

It will be noted that in 2004 BCSL believed the marketing literature put out by the biometrics suppliers. That belief was undermined by the evidence of the UKPS biometrics trial and US-VISIT. BCSL is now a biometrics apostate, a state recommended here to everyone else, the UK Home Office included.

Crime and dematerialised ID

**A submission prepared exclusively for the
Home Affairs Committee
in connection with its inquiry into
Identity Cards**

by David Moss

of Business Consultancy Services Ltd

May 2004

Credentials David Moss of Business Consultancy Services Ltd (BCSL) has 27 years experience in IT and has spent 18 months researching dematerialised ID. He is a taxpayer and believes that the Home Office budget of £3,145m of tax-payers' money could deliver a better ID voucher scheme than the one proposed.

Many people have criticisms of the Home Office's proposed scheme. BCSL has gone beyond that point and taken the trouble to propose an alternative – dematerialised ID.

Dematerialised ID, named following the successful example of dematerialisation in the securities industry, is described in the BCSL report available on the company website. It includes the references to the source material which supports the assertions made here.

The report has been peer reviewed and is due to be delivered as a paper at a conference in Prague next month.

| <i>Table of contents</i> | Para. |
|--------------------------|---|
| | 1 – 7 Summary |
| | 8 – 10 Problem 1 – anonymity* |
| | 11 – 14 Solution 1 |
| | 15 – 17 Problem 2 – credit card fraud |
| | 18 – 21 Solution 2 |
| | 22 – 24 Problem 3 – identity theft and money-laundering |
| | 25 – 27 Solution 3 |
| | 28 – 29 Problem 4 – forgery |
| | 30 – 31 Solution 4 |
| | 32 – 33 Problem 5 – location-based crime |
| | 34 – 35 Solution 5 |

* Unlike the other points made in this submission, the contents of paragraphs 8-14 have not been widely published, they have been shown only to the Home Office, NCIS and the Metropolitan Police.

Evidence

- Summary*
1. The Home Office proposals with regard to ID vouchers rely on three components – a population register, biometrics and smart cards.
 2. There can be no argument that a population register is needed in order to implement an ID voucher scheme and biometrics also seems to be an essential component.
 3. BCSL argue that it is a mistake to rely on smart cards, the right technology to use is mobile phones, see crime problems 1, 2 and 5 below.
 4. BCSL argue also that there is a component missing from the Home Office scheme. It is a mistake to omit PKI, the public key infrastructure, from their scheme, see crime problems 2, 3 and 4 below.
 5. Crime solution 1, which would make anonymous mobile phone communication impossible, is especially contentious. It looks distinctly as though it would work. It would be effective. This may make people recoil from it.
 6. The Home Office scheme looks less threatening by comparison, more acceptable, because it will not work.
 7. From BCSL's point of view, the choice seems stark. Implement dematerialised ID, do the job properly and get value for money. Or do not do the job at all. The Home Office proposals as they stand occupy an unsatisfactory middle ground, where £3,145m is spent but there is not much to show for it, crime is hardly reduced. The Home Affairs Committee will no doubt have a more rounded view.

-
- Problem 1 – anonymity*
8. The National Criminal Intelligence Service make the following point in their *UK Threat Assessment of Serious and Organised Crime 2002* report, para.2.38:

In choosing telecommunications products and services, criminals are guided by the need for security, anonymity and convenience. They remain keenly aware of new products and services and take advantage of any that enhance these three features. Mobile phones, in particular prepays, are particularly popular, since there are no legal requirements for registering them and so no need to reveal any personal details. They are also inexpensive enough to be bought in bulk and regularly changed. Organised criminals also make use of telephone kiosks, foreign roaming mobiles (also available as prepay) and satellite phones.

9. Anonymity is the key feature here which helps criminals. An ID voucher system might therefore be expected to help to solve the problem.
10. The identity card system proposed by the Home Office is based on the wrong technology ever to be of any help in this case.

Solution 1 11. Dematerialised ID is based on the right technology.

12. Under dematerialised ID, UKPS would issue each person enrolled in the scheme with a digital certificate stored on that person's mobile phone. The digital certificate would vouch for that person's identity.
13. When you switch on your mobile phone, it has to connect to the mobile phone network. Certain information is exchanged between the phone and the network so that calls can be made and received and so that you can be billed for them.
14. Make one change to this connection process and the NCIS problem above is solved. Add the public key of the stored UKPS digital certificate to the information that needs to be exchanged in order successfully to connect to the network and there will be no more anonymous mobile phone communication.

Problem 2 – credit card fraud 15. It is not clear how the Home Office's proposed identity card scheme will help to reduce credit card fraud.

16. The credit card companies are now introducing chip and pin cards in the UK which seems likely to reduce fraud in transactions where the customer is present.
17. Chip and pin cards, like identity cards, do nothing to reduce fraudulent transactions when the customer is not present.

Solution 2 18. Dematerialised ID does.

19. Under dematerialised ID, more suppliers would issue digital certificates instead of material secure vouchers like credit cards. Suppose that your credit card was no longer a material lump of plastic but was instead a digital certificate stored on your mobile phone.
20. Then, when you are present at the point of sale – perhaps you are paying your bill in a restaurant – your phone could connect to a cash register using a free infra-red link. The transaction could be validated using all the strength of the public key infrastructure to authenticate you and the merchant you are buying from.
21. When you are not present – perhaps you are ordering theatre tickets over the phone – you will be connected to the supplier by the mobile phone network. Apart from that, there is no difference between the two cases. Your transaction will still be thoroughly validated even though you are not present.

Problem 3 – identity theft and money-laundering 22. The Home Office advocate their identity card scheme partly on the basis that it will help to reduce identity fraud and money-laundering.

23. They will issue identity cards to all individuals aged 16 and over. But money-laundering is not carried out only by individuals. It involves banks and other organisations. And identity fraud does not happen only to individuals. It happens to companies, too, and other organisations – consider the examples

of the current practice known as “phishing”.

24. As long as the Home Office concentrates on individuals only, their scheme can only partially tackle the problems of identity theft and money-laundering.

Solution 3 25. Dematerialised ID can tackle them fully.

26. Under dematerialised ID, it is not just UKPS who would issue digital certificates. Companies House would issue digital certificates to companies, in addition to today’s material certificates of incorporation, the FSA would issue digital certificates to banks, the TUC would issue them to unions, the Charity Commission would issue them to charities, and so on.

27. Dematerialised ID would have the effect of bringing all the parties to identity theft and money-laundering into the same infrastructure, the public key infrastructure or PKI. In this way it will be better equipped to combat the problem effectively than a scheme which concentrates on individuals only.

Problem 4 – forgery 28. Every year, there is a small incidence of people being sold forged FA Cup Final tickets. People are sold forged tickets to pop concerts. Employers are duped with forged examination certificates. People carry forged passports, driving licences and other identification.

29. The Home Office identity card scheme ignores PKI, the proven technology designed to make forgery impossible.

Solution 4 30. Dematerialised ID does not.

31. Under dematerialised ID, all of the material secure vouchers above like passports, concert tickets and so on would be replaced with digital certificates, they would be dematerialised. And they would all be subject to the powerful authentication facilities of PKI. As long as established procedures are followed – and they have been established worldwide for some 30 years already – forgery would become so difficult as to be to all intents and purposes impossible.

Problem 5 – location-based crime 32. Identity theft, money-laundering and forgery are bad enough but they are not the crimes that more generally worry and depress people. What upsets people generally is muggings, car crime, burglary, vandalism, and so on.

33. The Home Office’s identity cards do nothing to address these crimes.

Solution 5 34. A scheme like dematerialised ID that does address these crimes would be politically popular.

35. These crimes are all location-based. Dematerialised ID relies on mobile phones. Mobile phones can be tracked, they are “location-aware”. Location records can be and is stored by the mobile phone network operators and used by the police in crime detection. In this way dematerialised ID makes a contribution to reducing the crimes which actually worry people.

35 paragraphs, 1,194 words of evidence