



COMMONWEALTH OF AUSTRALIA

JOINT COMMITTEE

of

PUBLIC ACCOUNTS

Reference: Internet commerce

CANBERRA

Monday, 27 October 1997

OFFICIAL HANSARD REPORT

CANBERRA

JOINT COMMITTEE OF PUBLIC ACCOUNTS

Members

Mr Charles (Chairman)

Mr Griffin (Vice-Chairman)

Senator Coonan	Mr Anthony
Senator Faulkner	Mr Peter Baldwin
Senator Gibson	Mr Beddall
Senator Hogg	Mr Broadbent
Senator Watson	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

ADAMS, Dr Michael, Acting Assistant Secretary, Trade Analysis Branch, Department of Foreign Affairs and Trade, R.G. Casey Building, John McEwen Crescent, Barton, Australian Capital Territory 2600	46
ASHER, Mr Allan James, Acting Chairman, Australian Competition and Consumer Commission, 470 Northbourne Avenue, Dickson, Australian Capital Territory 2602	59
CAELLI, Professor William John, Council Member, Australian Science, Technology and Engineering Council, 20 Allara Street, Canberra City, Australian Capital Territory 2600	72
MONRO, Ms Helen Mary, Manager, Export and Industry Policy, Austrade, PO Box 2386, Canberra City, Australian Capital Territory 2601	46
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CANBERRA

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Present

Mr Charles (Chair)

Senator Coonan

Mr Beddall

Senator Gibson

Mr Fitzgibbon

Mr Griffin

Observer

Department of Finance:

Mr David Evans

The committee met at 9.36 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. I declare open this public hearing of the Joint Committee of Public Accounts inquiry into Internet commerce. The JCPA conducted its first public hearing on this matter last Monday in Canberra.

This is my first public engagement as the new chairman of the JCPA. I am pleased to serve in this role and I look forward to maintaining the fine traditions of the committee. One of my immediate concerns is to progress the committee's inquiry into Internet commerce. The inquiry will focus on the international competitiveness of Australia's small and medium enterprises, administration of the taxation system, and the implications for Australia's tax base arising from the dramatic increase in the volume of commercial transactions now occurring via the Internet.

The JCPA's inquiry and report will form a vital part of our country's challenge to be a leader in the worldwide Internet revolution. The implications, challenges and opportunities created by Internet commerce are only just beginning to be realised. Australia must be at the forefront of these growth opportunities and be a world player.

Currently, the global value of goods and services transacted over the Internet is estimated at \$A3 billion. By 2000, this is expected to grow to around \$A100 billion to \$A150 billion. The inquiry will explore some of the key issues that are beginning to emerge as Internet commerce expands. For example, Australia's small and medium enterprises will be exposed to greater competition from overseas retailers advertising their goods and services on the Internet. At the same time, Australian SMEs will be able to expand their market share in the same way.

A growing trend exists for Australian consumers to purchase goods and services from overseas retailers via the Internet and avoid duty and sales tax. Currently, goods entering Australia are not subject to sales tax if they are below a \$50 duty and sales tax-free limit and the value of the goods is below \$1,000 for goods imported by post and \$250 for goods imported by means other than post.

An increase in the volume of imported goods not subject to duty and sales tax will have implications for Customs administration and for Australia's tax base if there is excessive revenue leakage. In addition, there is a potential impact on the trading environment for locally based companies trying to compete against international traders able to avoid sales tax liabilities.

In addition to investigating and making recommendations on these issues, the JCPA will also consider the current framework for consumer protection and the protection of intellectual property, government industry assistance programs, and the opportunities for Commonwealth agencies to improve services to the business sector and to the general

public arising from growth in Internet commerce.

The JCPA will conduct further public hearings in Sydney and Melbourne in November. Today, the JCPA will take evidence from the Department of Foreign Affairs and Trade, the Australian Competition and Consumer Commission, and the Australian Science, Technology and Engineering Council. Before swearing in the witnesses, I will refer members of the media who may be present at this 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 the proceedings of the committee. Copies of the statement are available from the secretariat staff present at this hearing.

[9.41 a.m.]

**ADAMS, Dr Michael, Acting Assistant Secretary, Trade Analysis Branch,
Department of Foreign Affairs and Trade, R.G. Casey Building, John McEwen
Crescent, Barton, Australian Capital Territory 2600**

**MONRO, Ms Helen Mary, Manager, Export and Industry Policy, Austrade, PO Box
2386, Canberra City, Australian Capital Territory 2601**

CHAIR—I now welcome representatives of the Department of Foreign Affairs and Trade. As I am starting to come to grips with what Internet commerce is all about, having now had the opportunity to read the report, *Putting Australia on the new silk road: the role of trade policy in advancing electronic commerce* and your submission, this is certainly a timely and important inquiry for Australia. One thing that interests me is that some observers along the way have intimated that it might be possible for an individual to set up an entity, a company or whatever with some limited funds, spend some money purchasing a good web site on the Internet, trade in cyberspace and never bring the money back, except perhaps some day to download it in the Cayman Islands or some other totally tax-free environment. Would you care to comment on that sort of scenario?

Dr Adams—It is certainly a scenario that we did not explore in the *New silk road* publication. I think you will see that the real focus of the *New silk road* was on trade policy and the overall dimensions of growth in Internet commerce. I think that that question really is better directed at the ATO. But I would think that, in theory, perhaps you are correct. I really profess no expertise in that area.

CHAIR—Can you tell us generally how, outside of the examples that you have given in the *New silk road* report, we can really encourage our SMEs to get more involved more quickly in order to prevent them being overrun by overseas traders on the Internet marketing into Australia?

Dr Adams—I think that the first and foremost thing is to raise awareness of the opportunities of Internet commerce amongst small and medium size enterprises in Australia. It is true that awareness levels are rising. For example, the *Yellow Pages* surveys suggest that small businesses are much more aware of the Internet now than they were even 12 months ago. The latest survey found that 23 per cent of small businesses in Australia are on the Internet. This compares with only about nine per cent last year and five per cent in 1995.

So there is an increasing awareness of the value of Internet commerce. However, one could, I think, say that that awareness has got a long way to go, and there is a clear role for government to increase general awareness of the value of Internet commerce. We see it in Foreign Affairs and Trade, but it is also applicable in the industry department and other areas. That is very important in terms of using the Internet not only to access

overseas markets for exports but also to access inputs for production processes here.

CHAIR—What would be the most effective and efficient mechanism for going about that, considering that it has been observed that perhaps we do not do a very good job of letting SMEs know how they may access federal and state governments for purchasing?

Dr Adams—I think SMEs are not going to be impressed by theory. SMEs need to have presented to them a business case for becoming involved in Internet commerce. As it stands, many SMEs see electronic systems as an additional cost to paper systems, and I think what we really need to do as a matter of urgency and priority is make sure that more high quality case studies are done which demonstrate the business case for Internet commerce. That really will revolve around how the Internet can be used to access overseas markets which would previously not be possible, to access inputs and in conjunction with technologies like electronic data interchange to improve the overall efficiency and, therefore, reduce the cost of business supply chains. That can only be done through high quality case studies, and that is why we as a department put a great deal of emphasis on that.

Senator GIBSON—Dr Adams, first of all congratulations on the report. I think it is a very good report. What is happening to it?

Dr Adams—A great number of things are happening. We have certainly made it available to business groups and consumer groups within Australia. We have also made the publication available through our posts to a range of overseas businesses and governments.

In terms of our immediate term policies, next month we are embarking on a series of round table discussions in all capital cities and some regional centres to discuss with stakeholders some of the key conclusions in the *New silk road* report and in particular to look at the elements of a possible domestic online trade strategy and an international online trade strategy. What we have done in the *New silk road* report is identify about 10 or 12 possible elements of this online trade strategy and that has been done on the basis of fairly wide consultations with business. However, we would like to take it one step further and talk around Australia with a very diverse group of businesses—large and small—consumer groups, as I said, and state governments so we can use the elements identified here as a basis for further discussion.

It might well be that, on the basis of that further discussion, some of these elements are dropped. Some might be elaborated or put into different forms, but that is certainly one key thing that we want to do—identify in a very clear way, and in a way that might be endorsed by business, domestic and international elements of an online trade strategy.

We want to do the round table discussions in addition to three other things. The first thing is that we are going to put a great deal of time and effort into working with Monash University and other universities on case studies which will involve both large companies and small companies on how they are using the Internet. The second thing is that we intend to do a limited national survey on how the Internet is being used. The third thing is that we will work with our embassies to better identify the trade policies and the policies to encourage technical development in the United States, Europe and also within our own region.

Senator GIBSON—I am pleased to hear that. I think the case studies you have got in here are excellent and I applaud what you are doing and encourage you to continue those case studies. I do agree with you that that is the way to get the message through to small and medium sized enterprises, in particular. Where does the new National Office of Information Economy fit into this? Do you see it as their role to be the main coordinator of communications back to the 800,000 businesses in Australia?

Dr Adams—Absolutely, yes. We will be doing this additional study in the context of the new National Office of Information Economy and in the context of other Commonwealth departments and agencies. I think we will be wanting to coordinate as fully as possible within the Commonwealth, and ultimately we will be seeking to report to the ministers in the information economy ministerial council. Indeed, that was our policy with respect to *New silk road*. We did not try to work in splendid isolation. We did work with the coordinating committee on information services within the Commonwealth and also of course with state governments.

Mr FITZGIBBON—Dr Adams, I have to start by admitting that I have not had an opportunity to read your report, but I look forward to doing so. I think it is fair to say that this inquiry was largely driven by concern amongst SMEs about their inability to compete as a result of the growing incidence of Internet commerce. It is all a little bit intriguing, isn't it? I think the small business world is looking towards this committee to make recommendations to the parliament which will protect them from such competition. But if you have a look at it on a larger scale and compare it to some primary sector industries—which, at the moment, are experiencing the removal of quarantine barriers—or other industries where tariffs are coming down, they are really asking for something that other industries are not going to receive.

Therefore, shouldn't the focus really be not on making them more aware about the use of the Internet but on making them aware of what markets are out there for them and of who is able to compete and who is not? Trade liberalisation for me, at the end of the day, is about winners and losers. There will be winners and losers. There are some sectors out there—whether they are great on the Internet or not—that are going to be losers as a result and the Internet is really only a means of facilitating that process.

Dr Adams—I think you are right. There is nothing particularly different in some

basic respects concerning the Internet. The Internet is just an additional and new medium for trade. It is not something which is anything different beyond that. I agree that there are markets out there that can be accessed by the Internet and we do need to put in place mechanisms to help facilitate that access to markets. It will be very important, in terms of making sure there are more winners than losers, that companies have access to, for example, the facilities offered by Austrade. World Direct, for example, provides information and has a very good electronic database of Australian companies that are wanting to do and are capable of doing business electronically.

It is also important for organisations like Austrade to point companies in the right direction in terms of supply chains and so on overseas. So there is a great deal to be done to ensure that there are more winners than losers in this whole process. I would just see that the activities of trade policy and trade promotion are going to be quite critical in terms of ensuring that we have an acceptable balance of winners rather than losers.

Mr FITZGIBBON—But what do you say to an SME operating in a sector which is just obviously uncompetitive with other overseas nations? Do we say to them, ‘You are doing the wrong thing. You need to get on to the Internet. You are not keeping up with the pace.’ Or do we simply say to them, ‘This is the brave new world and you are one of the losers’?

Dr Adams—I do not think there is ever such a thing as a loser. We talk in *New silk road* about the problems of certain industries, or certain sectors possibly, becoming disintermediated as a result of the Internet and we give examples of old-fashioned book stores, CD stores and the like. I think it is possible to see that these companies, these sorts of industries, will be subject to far higher levels of import competition than they have ever been subjected to before. What one can see is that it will be a pretty gruelling time for them.

However, there is a response to that. I think the response is to ensure that they do offer an enhanced level of service. If we look at, say, the music companies, it is possible for music companies to offer enhanced levels of service in terms of advising: you identify your music interests, your music profile, and they can offer you advice on what the best music is around that meets that profile.

Mr FITZGIBBON—Could we stick to the bookshop example?

Dr Adams—Okay. That is a hard one because what you can do is that you can go into a bookshop and look at a book, you like the book and you know what product you are getting, and then if it is possible to trade through the Internet it is of course possible to get that book slightly cheaper than through the local stores. But I do notice—and this was reported recently in the *Sydney Morning Herald*—that the advantages of sourcing things like books, or CDs, through the Internet might be not as good as perhaps people think. And it all depends on what amount of books, or CDs, you are purchasing.

In the case, say, of CDs, you might, through tax and duty, if you go over a certain threshold, have to pay another 26 per cent. That is in addition to the cost that you incur in terms of freight and the cost that you might incur in exchange rate movements and so on. The gist of some of this work that has been reviewed by the *Sydney Morning Herald* would suggest that, yes, there are advantages of sourcing product through the Internet, but beyond a certain threshold those advantages perhaps do diminish somewhat.

Mr BEDDALL—That is provided the tax is collected.

Dr Adams—Indeed; and that is why the threshold becomes quite important.

Mr FITZGIBBON—But, short of ensuring that Internet commerce does not become a threat to our taxation base and that international legal obligations are met by all the players, this committee cannot do anything for small business other than maybe fiddle with the thresholds for imports. I do not know that that is going to have a great effect or be of great assistance to them. Would the fiddling of those thresholds be frowned upon in any sense by the World Trade Organisation? Could they be seen as non-tariff barriers or could we be seen internationally to be putting the walls back up by fiddling with those thresholds? And am I correct or incorrect in asking if, short of doing those things I mentioned, there is any role for this committee to play in terms of Internet commerce?

Dr Adams—I think the issue of thresholds is obviously one appropriately discussed by Customs and perhaps the ATO. But I would think that thresholds are obviously a very important point; certainly how they are perceived internationally is very important. If we were to reduce these thresholds, there are a number of issues that one would have to consider. One would be, say, a logistics issue of just how Customs would cope.

Mr FITZGIBBON—All those aside—I know there are problems—how would the international community—

Dr Adams—I really think that, at the end of the day, it is an issue for our own government. I know that some governments, like the UK government, are looking at this issue and I believe these thresholds are going down. I have got no firm information on that, but I have been informed that the UK government is seriously looking at a downward adjustment of the threshold to address the sort of concerns that you are addressing now.

Mr FITZGIBBON—But given that we have had evidence that lowering of the threshold does not pay, if I can put it simply, aren't they therefore being reduced for one purpose only—that is, to restrict trade or discourage trade?

Dr Adams—I cannot necessarily agree with you at one level because the best way in which a CD company, a book company or, indeed, a local accounting or legal company can respond to the increased competition which will come via the Internet is to offer an

enhanced level of service. If they are prepared to reorganise their businesses and make them more oriented towards providing enhanced services, then I can imagine that there is literally no reason why they cannot survive and prosper.

Let us take the case of a CD. You can get CDs sourced internationally through the Internet at a slightly lower cost than you can by going to the local store. But the local store can do a number of things for you. It can provide you with a CD when you want it, rather than a CD that is sourced from the United States and that you have to wait a week or a fortnight to get. So there is a time advantage. And, as I said, you might be able to provide enhanced services in terms of more information about particular artists or particular styles of music.

Mr FITZGIBBON—You keep going back to CDs, which of course is a modern high-tech item. But if we can just pretend for a moment that you can send T-shirts through cyberspace, it is like saying to the TCF industry, ‘Notwithstanding the fact that you can bring in a T-shirt through cyberspace 10 times cheaper than you can produce them, there is an opportunity for you here to get better by doing X, Y and Z.’ But really, in that example, there is not an opportunity. While there are always exceptions to the rule, like maybe CDs, as I said earlier the Internet is just a facilitator, isn’t it?

Dr Adams—It is.

Mr FITZGIBBON—You cannot pretend that people are not going to be hurt or pretend that, because the Internet is the medium of exchange in this case, it is a different scenario. This case is no different than a thousand other cases that apply in the Australian sector generally, is it?

Dr Adams—It is undeniable that there will be some winners and losers, that some people will get hurt. In the case of TCF products I would imagine that two things are relevant. One is that it is a physical good and it does take time—it cannot be physically downloaded obviously through the Internet so it has to go through the post. So if you are sourcing that from South-East Asia or the United States, there is that time factor, and time might be precious.

There might also be other points, particularly in relation to products sourced from, say, low wage countries. If it were a problem that there was a proliferation of TCF products purchased via the Internet from, say, Malaysia or South-East Asia generally, I guess that that would be one additional factor for moving more towards the premium end of the market here.

Mr BEDDALL—The reality about the Internet is that there are two reasons to shop on the Internet: one is price and the second is the availability from a much larger feed stock. Unless Australia can actually compete on price or produce goods in sufficient diversity, then business here will lose to the Internet, on those two grounds.

Dr Adams—I think that it would be true in the short term and I think one of the points that we made in the *New silk road* was that there might be a slightly negative economic set of implications from the Internet. I emphasise that it is likely only to be in the short term and that is going to be a function of the fact that 80 per cent of web sites are basically in North America. So most people spend their time looking for products or services on the Internet, looking at US sites and therefore make their transactions accordingly. However, if we look at the medium- to long-term, I see that there is absolutely no reason why the quality of web sites in Australia—the quality of electronic industries within Australia—cannot be as sophisticated as in the United States or elsewhere.

Mr BEDDALL—What are we going to sell, though? It is all right to have the big web sites and all that. You can do that and we are very good at all of that technology. We are very good at software. But we will not be able to compete in the commercial world. If you can, tell me a product range at which we are better than anyone else in the world?

Dr Adams—I would suggest that there are various ways in which we can sell.

Mr BEDDALL—We can sell, but the question really is, what are we going to sell?

Dr Adams—What are we going to sell? We are going to sell accounting services. I think there is a great amount of opportunity for accounting, legal services, architectural services and consulting services generally. I think that there are opportunities, let us say, for—

Mr BEDDALL—You are going to buy accounting services on an Internet?

Dr Adams—I believe absolutely, yes, and I also think the same about banking services and brokerage services. There is an enormous opportunity, particularly in those services. I would also suggest that there are opportunities, let us say, in relation to physical goods as well. One of the things that we demonstrate in this book, for example, is that even micro-companies that really are in the middle of nowhere, employing one or two people—for instance, Mick's Whips—are now able to access consumers in 12 different markets. They are selling all sorts of leather goods to markets as diverse as Malaysia and Canada. I think there are opportunities.

CHAIR—Is that a very isolated example? I wondered about that because, in the examples that you gave in the *New silk road*, you only had one manufacturer. You had one agricultural producer but only one manufacturer, and that was Mick's Whips. Are you telling us that Internet commerce, with respect to manufacturers, is reasonably limited, that where the growth is going to be is in services?

Dr Adams—I believe that the strongest growth is going to be in services. The

configuration, the choice of the case studies, was very much a function of Monash University.

Mr FITZGIBBON—Just to interrupt, there are obviously two aspects to Internet commerce. One is the exchange of physical goods, facilitated by the Internet; the other is the direct downloading of actual electronic data. Are you focusing on the downloading now when you talk about services?

Dr Adams—I think that you can, yes. Let us say that accounting, legal services and brokerage services can be downloaded.

Mr BEDDALL—This is another job replacement strategy, where we lose one lot of jobs because you cannot sell physical goods and we replace them with a whole lot of new jobs that we have been trying to find for about 20 years, that are going to produce services.

Dr Adams—I personally do not agree with you. I think the Internet is for the delivery of goods, although obviously you cannot deliver hard goods electronically but you can purchase them electronically, and then you have got to have perhaps a more sophisticated system of infrastructure to make sure that those goods can be delivered from one country to another country in a reasonably short time.

I think one of the reasons for the success of Internet trading in hard goods—in the United States, for example, Dell Computers are selling about \$1 billion worth of computers a year through the Internet—is that you can move products very quickly, from Texas to Seattle or whatever within three days, simply because of the efficiency of the postal system.

If we are going to really benefit in terms of selling TCF products across the Internet to the United States or selling wine to London or New York, which we are doing, but if we are going to do it on an even bigger scale, one thing that is absolutely essential is that the physical infrastructure is in place to make sure that it does not take an age—for instance, if a person orders a case of premium quality wine—to actually get it to wherever it is going, to London, Germany or wherever. If that infrastructure is in place, I see no reason at all why Internet trade in goods cannot flourish to the same extent as in services, although I expect the strongest growth will be in services.

Mr BEDDALL—When you say the efficiency of the US postal system, do you mean the private postal system in the US, not the government postal system in the US?

Dr Adams—Well, whatever the postal system is that enables—

Mr BEDDALL—There is only one efficient postal system in the world and it is actually here.

Mr FITZGIBBON—Helen is just going to let me go first, Mr Chairman. It is my last question.

Senator COONAN—I was going to change the topic.

Mr FITZGIBBON—There is a bipartisan approach, I suppose, in politics in Australia to trade liberalisation, and I do not challenge that. There are a few exceptions, but that is for another day.

CHAIR—For another committee.

Mr FITZGIBBON—Yes. We could extrapolate the speech that you just made to an inquiry on trade, generally, couldn't we? The Internet is just a facilitator of a bigger process. In a sense, it is almost rather frivolous for this committee to be trying to address that small component—that is, Internet commerce—that is just acting as a facilitator. So I ask you again, do you believe that there is any role for this committee to play in assisting SMEs in their frustration with Internet commerce?

Dr Adams—I think Internet commerce is obviously bound up with trade liberalisation and also the massive increases which have occurred in global investment flows over the last 10 years. I think that, in the last 10 years, global investment flows have increased something like sevenfold, and this conjunction of trade liberalisation and the very marked increase in investment flows is the basis on which we talk about globalisation of markets. I also see the Internet as another ingredient within the various factors which are encouraging the globalisation of markets.

What can you say about this? As far as I am concerned, trade liberalisation, globalisation and the Internet are all part and parcel of the same basic story. What is very important for this committee to understand is that the Internet is becoming and will become in the next few years a very important medium for trade.

At the outset of this meeting, the chairman indicated that Internet commerce is likely to burgeon over the next two or three years. A figure of \$US3 billion, \$US4 billion currently per year for Internet commerce, was mentioned and this was compared with a figure that is about \$100 to \$150 billion by the year 2000. These figures—\$100 to \$150 billion by 2000—are very conservative figures. Many forecasters are suggesting figures significantly higher than these.

What we can say is that, within the general picture of globalisation, you are going to find that Internet commerce, the information industries and so on, and how they develop, are going to be very important. This is very important for Australia's long-term economic future. This committee has got an incredibly important role in contributing to an environment within Australia that is helpful to electronic companies.

We need to enable companies to thrive here. The deliberations, recommendations or conclusions of this committee, in so far as they affect the overall environment for electronic commerce here, can play a very important role either in terms of encouraging the Internet and our engagement in global markets or perhaps protecting and insulating ourselves from what is happening in terms of information technology and the Internet. In which case, if the conclusion was to protect against the Internet and if this recommendation were factored into whatever the environment is that is being developed by the government here, then that would have very serious negative implications not only for Internet commerce in Australia but for Australia's medium to long-term economic future.

Mr FITZGIBBON—At the end of the day it still is true to say that within trade liberalisation there will be winners and losers and we must encourage the users to become more efficient and more effective to enable themselves to compete.

Dr Adams—Absolutely.

Mr FITZGIBBON—It is also true to say that whether the exchange is Internet or otherwise, there are going to be winners and losers and to those losers, is it not true that we must simply say, 'Whether it is happening on the Internet or not, tough, you've got to wear it like the rest of the economy is wearing it.'?

Dr Adams—We have to tell the losers, and make it very clear to them, that there are opportunities for them to be winners. Perhaps the way that they can be winners—and this is repeating what I have said earlier—is if more of them were encouraged to offer trading on the basis of enhanced services.

Also, there is an increased value in the business community making sure that the government is providing the sorts of services that are needed to ensure that the number of losers is kept to a minimum and the number of winners is maximised. That comes down to the sorts of very varied services that Australia is offering.

It also comes down to simple things like making sure that companies are aware of the business case for the Internet and also that they have access to training. That will enable them to take on the skills because if you are a small company, sometimes it is a matter of business survival and a week can be a very long time for a struggling small company. The idea of having key personnel from a small company going on fancy training courses for long periods of time is just not an option. Options have to be developed whereby key personnel in small companies can get the training they require in order to enable them to get the advantages of Internet trading.

Mr FITZGIBBON—Thank you, Mr Chairman.

CHAIR—If we can go a bit faster, because we are going to have to wind up very

shortly.

Senator COONAN—Thank you, I will not be very long. I just wanted to take up with you, Dr Adams, the tantalising prospect that you refer to at page 6 of your submission:

. . . that the Internet has the potential to create tens of thousands of new jobs.

I wanted to also refer you to the paragraph before that where you say:

. . . the internet will provide major opportunities for internal restructuring and efficiency savings flowing from EDI and technologies converging around the internet.

Frequently, that is equated with loss of jobs. I know that in page 19 of your report you go into some detail about the difficulties of some job loss and some job gains. Can you elaborate a little on the sorts of policies which you say are critical that we should be looking at to encourage job creation rather than job loss? It seems to me that there is a tension there between those two broad concepts, or broad parameters.

Dr Adams—There are two points that I could make in a preliminary sort of way. The first is to emphasise the short term. I would find it very difficult to assess what the net impact of Internet commerce or electronic commerce will be on jobs in the short term. There are likely to be new jobs created in some of the service industries. I can see that there could be jobs created in distribution systems, in infrastructure. There could be jobs created in training systems and so on. There are also likely to be jobs created for those wanting to work from home and there might be more part-time job opportunities.

It is also true, as you say, that there are these opportunities to re-engineer companies, which often is a euphemism for getting rid of people. Re-engineering can take a number of forms. It can take the form that you need fewer people to key in material, so less secretarial support. It can also take the form of being able to automate your supply chain and distribution systems and so on. This can have some impact in terms of job losses but in so far as it makes your company more efficient it can mean that your company is more competitive internationally and therefore has more opportunity to grow.

The picture for jobs is very mixed in the short term, but in the medium term, in the longer term, the situation is a little bit clearer. I would suggest that in so far as electronic commerce or Internet commerce becomes very much part and parcel of accelerating the process of globalisation and in so far as it is also helping to create new areas of comparative advantage within Australia, then I could see this as being very important in terms of developing new jobs, particularly in the service industries but also in manufacturing as well.

There are limited case studies that we have given in this book *Putting Australia on*

the new silk road: the role of trade policy in advancing electronic commerce. The examples of Tower Software or DA Information Services are consistent with the view that, regardless of what the shaky situation might have been in the short term, in the medium to long term, Internet commerce has been associated with not just new jobs but also well paying jobs.

In order to follow up on the second part of your question about policies to encourage job creation, the most important thing that I could say in relation to Internet commerce is that we do need as a government and as a society to embrace information technology, the information industries, the information economy as a whole. We need to create an environment which is very welcoming of these sorts of changes. If we do create an environment which is welcoming of these sorts of changes then I think that we do have that capacity to create the new areas of comparative advantage, the new ways of doing things which are mentioned several times in *The new silk road* and which could potentially form the basis of some very worthwhile jobs.

My own background as an economic historian suggests that one way of looking at it is that people often talk about the Internet as a new kind of economic revolution. Perhaps it is. Perhaps what we need to consider this in looking at the Internet. If we were advising British or Prussian or French governments 150 years ago, what would we have advised in relation to the railway? Would we have said, 'We have got a very strong set of vested economic interests in the canals. Do we want to insulate ourselves from railway technology in order to protect established operators of canals?'

Countries which did choose the policy of insulating their economies from these sorts of changes went through very slow growth over the following 150 years. We have an opportunity to be welcoming this new technology in the same way as the Americans and so on welcomed the new railway technology and prospered. We do not want to be like Charles III of Spain and oppose this new technology—the railways, in his case—and then go through 100-odd years of economic doldrums.

Senator COONAN—Thank you for the analogy. I think we are probably out of time.

CHAIR—Could I have a one sentence answer to a simple question? In *The new silk road* you indicate that Australia has the second highest take-up of Internet users per head of population of any country in the world and it is expected to expand proportionately to that by the year 2000. In a one sentence answer; will we also expand our use of economic commerce at the same rate?

Dr Adams—I would like to think that we would, but this depends on how Australian companies develop their web sites and how fast they do this, and whether they have interactive web sites, as is increasingly the case with the United States. We have got

a great basis. If we have an enabling environment that does encourage this movement from simple access to the Internet to establishing sophisticated web sites which are interactive, then there is literally no reason why we cannot have a very prosperous economic future.

Mr BEDDALL—How do you know that statistic? I had lunch yesterday with 18 people from all age groups and across all spectrums, and not one of them is hooked up to the Internet.

CHAIR—You asked 18 people?

Mr BEDDALL—At lunch yesterday. Not one of them was hooked up to the Internet. I think this is a figure out of the air.

Dr Adams—There are various surveys. There is a Roy Morgan survey, for example, for August of this year, that demonstrated that something like three million Australians have used the Internet at some point in their lives, and that something like 1.4 million have used the Internet for some purpose—it might not be for transactions—within the previous month. Also, the *Yellow Pages* survey that I referred to earlier found for July that 23 per cent of all small businesses are now on the Internet. But there is a big difference between being on the Internet and being able to use the Internet effectively as a trading medium for actual transactions.

CHAIR—Dr Adams and Ms Munro, thank you very much for helping the committee with its deliberations and enlightening us.

[10.32 a.m.]

ASHER, Mr Allan James, Acting Chairman, Australian Competition and Consumer Commission, 470 Northbourne Avenue, Dickson, Australian Capital Territory 2602

PEARCE, Ms Jacqueline Patricia, Project Officer, Consumer Protection and Compliance Strategies, Australian Competition and Consumer Commission, 470 Northbourne Avenue, Dickson, Australian Capital Territory 2602

WRIGHT, Mr David Michael, Project Officer, Australian Competition and Consumer Commission, 470 Northbourne Avenue, Dickson Australian Capital Territory 2602

CHAIR—Welcome. We received your written submission. It is quite detailed. Thank you for that. Would you like to make a brief opening statement?

Mr Asher—Yes, Mr Chairman, I would. The terms of reference of the Joint Committee on Public Accounts are obviously fairly wide. We put in a submission on issues that seemed to us to be relevant on both the framework for consumer protection and also on aspects of international competitiveness. We, of course, cannot tell—and I am not even sure if the committee has worked it out yet—where the focus of its inquiries is going to be.

Of course, we are not wanting to go into any great detail in areas that you regard as low priority. However, we would like just to record, in overview, that issues of both competition and consumer protection really will form the heart of whether electronic commerce grows to a viable form of economic activity in Australia. There are lots of opportunities for it to be retarded. There are lots of opportunities for it to be enhanced.

We find ourselves with a slight tension. As a body responsible for competition, it is our mandate to do everything we can to remove barriers to entry, to promote vigorous competition and to ensure that regulations do not stifle commerce. But also as a consumer protection agency—and already we are receiving some 200 complaints a month in the area of Internet commerce—we also are conscious that there are many aspects of electronic commerce that promote much grander fraud and deception than the old direct mail systems used to. We think it is going to be important to keep those tensions in mind as policy settings and research are done to encourage it and to underwrite availability of a much wider range of goods and services to consumers at lower prices.

We understand that you have interests in the taxation aspect of it. I guess that is something beyond our particular experience and, indeed, there might be tensions there too. We would say, for example, that it is probably the availability of CDs on the Internet that has played a decisive role in many people's thinking in encouraging deregulation of parallel imports. That is a welfare gain at one level but at the same time people will point

to a bleeding off of some sales taxes and so it is an issue that lists on both sides.

Finally, the commission, over the last eight or 10 years, has had fairly extensive experience in a rapid growth in cross-border transactions generally. We now have very close cooperative arrangements with the European Union, with the US and with the OECD and some other multilateral and bilateral arrangements. It seems to us also that no country can effectively establish policies in this area that are not at least well informed and generally consistent with the policies of major trading partners. To do so will end up creating all sorts of pressures and distortions that in any event, in our view, would be overwhelming.

CHAIR—Thank you for that. In your submission you said:

It has been estimated that 10% of all US-based telemarketing is fraudulent.

And you went on to say:

. . . it is quite foreseeable that annual consumer losses from fraudulent and misleading conduct on the Internet could amount to US\$2.6 billion within a few years.

Where did we get such statistics? How reliable are they? Are we experiencing the same degree of fraud in Australia, which, I understand, has the second largest uptake of Internet per head of population of any country in the world?

Mr Asher—The data is from the United States. Attached to our submission was a discussion paper on enforcement of global consumer protection rights. That document itself was a major input to a recent OECD report, to which was appended some US research. It is not actually in that discussion paper, but another report published by the OECD only about six weeks ago. I will certainly send that to you.

How reliable is it? I think the confidence level that you would put on it would not be 100 per cent. It is based on two different surveys where they looked at classes of transaction, number of complaints and things like that. It is a bare extrapolation and the projections to 2001 have all the limitations that you would expect if no regulation were imposed. If authorities acted in the way that they had with more or less benign neglect, then I think those figures may emerge.

CHAIR—Are Australians more discerning or are our companies that offer services via web sites on the Internet more honest than their United States cousins?

Mr Asher—The difference in the incidence of complaints, at least so far as we have experienced them—although with recent publicity on a Net surfing day that we undertook, we have heard from far greater numbers of people—I believe is due to the fact

that Australians are far less likely to use the Net in circumstances that are quite so open to fraud and deception. For example, we had a few early scandals with the release of credit card numbers and that probably scared Australians off putting credit card numbers into transactions. They were more using the Internet as a source of information and then making paying payments off line—by telephone, sending a credit card authorisation by post or something like that.

CHAIR—The Australian Fishing Tackle Association is pessimistic about the future of its industry. It is seeking to remove the exemption for imported goods that are not subject to duty and sales tax if the amount is below \$50. Could you give us your view of the competition implications of lowering our reasonably high barriers to Internet transactions?

Mr Asher—Are you speaking of international transactions or domestic transactions?

CHAIR—International, but you could then think about the domestic implications as well in terms of competition.

Mr FITZGIBBON—Could I supplement that question, Mr Chairman, so that we can have it answered once?

CHAIR—Sure.

Mr FITZGIBBON—Thinking about competition policy generally, obviously governments and government trading entities are as exposed to the pressures of competition policy as the private sector is. That is moving against government protecting its own trading enterprises. What role is there in terms of competition policy for ensuring that governments do not protect other industries? For example, could the lowering of that threshold be seen as government protecting or resisting competition in Australian industries?

Mr Asher—On the broader question, if this is an issue of interest to the committee, I could send to you another fairly substantive OECD document. The OECD Consumer Policy Committee for the last two years has been working on what it calls its international parcel post project to try to identify the international barriers to trade that have retarded the growth of delivery internationally of parcels as a strong competitive force in domestic markets.

The committee has seen this as part of its work on global commerce. It published in July this year an international publication which looks at policy settings in a dozen OECD countries, at how welfare gains are possible and at how, through cooperative arrangements between customs agencies, it will be possible to substantially reduce the transaction costs and thus radically promote such trade. I will just give you the small

example that the committee has used: the cost of sending a one kilogram parcel from the east coast to the west coast in the USA, a distance pretty similar to that from the east coast to Europe, is about seven times more when it goes overseas than if it were domestic.

Of course, there are some market size issues there, et cetera. But there is a huge potential if customs rules and arrangements between customs agencies can be improved. In my view, the cost of monitoring at customs points is vastly higher than the net benefit to the public. Through certification systems with couriers—obviously with random checks and things to validate the licences of those couriers—the problems that that organisation referred to are probably short term.

The other issue is about competitive neutrality. All Australian governments agreed three years ago to a policy of removing competitive advantages or competitive barriers from government trading agencies. By the year 2000, all governments in Australia are required to review all of their legislation and remove that legislation which has an anticompetitive effect without an overwhelming public benefit. It is possible, however, for governments to enact policies which inadvertently favour one sector by licensing, which closes out entry, or to impede things. Setting weight limits on parcels and things like that can have that effect.

Mr FITZGIBBON—So government is under an obligation to ensure that its policies do not restrict trades in which their own government enterprises are involved?

Mr Asher—That is right.

Mr FITZGIBBON—I think you have already said this, but therefore, theoretically or potentially a lowering of those thresholds which apply for import duty, et cetera could be seen as restricting competition?

Mr Asher—If you lowered the thresholds, then I think the administrative costs would inevitably rise and the competition from abroad would inevitably fall.

Mr FITZGIBBON—Therefore, the government would be open to a charge of anticompetitive behaviour?

Mr Asher—It is a policy administered by the government itself. There is no enforcement agency. It is a set of principles, that is all.

Senator GIBSON—Mr Asher, you mentioned you were getting 200 complaints, was that per week?

Mr Asher—No, per month. About 50 a week.

Senator GIBSON—What are they are about?

Mr Asher—Quite a wide range of things. The standard consumer protection complaints have largely been automated. So if it is buying goods from a distance, perhaps they do not turn up at all, the wrong ones turn up, billing errors, misdescription or fraud—so pretty well the whole range of complaints that we get in our normal work. We get 65,000 complaints a year.

The Internet is just a subset with this difference. A growing proportion of those complaints are from commerce that has an international dimension. So, we have set up a cooperative arrangement with all the OECD consumer law enforcement agencies where we cross-refer on an informal basis complaints for reference, although we cannot disclose at the moment any confidential information which is a big barrier.

Senator GIBSON—Is that something we should be addressing?

Mr Asher—I certainly hope so. We have pointed out in our submission that, in relation to the dimensions of a global economy, consumers have long since gone global and, on the supply side, traders in Australia's case started off global, but our law enforcement and cooperation systems are not. Australia has still to come to grips with a single national market, let alone a global market. I believe there is going to be a great need to break down some of the information flow restrictions, cooperation restrictions, with overseas agencies. Just as is happening with tax, securities and competition law that also needs to happen in global commerce and consumer protection law.

Senator GIBSON—Do you get many complaints now about the security of the financial transactions?

Mr Asher—We would refer those to the ASC on the whole, if it is about capital raising. With a lot of investment schemes, we have a cooperation arrangement with the ASC where we cross-refer those complaints to them.

Senator GIBSON—What about credit card fraud?

Mr Asher—Yes, there is a steady incidence of those. The chairman asked about differences between Australia and the US and the key difference—and this has always been the case—is a temporal one. Watch the complaints incidence from the US this year and you can bet that they will be here next. For example, last year there was a big upsurge in the United States of a particular form of credit card fraud, credit repair. In the US, you can see lots of ads for people with a very bad credit record—perhaps they have been bankrupt or something like that. They are being offered that, for a fee, this person will be able to get them a credit card issued by a certain bank. We had not seen any of those in Australia until the last few months. I have now seen a few in the newspapers and, of course, they are distributed much more broadly on the Internet. So those things are happening, and we can expect a lag of a year to 18 months before US scams come to Australia. The gap, though, is closing with electronics.

Senator GIBSON—Do you expect that with encryption commerce trading over the net will increase substantially when people get confidence in it?

Mr Asher—I have no doubt whatsoever. I think an exponential growth is entirely predictable and it is not all that surprising.

Senator GIBSON—For building up the credibility, do you think credit labelling of the traders is an essential component of that? I know that one suggestion from the ASC is company numbering.

Mr Asher—I think that is one but I think there will be a range of certification schemes. The commission has a strong bias in favour of encouraging industry participants to develop these schemes. We think that it is an area where the government's most important role is through encouragement, nudging and admonition and not through intervention in regulations. For example, the Internet industry association and international chambers of commerce, those sorts of bodies, are already very active in developing certification schemes. We are working with them and the OECD committee.

I will just give you an example, it is slightly off the point but I think it will give you an idea of what can be done in the area of remedies for the use of charge cards. Around the world there are lots of different policy settings as to liability in the use of charge cards. In the UK and the US, if there is a failure in the goods and a billing error, you have a legal right to charge back that transaction to the credit card or debit card company. In France, the use of a charge card is an irrevocable order for payment so that, even if you never get the goods, even if it is a total fraud, you are legally obliged to pay that whole sum.

The OECD committee, after a couple of conferences and negotiations with the international charge card companies, has largely agreed to a global voluntary program of providing all consumers the same level of charge back protection. That did not require government intervention but it did require government admonition. I would say the same in this area so that, for privacy protection, for certification, for complaints handling schemes, for refund schemes, and for advertising standards, one ought to encourage this sort of conduct.

Mr Wright—Also there is some substantial convergence occurring at the moment where parties in transactions, for security of transactions, have an authorisation or certification of bodies within that financial transaction. The other part is that, in those procedures, they create intermediaries in the middle so that you can have some sort of authority along the path or some sort of security for your own financial transactions, and that is happening at the moment.

Mr GRIFFIN—So essentially you are arguing for a self-regulatory approach, with government's involvement being more a question of suggesting things and urging things

rather than legislating things.

Mr Asher—That is right, at different levels. If you are talking about regulation of transactions, we think that that is ideal for a self-regulatory or co-regulatory approach. For policy settings, though, there will be a need for some government activity in allowing enforcement agencies to cooperate and exchange information internationally. But there is a class of trader for whom self-regulation is absolutely ineffective and those are the straight-out fraudulent operators. I would prefer to see governments conserve their resources for prosecution of fraudulent traders, getting systems so that the telecommunications companies and the Internet service providers can switch them off, and not to get bogged down in individual transaction issues where it is just a dispute that can be worked out by an industry scheme.

Mr GRIFFIN—There are a couple of issues on that question of the straight-out fraudulent traders, and the question of international and domestic enforcement agencies. I also take it from what you have said that you see it as an evolutionary process around the question of developing systems to deal with these sorts of issues. Are you confident that that evolutionary process is occurring to keep pace with what is happening? Have you got any examples of successful cases of prosecution and, if so, could you very briefly outline them to give us a bit of an idea on a case study basis?

Mr Asher—I think there is a consciousness around the world of these issues and so, at least amongst the enforcement agencies, there is a high degree of consciousness. I think at the policy level many governments have yet to decide how best to structure these things, and there is a lot of what I would call regulatory competition as well—lots of people with their hands up who would like to be the sole source of policy in different governments. I think that would be a futile approach. The issues just deal with every aspect of government and we should not see the Internet, in any way, as an end in itself. It is merely a tool to facilitate the whole range of transactions. But, amongst consumer law enforcement agencies, we have taken a number of actions in Australia in cooperation with our fraternal organisations around the world.

Just two weeks ago, the ACCC coordinated a global Internet sweep day. We thought we would have 30 agencies but it turned out that we had closer to 70 consumer protection agencies around the world who all logged on on the same day. We allocated various search engines and terms to hunt down web sites that might either be engaging in deceptive conduct or where there were some questionable representations made. They were all sent a range of law enforcement compliance messages. In a short period, when we get all of the material back from the 70 agencies around the world, we will log back on to see how many of those sites have improved their representations or disappeared altogether. For some that have not, we will arrange some strategic internationally coordinated law enforcement action against them.

Mr GRIFFIN—Let us use that example. Say, I am a bodgie web site. I have

received the electronic messages from law enforcement agencies on Internet sweep day. I have said, 'This is a bit hot.' So I crash—delete myself, in effect—and then I go and sign up somewhere else. What happens then?

Mr Asher—We expect that the next phase of this will be to take the sweeps onto a more random, targeted basis. Next time there might be 700 agencies involved, and they might all be looking at just one practice—pyramid selling or investment schemes or something like that. But, also, the commission set up on its own web site a scam scheme to encourage consumers to become, effectively, extensions of the law enforcement apparatus.

There are two things, though. I am not suggesting for a moment that law enforcement agencies should or can properly eliminate all of those. But, by getting a much higher level of awareness by consumers so that they are critically aware, and by involving the Internet service providers and agencies like the Telecommunications Ombudsman and the telecommunications carriers plus their co-regulatory systems, backed up by the law enforcement agencies strategically intervening with some demonstration prosecutions and things, those coordinated activities will serve to keep fraud to a manageable level.

Mr GRIFFIN—Just on that question, you mentioned about the possibility of enforcement prosecution. Can you just run us through an example of a prosecution?

Mr Asher—Sure. We were involved in an enforcement action against Destiny Telecom. Do you know the details of that, David?

Mr Wright—Yes. Destiny Telecom was basically a scheme which sold pre-paid telephone cards. That was the product, as we call it. Fundamentally, we claim that it is a pyramid selling scheme and that there is some doubt that the telephone cards are of any use to Australians anyway. But the idea of it was that it does not matter what the product is: it can take the form of an illegal structure which is really designed just to earn money for the people inside the scheme. That was one that we looked at.

We also worked with the US government and various state enforcement agencies in the US, and they were able to put receivers in and seize assets at the host site from the United States, as well as our taking our own action here in Australia. That was the fundamental part of the scheme. Is there any other element of it you would like me to explain?

Mr GRIFFIN—No, that is fine. On from that, often when we are looking at the question of international trade, commerce and regulation, there are issues around the question of countries or locations that actually become, in effect, havens. One obvious example is in shipping, with the question of Panamanian and Liberian registrations when the ships are basically rust buckets ready to sink. Is that a potential possibility in terms of the Internet?

Mr Asher—It is a certainty. We referred to a couple of these actions in *The global enforcement challenge*, and we do expect that, as the OECD countries and other countries with a regulatory infrastructure start cracking down, a lot of these web sites will turn up in the Bahamas and other jurisdictions that are not so well regulated. However, we think that it is still going to be possible to bring to bear a couple of complementary forces.

Firstly, there is the certification system where Internet industry associations and banks and others will offer their imprimatur to certain schemes, and that will give consumers certain guarantees of redress so that any Internet service provider who allows the use of their network by a scam merchant is going to have some liability. That is going to give them an incentive for due diligence and compliance checking, and it will give consumers some measure of confidence about particular nets.

Secondly, the carriers that trade through these unregulated areas tend to be ones that also have operations in more highly regulated jurisdictions, and it is going to be possible to lean on them that way. Remember that there is a profound coincidence of self-interest between banks, traders, Internet service providers, telecommunications carriers, consumer groups and business groups to provide these safe, secure modes of transaction. What we are saying is not naive: it is to harvest that profound self-interest in many parties by providing these safe havens. It is not going to stop piracy elsewhere—just to extend that analogy—but it will give consumers a greater degree of confidence.

CHAIR—On that last issue, from another party we have a submission that talks about Australia's 15 years of experience with PIN based transaction systems, largely through the banks and for electronic point-of-sale transactions. Do you know to what extent those kinds of hardware based security systems are being considered by other major Internet players? What are the chances of a worldwide movement to real security in terms of funds transfer, based on those kinds of solutions?

Mr Wright—There is certainly a substantial movement to various forms of PIN identification/certification systems. Recently in Australia, only a few weeks ago, Telstra released its latest product, which is supposed to be a secure Internet transaction product. The idea of PINs lines up with encryption and various signatory types of systems, where you can actually have digital signatures. Whether they are a PIN or actually a written piece of code, they are very similar fundamentally. There is certainly a drive to do that. Clearly, industry is working at that as a major impetus at the moment.

Of course, various parties of the industry are also trying to show that their format for doing that is the best. So telecommunications companies are trying, banks have their own products, and other software companies have their own products, as well. They vary slightly, but certainly, the fundamental PIN system is similar between all of them.

The other part of it, of course, is to create intermediaries in the middle of that procedure: you are not providing your personal details to the person at the other end of the

transaction. You are providing it to an intermediary, and that intermediary provides the funds to a party that it can identify within its system. It certifies that that party exists. That is definitely the way industry is moving.

CHAIR—But are we going to have problems? Some of the world is way behind us, I understand, technologically.

Mr Wright—Yes.

CHAIR—Some might be ahead: I do not know. But is there going to be great difficulty in matching the various kinds of security systems one to the other, as transactions take place in cyberspace?

Mr Wright—I suppose there are some difficulties that you can foresee; but also the technology is moving fairly quickly. Fundamental to that is that there is the basis in the financial payments system to identify parties within that around the world already. For most traders, eventually there is money at the end of the scheme, and so there is a framework there for them to identify parties within that system. They can identify a bank in Spain, or whatever else, as being the destination for payment.

Some countries are certainly behind in that, but not enormously behind for our general trading partners. There is going to be a minor number who simply are not within the system or the link yet, and there are certainly some countries that have virtually no Internet uptake at all, and they will need to develop in their own way. But, at this stage, it would not be a barrier to trading with those particular countries. In the self-regulatory models that have been put forward, the initiatives are certainly looking at dealing with the circumstance of those parties that do not fit within a current system that they have—a current computer system or an Internet system. They get to, say, point B and then they need to have another system to get from B to C at the end. And they are developing techniques to do that. But it is always a balance of how much it is worth to go that extra step.

CHAIR—I asked our last witnesses this, and they declined to answer. I understand that some people put up a possible scenario that an individual might establish a legal entity—and whether it is a sole trader or a partnership or a company is irrelevant—and buy a web site and spend however much to jazz it up, and then go out and trade on the Internet, refusing to trade in any other medium than the Internet and literally moving money from point to point around the Internet. Let us say that they do really well and build up vast wealth, with none of it coming back out: some day, they will download the lot of the money into the Cayman Islands and walk away, tax- and tariff-free. How do you view that sort of scenario? And what sort of implications does it have for our normal, legal based competition system?

Mr Asher—For competition policy and consumer protection, I mentioned we do

not have any policy role in taxation and the revenue—which are vital issues, but for other people. We certainly are concerned about the potential growth of large market power that might come through that. For example, the commission is looking very closely at the US and Japanese regulatory agencies actions against Microsoft on its browser behaviour and the way it is marketing that. That is not the same issue. There are potential competition issues about the growth of operators who might have vast market power, be able to drive out competitors, be able to engage in predatory pricing and that sort of conduct. On the other issue, I rather suspect that the very worst things that you can think of were done long ago.

CHAIR—Really?

Mr Asher—Absolutely. We have already found a lot of international scams just in our small area of consumer protection. But we have decided that, for a period, we are going to try to follow the money trail. We have actions going in Singapore and Vanuatu and actions with our US colleagues to try and secure and recover moneys from overseas. I think one message that we internalised years ago was that, if you really mean global markets, then the notion of quarantining them at some artificial point of geography is just folly. Increasingly, for purposes of trade and commerce, those notions are totally irrelevant.

In my view, it is a decade since the real locus of commercial regulation left Australia and moved to agencies like the WTO, the International Standards Organisation, some of the UN agencies—the World Health Organisation for food standards. Australia would be very badly served if it did not recognise that and put resources into those international agencies to ensure that Australia's national interests are vigorously represented there.

I could give you another example that might seem off the point, but there is a link. Two weeks ago, speaking at the public launch of Supermarket to Asia—the first major report for this project to expand Australia's food and food related exports to Asia to \$18 billion over the next few years—the Prime Minister noted that in many of the target countries the problems that Australian companies face are not so much quality or access to markets, but regulatory infrastructures that contain anti-competitive or anti-consumer practices.

I know the Supermarket to Asia believes that the best way around that is by establishing Internet based trading systems to bypass all of that. Dr Stuart Boag will probably be giving evidence, if he has not already. There is a real connectedness between what the international telecommunications protocols say, how we are involved in the standard setting processes, and the way in which Australian businesses can wholesale their products into the region, and their success. There is an obvious link there.

Mr FITZGIBBON—This inquiry was obviously largely driven by concern

amongst SMEs about their inability to compete because of this growing incidence of Internet commerce. On the basis of what you have just said, the whole idea of even holding this inquiry is a bit of a folly.

Mr Asher—Not if what you do is identify areas that governments should not attempt to regulate, and instead point out to SMEs, especially, some of the huge opportunities. This really is a bit beyond our field of expertise—so take it for what it is worth—but it is my perception that small enterprises are going to be disproportionately advantaged by being able to use Internet based information, ordering inventory control systems, over their larger colleagues who have always had the infrastructure to have agents all around the place and have large infrastructure. With smaller enterprises, being able to plug into databases and being able to collectively get information together through booking systems of airlines for freighting and through shipping lines will give exporters of goods and, profoundly, services vastly greater access to a vastly greater market, with greater risk.

CHAIR—Back on the regulatory system again, I have one last brief question: of what significance is international cooperation and regulation with respect to property rights? How is that going to play an important role in how international trade on the Internet develops?

Mr Asher—I think the issues of intellectual property rights and electronic commerce are obviously pretty critical. That is probably the reason that many well-known brand names are not trading, especially services, on the Internet, because of fears of losing copyright and various other things. Again, despite some of the current efforts by particularly the US to assert very strong copyright controls over the Internet, from a competition perspective I think it is doomed, and doomed for good reason. When you look at the whole notion of intellectual property protection, I think there is a big disconnection between the philosophy of intellectual property right protection—in other words, to reward the creators of intellectual property, to give them a controlled proportionate monopoly for the purpose of encouraging further output. With Internet commerce, the risk is that they can just gain monopoly profits from that.

CHAIR—That was an interesting point. I appreciated that. How about naming rights: for instance, what if you have a corporate name in one country, and you have paid for and built up huge value for your business as a result of goodwill, and somebody picks it up in another place because of naming rights through the Internet?

Mr Asher—Indeed, we refer to that in our submission as a naming rights problem. We have seen it often enough. I think the answer to that probably expired about seven or eight years ago when the current naming systems and protocols were first introduced. I think it is going to be very hard ever to win that back. The controls that you would need on it are pretty huge.

I do not know if you are aware of this or not, but each year there is a ministerial council of consumer ministers and Attorneys-General looking at the problems of business names from one state to the other. Dealing with that has been an intractable problem for 20 years, even in the Australian jurisdictions, even where we have a cooperative system. If you are talking about even understanding the dimensions internationally, much less doing anything about it, I think it is just beyond anybody.

CHAIR—So if I managed to get on the Internet by calling myself Tiffany's before Tiffany's got on the Internet, I am the winner?

Mr Asher—Not strictly speaking. We are contemplating taking an action against an Australian company trading in the US in a deceptive way. It was passing itself off as being the official domain vendor for domain names, but charging much higher than the official one. It did that through registering a name that was very similar to the official one. So there are still the normal deception rules that would apply. If somebody is pretending to be Coca-Cola or somebody like that, if they mislead consumers, then there will still be legal rights.

CHAIR—Thank you very much.

Mr Asher—Would you like us to send you that additional information on the Customs project, the parcel post project?

CHAIR—Yes, please.

Mr GRIFFIN—Also, you mentioned, and it is also in your submission, that in about a month's time there will be some more detail on the question of the Internet sweep day. Can we have those results?

Mr Asher—Okay.

Mr FITZGIBBON—That was the OECD based document?

Mr Asher—Yes, that is right.

[11.22 a.m.]

CAELLI, Professor William John, Council Member, Australian Science, Technology and Engineering Council, 20 Allara Street, Canberra City, Australian Capital Territory 2600

NICHOLLS, Mr David Conway, Director, Secretariat, Australian Science, Technology and Engineering Council, 20 Allara Street, Canberra City, Australian Capital Territory 2600

CHAIR—Welcome. We have received your written submission, for which we thank you. May I say to you that committee members have, in the last minute or so, expressed to me their concern that we do not want to become too technologically involved in this discussion or we feel we are likely to be left very far behind. Would you have a brief opening statement that you would like to make with respect to your submission or other issues?

Prof. Caelli—The important points of our submission relate to the four outlined points on page 1: the question of network bandwidth, particularly as that will relate to small and medium enterprises; the question of switching capacity, which similarly relates to that; international connections, which we feel has a major impact on the potential of Australia to deal nationally and internationally in this area; and, finally—and it is one which we have spent a fair bit of time on there for you—end-user equipment security.

Those four points form the basis of a technological underlying of what we are trying to discuss today. Indeed most recently, in a recent issue of *Computer World* in the United States, the question that was brought up was, very essentially: is the Internet yet ready for electronic commerce on a global basis? Indeed, if the committee is interested, I have a dump from the Net of what they said. It basically says global trading posts and electronic commerce on the Internet is still a proving ground. We are still not there yet as a totally reliable, secure and dependable service for electronic commerce on a global basis.

At the same time, I draw the committee's attention very generally to a report issued to the President of the United States on Monday, 20 October by the President's Commission on Critical Infrastructure Protection (USA). That report clearly identified networks such as those used for electronic trading, electronic commerce and more specifically, the back end where those networks facilitate in the payment side. Not much point having trading if you do not get paid. They have identified in that particular report problems of concern relating to information. The draft summary of that report states that five sectors, including information communications, banking and finance areas, have been of major concern for the protection of critical infrastructures in the United States. So those two statements have come up in the last week, both of which emphasise the problem we bring out in our summary for you.

CHAIR—Could we have copies of those?

Prof. Caelli—Yes, I can make copies of those available.

Senator GIBSON—I want to start with the potential problem you have identified with regard to bandwidth. Can you expand on that? I noticed a couple of weeks ago that there was some problems when, allegedly, a trawler got stuck into the cable across the Pacific.

Prof. Caelli—Yes, that is very true. In June this year ASTEC called together a group of interested parties to look at this whole problem of what is the underlying capacity of the Internet, particularly to serve electronic commerce purposes. We held those hearings in Canberra and a number of people attended, including Telstra, Optus and the Internet service providers association, INTIAA.

Generally, taking from that particular study which we performed and the investigations we did, there are some problems emerging, particularly in relation to international connections, which are on the third page there. What was seen in summary was that there could be what we will call a down dip. Maybe within 12 months or sooner we may see a growth emerge which simply cannot be answered for a hiatus period of around 18 months because of the time taken to put new infrastructure in. So, we may go up and then we may go down for a period of about 18 months. That is what came out in evidence to us. Specifically, with their vital connections, particularly into Asia, which we identify as one of the trading markets, there could be a problem moving up into the Asian market for bandwidth.

CHAIR—What is that infrastructure? What do we need to put in?

Prof. Caelli—Essentially high performance optical cabling across the Pacific or through the Pacific north into Singapore and through the switching hubs into Asia.

CHAIR—Who will put it in?

Prof. Caelli—That will be the responsibility of the appropriate telecommunications carriers and their partners. Internationally they would normally have a partner—Telstra will have its international partners and Optus will have its international partners. The problem is not so much that they may not commit to do that—indeed they might—the problem is simply the time to install it.

Senator GIBSON—Cost?

Prof. Caelli—Cost, of course.

CHAIR—How much?

Prof. Caelli—I have not the foggiest idea. At present it would be extremely high. It may be of interest to the committee to have a quick think about what is called Internet 2 in America, which is essentially the rewiring of the Internet throughout the United States. There we are talking about billions of US dollars to up the bandwidth there to what they call the 100 megabyte service or the 2.5 gigabyte service. That is very high-speed stuff. They are moving up into the gigabyte range now or early next year in the new services that are emerging.

The problem is really one of very high bandwidth requirements because we are all sharing the one pipe. The problem is that we are all sharing that pipe. That pipe has to be done either by cable or by advanced high-speed satellite networks. Both of those are very expensive indeed.

Senator GIBSON—Does much of the traffic go by satellite now?

Prof. Caelli—No, most of it goes by cable. Satellite links are normally used throughout the world as a secondary or backup link service. There are a few reasons for that, it has to deal with such things as delays and what have you. Presently bandwidth is shared between those types of services—terrestrial services and satellite services.

For Australia, the viewpoint might be one of trying to boost our satellite links, particularly into Asia. That is another possibility. However, whichever way we go, there are some substantial costs involved. The question is really one of whether or not those substantial costs could be easily passed on, particularly to small and medium enterprises.

Mr Nicholls—Cable is usually used as a medium for communication on the Internet because of the way the packets of information, the chunks that the communication stream is broken up into, are sent. There is a confirmation ‘Yes, I have got that, send me the next bit’ type of instruction. The time it takes for the message to get across is in the order of a 30th of a second. The rest of the time, which is about a fifth of a second, is taken up with other things such as delays in terms of switching and computer processing of the information at one end or the other.

The trouble with the satellite, which is usually thought of as being the geostationary satellite, is that it introduces an extra quarter second or thereabouts into the transmission. This throws out the ‘Have you got that? Hang on, you haven’t got it. I’ll send it again’. You start getting traffic jams because they keep sending the stuff that they have already got because they have not been told they have got it.

There is a new technology called LEO, low earth orbit, satellites being introduced by at least two, if not three, companies. One is called Iridium, which is backed by Motorola, and that has its first half dozen or so satellites in orbit already. Another one is called Teledesic, which, I believe, is the one that Microsoft has invested in. It needs to have a continuous supply of satellites, always overhead in a low orbit which does not

involve this delay. But this is an emerging technology and it is not clear just how it is going to work. In the meantime, it will be very prudent to depend on cable, apart from any question of whether the satellites are secure from attack by meteorite impacts and stuff like that.

Senator GIBSON—How vulnerable are we in Australia to incidents like the one a few weeks ago with a trawler?

Mr Nicholls—It happens everywhere. For instance, about a year ago one of the local Internet service providers, which has its own rented bandwidth across the Pacific that goes through to Portland, Oregon, announced to its Australian servers that they would be off-line for two days because the cable across a river somewhere in Oregon had been cut by floods. This cut off Portland from the rest of America as well. So it happens everywhere. It is endemic with communication systems that depend on physical infrastructure. It can happen in the Pacific and it can happen in the middle of Idaho.

Prof. Caelli—The President's Commission in the United States identified this whole area as a critical infrastructure. I recommend that the committee look at that. It does seem to me to move very much into a need for regulatory activity in this area.

But more than that, we were talking a bit there about bandwidth and reliability. It is not just a problem of a bandwidth also going down. We should also bear in mind that the Internet itself is not autonomous. It is not like a telephone exchange system. One attack or one down, for example, of the master name server in America would bring down the whole Internet, which was going to happen some time ago by a mistake that was made in what is called 'giving people different names'. The problem we have got is that we do not have a completely autonomous system when we move commerce to the Internet. It is not the same as a telecommunications system.

Senator GIBSON—Have the carriers here, Telstra and Optus, been talking to your council about how they view the situation and their plans for the future?

Mr Nicholls—To a limited extent. We had Telstra's head of Internet in an open non-competitive forum saying that, 'Yes, there are certain problems. We don't see great difficulties in solving them, other than perhaps this dip in about 18 months in the short term.' It was a bit of a 'Don't you worry about that' approach, which concerned us somewhat, and it led us to wanting to express this concern at this committee hearing.

Mr FITZGIBBON—I was really surprised when I saw your comments in relation to the lack of capacity of the system in the next 12 or 18 months. Of course, these are investment decisions. Does it surprise you that the private sector has not seen sufficient return to speed that process up, and what, if any, role is there for governments?

Prof. Caelli—That it is a very hard question. I think there is a role for

government, by the way. But, most importantly, the question of whether or not market forces will simply resolve this problem, I think, is a very moot question. When you get to the large scale capital investment that is required for those international high bandwidth networks, the question of amortisation, the question of on-producing of those costs, becomes very crucial and the modelling becomes very crucial.

As ASTEC was saying, all we can say is that, at the meetings we had with the carriers, basically there was general feeling that, yes, the market forces will prevail, but we may find, because of prudent investment decisions and capitalisation decisions—just getting the money and putting it in the right place—there could be dips. That was evidence presented to us, that there could be short-term hiatus periods. Indeed, in the longer term, the market forces may prevail, but there may be dips in that market force situation.

At the same time, the question of costing back into particularly smaller medium enterprises is also one which could be considered: how do you share that absolute cost of those international circuits? There is a real problem with that one, too.

Mr Nicholls—To add to that, the question of this clag up of bandwidth is likely to come at a time when Internet commerce is emerging into full bloom, at a time when Australian companies will be handicapped most by not being present as prominently as they ought to be at a critical time. It is very unfortunate but the trouble is the delay in investment and implementation decisions will come at a time which will be, shall we say, unfortunate for Australian businesses wishing to set up to the extent that they may well choose to go offshore from the point of view of their Internet presence, and there are plenty of opportunities, for example, to set up your Internet-commerce, Internet-transaction site in America.

I have a piece of paper here which just came as junk electronic mail the other week from an American server, which is based in California and claims to have an extremely high bandwidth to the major market, namely, the United States, where you can at relatively modest costs set up your presence. This is fine and if I were setting up an Internet electronic presence to sell things, I would go there. But it means that it is completely out of the hands of the Australian government and any transactions are beyond the knowledge of the Australian government. This, of course, has taxation implications, which is a major thrust of your inquiry. If you are interested in this I have a copy available.

CHAIR—Yes, please.

Mr Nicholls—It is just an example of the sort of market that is emerging in America to meet the needs, which is not yet emerging here.

Prof. Caelli—In summary, I simply say that may have actual business effects as

companies will simply move where the best man is available to meet their business requirements, which means that they will set themselves up anywhere in the world as an entity offering their services there. That presents major regulatory problems.

Mr GRIFFIN—You also talk in your submission about switching capacity, which has an impact on from there. Could you just talk about that for a bit?

Prof. Caelli—This whole question has cropped up most recently in the United States and now, of course, in Australia. The problem is not just the bandwidth, which is rather like the superhighway that is coming in, but it is how you get around and switch to anybody. So you clog yourself up beautifully by your switching system.

At the inquiries that we did this year, we asked the appropriate authorities to discuss that. There was a general agreement that the market will look after that. We expressed concern that this might be true except, maybe, for fringe capital city and regional and rural areas where the amortisation costs of upgrading those exchanges—the systems—could be quite high.

Mr GRIFFIN—So it is like the overall issue of community service obligations to—

Prof. Caelli—Absolutely, and that becomes critical if we are trying to promote small and medium enterprises in those fringe areas. They could be extremely hamstrung compared to their inner city competitors who have not only a much higher bandwidth but also the ability to switch out.

Mr GRIFFIN—For example, on that, a previous witness mentioned the supermarket to Asia, where we are looking at trying to get small and medium sized enterprises involved in playing that role overseas, yet they will essentially, predominantly and principally be people operating in rural and regional areas by definition.

Prof. Caelli—Yes. This is a very genuine problem which you have identified. The question is really, firstly, do we need government involvement, shall we say, in this particular area? I cannot see any way out of it. In other words, are we going to see a failure of normal market forces? It has happened before. The answer is most likely, yes, in this particular case. There is the simple cost of upgrading regional and rural and, I dare say, ‘fringe suburban’.

I think that is one of the major areas now where the cable roll-out appears to have stopped in this country. Once we move beyond that, if the cables have stopped at the fringe suburban areas, we could have some very severe problems not only from the cable but also now from the switching capacity. Both of those are referred to in our area, which we feel the committee should be very closely looking at and seeking further advice from the appropriate communications carriers.

The problem is a very genuine one. We are essentially trying to combine an Internet on top of a telecommunications switching system. That is the key problem and they were not designed together. One can flood the other.

CHAIR—I was really interested in your description of the 10 EFTPOS links in Australia, and the relatively high technology and the public acceptance of that system. Is the council working with similar bodies in other countries and whether or not they might adopt similar systems?

Prof. Caelli—The council itself is not actually specifically working with other countries in the area. We are reporting through to you just on discussions we have had at the council meeting and on independent studies which I personally had been doing for the last few years. So, as a council, we do not have official contacts in that particular area overseas—not official discussions. However, these are observations given to us which have been discussed at a council meeting. We do not actually have official liaisons.

CHAIR—As I asked the last witnesses, are there any potential difficulties in international trade and competition which might be imposed because of the adoption in other countries or in other jurisdictions of other security arrangements?

Prof. Caelli—Yes. There is a very severe problem which we allude to in the back. We have given it to you in English and in German. A decision by the German government on 1 October to implement regulations in relation to what is technically called digital signatures, I think, has a very important import to us as we move to international trading. I did draw your attention to that. It is the attachment 1 to our discussion.

Essentially, the problem being alluded to is this: many of the current proposals we have for electronic commerce on the Internet, and its security, are really great for the transaction stuff once it is on the Net, in between the two ends, particularly between the consumer and the merchant, and the merchant and their bank, for argument's sake. The problem emerging is that, whereas it might be a problem—and it is agreed that, for an attacker to get in the middle, it would be rather pointless—it is actually ridiculously easy for attackers or other people to get to each end. That is why the German government has said quite specifically, in relation to digital signatures, which is a crucial part of electronic commerce, that it must be only affixed with systems that have met assurance quality and security assurance and certifications. They give some teco jargon there about the levels of evaluation and correctness that they want. That is very much in line with the European style. The United States has not moved that way. This is, I think, a major problem for us in Australia. Where do we sit in this dichotomy that has emerged?

We have mentioned in there, for example, the whole problem of PINs and security, and all that stuff. 'How do I know who I am? How do I know what I am doing? Is it secure?' In Australia, we have been using—and this is part of our submission to you—a standard, which is Australian standard 2805.3, which is called 'PIN management and

security'. That standard has been used throughout the past 15 years. This standard, by the way, is dated 1985 but in draft form it existed two or three years before that.

The PIN management standard for doing all this stuff quite specifically sets out the requirements for verification and security of all forms of hardware and software used when you affix your PIN, which identifies you to the system. That is the problem that is alluded to in the German situation. Current electronic commerce proposals, particularly out of the United States, completely ignore the security at each end of the system—that is, basically at the customer end and at the business end. That is a very severe problem.

We put to you some ideas which may also have some interesting implications. These have been discussed. One possibility—and it does mean, for example that we would not, as a country, adopt some international standards—is a policy or a philosophy that I think is rather important. It is the question about whether we should adopt, as the Wallis report has said, particularly the United States standards or derived standards for electronic commerce activity on the Internet. This is a very moot point, which we submit to you really needs to be investigated in far more detail. Those standards may not be suitable for the European, Asian, or Australian situations. We propose another concept for doing that, which we call 'gateways'.

Coincidentally, this problem about security at each end has just been alluded to in the United States. The National Institute of Standards and Technology, which is the US Department of Commerce group, has issued a project to a company there to look at that exact problem of what security should be at each end, and whether there should be regulatory authority on that area. We have given to you the example: in Germany, there is. In Australia, the question is open. The experience has been the force of standards.

Senator GIBSON—From Australia's perspective, given that as yet the US is the world leader in electronic commerce technology, and given that we are, within this country, high users of the technology by world standards, isn't it really in our interests as a nation to run along with US practice, so that it is perceived by US companies and US investors that investing in Australia is very little different from investing in the USA?

Prof. Caelli—There are two points there which I will very quickly answer. In relation to smartcard technology, which is critical in Europe to the whole electronics thing, the US is way behind the European situation. That has been recently evidenced by the fact that one of the first issues of smartcards in New York has happened only just last month. They issued 15,000 cards. That is generally acknowledged. I submit to the committee that, in the area of electronic commerce on the Internet security, the United States is not ahead. Indeed, I again refer to the President's commission on that. It has said exactly the same thing. The United States is not ahead at all. That is an important point about security, control and management.

Let us move ahead into standards. There are two ways of skinning the cat, and that

is being talked about today. One particular US based standard called SET—secure electronic transactions—is one possible technology. At the present moment, by the way, it has been limited to credit transactions only. It does not do debit transactions or anything like that yet. It only does credit cards. But in the future it might move.

The particular technology which we proposed to you, we could get our way into that by means of a technique called gateways. Gateways is something that is being very closely looked at by our Asian partners. The concept of a gateway is very important. It has taxation implications, it has control and management implications, and it has regulatory implications. Indeed, through gateway concepts it may be possible for the first time to look at a way internationally of capturing transactions at the point the payment is made. This could be crucial for taxation purposes. I hesitate to say GST, but let us call it a payments tax concept for argument's sake. A movement through a gateway technique becomes a way of looking at the future in the 21st century. That gateway concept we refer to would allow us to do that.

Let us summarise your point. I will have to express this personally rather than on behalf of ASTEC. I believe we should be very closely looking at the gateway concept for a number of strong reasons—regulatory, taxation, and the whole benefit to our country. Also, it has important implications in relation to protection, security and control. Indeed, with this whole problem of information warfare, it also has military and national defence implications. As we move to this whole electronic commerce thing, what do we mean by defence. That becomes important.

The gateway concept here in our submission is along those lines. It does mean we could adopt international or United States based standards at the gateway point. Inside Australia we have got experience of over 15 years of doing it our way. That is our proposal.

Mr GRIFFIN—Just on that issue, how do we go in the situation which I suppose is a follow on from Brian's question where you have a European system developing to an extent, and a US system developing to an extent. What is the capacity for us to influence developments across those systems, and is it compatible?

Prof. Caelli—I do not think we will have very much capacity to influence those developing standards, but I think your point is extremely important. The important point is that it is not just the United States that has standards now. The Europeans have been developing their own payments commerce standards completely separate from the United States for quite a time.

The gateway concept enables us to participate in the best and the cheapest possible way into those standards. We do not quite know where China is going to go yet, for argument's sake, so the possibility of using gateway systems could be a way around the problem. It is like having a mating connector. It is like having a three-pin prong to a two-

pin prong. That has extremely important implications not only from the point of view of standards, technical things, but also for the major thrust of your study, the important taxation, regulatory and control possibilities. That would get around that problem. Whether we could actually influence those particular standards is a very moot point.

Mr GRIFFIN—What worries me is that there are many developments occurring on a continuing basis. There are lots of studies, discussions and negotiations under way, but I have not heard of anything concluded yet. That is not a criticism that people are going slow, it is a comment on the system. So once you have got a system like that then that question of continually chasing your tail is a real issue that worries me.

Prof. Caelli—I agree. There is a problem there. In general, there are two things possible. Looking at the European way of going, they have had many years of experience using these things called smartcards, which is radically different to the United States system. Also, in Europe and in Australia we have had experience of what we call direct debit systems. We all go into Coles and we use direct debit quite extensively. That is not the same in the United States. So we have this radical difference in the way we do our business.

There are two ways around that. I think the Europeans are most likely to move towards an equivalent to that pin pad you have at the supermarket placed in your home. That will be at your shopping end. At the client's end or the business end you will have an equivalent to what they used to call a switching system that takes the transactions in and then they will be switched through to the bank. But the idea of having a small unit like that, which itself can be trusted, tested, made tamper resistant and all those things, can get around the problem.

That is not the way the United States is going at the present moment. Although, let us hold on for a minute. Three months is a long time in this business. We have 'Internet years' and we have ordinary years. It may be that the United States might move towards a smartcard environment. However, at the present moment they are not and this could be a way of getting around the problem, by simulating what we currently do at our supermarkets and doing that in a home environment. That might be one of the quickest ways around it. Then moving through to the gateway concept is a possible way to solve that problem.

Mr GRIFFIN—Previous witnesses talked about the approach being taken of a more self-regulatory environment with respect to most aspects of Internet commerce—not all, but most—and they were confident that is the best approach in the circumstances. Would you like to comment on that issue?

Prof. Caelli—I have a personal opinion but I have not discussed it with our council.

Mr GRIFFIN—Could I have your personal opinion?

Prof. Caelli—I think that is totally wrong, 100 per cent wrong. I could ask the question: how many people here have got smoke detectors in their house? When it comes to security, control and management, market forces have failed, and they have consistently failed for 100 years. A good example is that in 1965, a very famous American called Ralph Nader wrote a book called *Unsafe at any speed* which led within six months to the regulation of the United States car industry.

The proof of the pudding is when it comes to security, control and management, market forces do not work. No-one put seat belts in their cars voluntarily. I submit to the committee that by simple experience worldwide, market forces have never succeeded in creating good security control and management procedures.

That, by the way, is the clear thrust of the President's Commission in the United States. Unfortunately, the full report is classified but there is an unclassified summary available which is summarised in the things I have given you. That point is made in the President's Commission.

I would differ with that viewpoint. I believe the importance of regulation is—

Mr GRIFFIN—Does this report to the President talk about the fact that self-regulation will not work?

Prof. Caelli—It alludes to that fact. Essentially, it says that over a period of time the building up of good, robust security control systems in the electronic information area has not happened. It refers to that.

Mr GRIFFIN—From what you are saying you would agree with what I submit which is, essentially, when there is a regulatory requirement that can be avoided, a cost benefit analysis is done and the benefit is worked out, it is better to factor it into the price on the basis of what it might cost you rather than actually have a system.

Prof. Caelli—I think, basically, the role of government is crucial. As we move to this new environment in the 21st century, the role of government is absolutely vital in the area of security control and management of what will be the basic infrastructure of a nation. That, I submit to the committee, is crucial, not only for protection of that system but also for protection of the tax base, which is our other point.

CHAIR—You have talked extensively about gateways. I have speed read your submission and I cannot find the word anywhere.

Prof. Caelli—Sorry, it is a technical term. Basically, we talk about combining the EFTPOS system. By the EFTPOS system we mean the gateway system.

CHAIR—I wanted to clarify that.

Prof. Caelli—That is a possible solution.

CHAIR—You are talking about a possible solution.

Prof. Caelli—The word ‘gateways’ is in there.

CHAIR—Thank you very much for that. I have to say you have set us some challenges. This is not the science, engineering and technology committee, it is the committee of public accounts. Anyhow, we will certainly take on board both your submission and your comments. I think they are important.

Is it the wish of the committee that the three additional submissions—*President’s Commission on critical infrastructure protection; Global trading post: still a proving ground?*; and an example of an Internet service form—be accepted as evidence and authorised for publication? There being no objection, it is so ordered.

Resolved (on motion by Mr Griffin):

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 12.00 p.m.