I do not think setting up a home page would cost such a lot. I think it may be up to \$500, but not a huge sum.

CHAIR—You have done very well. Thank you.

Resolved (on motion by Senator Watson):

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 2.27 p.m.