Discussion paper: Biometrics – what the future holds for Australia

Purpose

The purpose of this paper is to detail where biometrics will go in Australia in future years.

Background

The Australian Institute of Biometrics defines biometrics as a variety of technologies in which unique identifiable attributes of people are used for identification and authentication. The diagram below provides a summary of the types of biometric measures.

![Biometric Categories Diagram](image)

In 2007 CPSISC representatives travelled to New York to attend an International Biometrics Conference. The conference was held at the Hilton Millennium Hotel overlooking the World Trade Centre hole in the ground. This was a fairly ironic place to hold the conference as the very technology under discussion may have played a role in preventing the disaster if it had been more widely and expertly used to screen out people of interest. The conference was well attended with US Customs, Navy, Intelligence Services and even a senior person from the office of the Secretary of State.

1 Australian Biometrics Institute, [http://www.biometric institute.org/](http://www.biometric institute.org/)
Apart from making excellent contacts at the conference, CPSISC returned to Australia and developed a suite of competency units for inclusion in the then Asset Security Training Package. These were developed after input from key industry and government officials as well as the Australian Biometrics Institute.

In Australia facial recognition equipment called ‘Smartgate’ has been in operation for many years after first being trialled with Qantas staff. It has proven highly effective and has recently been upgraded 3.

Future for biometrics in Australia

CPSISC again returned to the USA in 2011 and met with Samir Nanavati and Joy Kasaain of the International Biometrics Group (IBG). Advice from Samir was that the industry has quickly matured in the USA and that many of the smaller players with business models not really up to scratch were no longer in operation. The business has settled down and the rocket trajectory growth of the earlier years had levelled out 4.

(L-R) Noel Hamey, Samir Nanavati, Joy Kasaain, Alan Ross

It is very clear from IBG’s website, however, that business is still booming. IBG has recently been awarded a large contract to provide independent verification and validation for Medicaid EHI services for the Texas Health and Human Services Commission (see www.ibgweb.com). The new system removes paperwork and provides a permanent plastic ID card. The implications for this model in Australia are pretty much unlimited. Many of the larger government agencies may move to biometrics based identification which will remove large scale paper based systems.

3Australian Biometrics Institute, http://www.biometricssstitute.org/
4 CPSISC Strategic Engagement Report, July 2011
There is no reason, other than privacy issues, why all government access and identification requirements could not be moved to biometric systems. The Federal Department of Defence already uses iris scanning to enter secure buildings at Russell in Canberra, and either iris recognition or fingerprint scans could replace manual checking at all government buildings. For those officers entering Federal Departments or secure areas such as Parliament House, biometric scans would speed up existing processes markedly.

Biometrics have also made a significant impact on both the leisure and accommodation industry in the USA. Many gyms have found it cost-effective to use either iris scanners or fingerprint scanners to replace membership cards. This saves considerable money and time as cards are always being lost. Upmarket hotels provide a VIP service for guests who wish to arrive out of hours for business and privacy reasons. Fingerprints are scanned and kept on record to enable access to rooms without the need to check in.

An area of biometrics which will cause concern for Australia is full body scans at airports. In the USA these have slowed passenger screening to snail pace. A person has to move through a scanning device, turn and face a screen with arms above their head and wait until cleared before moving on. This is inefficient and has caused a lot of tension due to delays. We need to do better in Australia which may mean sticking with our existing system or even streamlining it for regular business travellers who do not have the time for such a process. Perhaps using the existing system along with iris scanning would save much time. Even the existing system can be frustrating. A young man was once seen stripping to his jocks after failing a scan three times. Fortunately he passed on the last occasion.

Another factor that will drive the growth of biometrics in Australia is prioritisation of roles for police. State governments are slashing budgets at present and a new model of policing will be adopted which will grow the private security industry. Many of the monitoring roles used by police will in the future be done by the security industry. Police will be used for key roles rather than mundane jobs. In the UK and Europe the police and security industry work much closer together with the security industry backing up police operations. The security industry in Australia will need to use biometrics to identify and weed out criminals. Security monitoring centres will use facial recognition equipment to catch and identify wanted criminals and can pass information quickly to the police for arrests. Australia will move to more gated communities as is the case in the USA, and the private security industry will do the guarding. Access will be through either iris scanning or fingerprints as both are very secure.

It is also reasonable to expect many homes to do away with keyed approaches and install biometric equipment for entry. The technology is becoming inexpensive and family members may no longer need to juggle large piles of keys to enter the family home.

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Biometrics can also be used to help with social programs aimed at assisting the disadvantaged. In the USA they are used to ensure that children from poor socio-economic areas are able to receive proper meals at schools. As children go through the canteen they swipe their forefinger on a scanner regardless of whether they are paying for the food. The kids without money are still fed but not earmarked as poor because privacy is maintained. These principles could also be used in Australia in areas where children go to school hungry. Everyone has a right to eat properly while allowing maximum learning.

Many of the problems around privacy are expected to be sorted out very soon as the Australian Biometrics Institute launched its International Biometrics Privacy Charter in November 2011. The Charter is intended as a guide across many different countries and jurisdictions for suppliers, end users, managers and purchasers of biometric systems.

Training implications

The existing biometrics units of competency in Australia are adequate, but further resources are required to deliver the necessary training. Training in this area will always be a problem as for all aspects of technical security, because numbers of candidates are limited. It is recommended that CPSISC’s security provider RTO cooperative check the adequacy of existing resources and develop a plan for the production of better training resources.

The Australian Biometrics Institute has done an excellent job of growing the industry in Australia but more needs to be done to market the benefits of the technology. CPSISC needs to continue working very closely with this group to make the most of the technology and opportunities for its use.

Conclusion

Overall, the use of biometrics in Australia is a long way behind the USA. Our adoption of some systems has been relatively slow and the industry has great potential to expand rapidly, especially in terms of access control. There is an opportunity to use the technology to overcome some social disadvantage in schools and to improve security in whatever shape our communities and living styles take in the future. The delays we have experienced will enable us to avoid many of the shortcomings experienced overseas.

References

- Australian Biometrics Institute, http://www.biometricsinstitute.org/
- CPSISC Strategic Engagement Report, July 2011