Information paper on
11 November 2000

Panel on Security of the Legislative Council

Smart Identity Card Projects of Other Places

INTRODUCTION

At the LegCo Panel on Security Meeting held on 24 October 2000, Members asked to know more about the smart identity (ID) card projects of Finland, Malaysia and Taiwan. This paper provides relevant information[*].

SMART ID CARD OF FINLAND

2. The Finnish Ministry of Interior, through the Population Register Centre, issued the first electronic national ID card (FINEID) in December 1999. The first batch of the cards are, 16K contact smart cards, issued first to citizens who want to have the first cards and subsequently to the whole nation. The card is voluntary.

3. Apart from the card holder's visual demographic data and other security features, the card carries electronic identity of the card holder. Through public key technology, electronic certificates are issued and stored on the card. Separate RSA key pairs are used for the generation of electronic signature to protect the integrity of information and non-repudiation of electronic transactions and e-commerce for authentication/encryption services.

4. All Finnish citizens can apply to the local police authority for a smart FINEID card. This enables them to use a digital certificate to register their change of address securely across the Internet (they are required to register any change of address with the government). The information feeds into the computers of the Population Register Centre and also into the address information system used by Finland Post.

---

[*] Based on information in the public domain.

5. Several sets of services and applications are now used by and planned for the FINEID card. Firstly, the card enables Finnish citizens to establish identity securely across the Internet – for signing forms on the Web (typically for taxation and address registration); for securing e-mail; and for proving identity for remote working. Secondly, the card may be used to certify the identity of the card holder for obtaining remote banking and insurance services. The card may also be used to establish identification to the local government and city services – for gaining access to libraries, recreational facilities and so on.

SMART ID CARD OF MALAYSIA

6. The Malaysian ID card has been issued to Malaysian residents since 1960 and the current one in use is paper-based. According to law, all Malaysian citizens, permanent residents and temporary residents are required to apply for an ID card at the age of 12 years. They are required by law to carry an ID card at all times.

7. With a view to providing new services with added convenience and security to the public, the Malaysian Government entered into a contract with the Government Multi-Purpose Card (GMPC) consortium formed by 5 companies for the implementation of a multi-purpose smart card project.

8. The new GMPC is a contact smart card. The base material of the card is made of layers of PVC and PC with a 32K memory chip to store fingerprint and black and white photo image of the card holder.

9. Following the introduction of the GMPC in September 2000, 50,000 cards are now being issued to Malaysian citizens on a trial basis. The GMPC project will be further developed in two phases – (a) large scale roll-out scheduled in April 2001 for an estimated population of 2 million (citizens aged 12 or over) in the Kuala Lumpur/Kiang Valley area; and followed by (b) a national roll-out planned for 2003. Four government applications, namely, National Identity, National Driving Licence, Immigration and Medical Information are included in the GMPC. The inclusion of immigration functions is to expedite passenger clearance, especially those who travel frequently to Singapore and Thailand.

10. The GMPC is the flagship of the two-card strategy adopted by the Multimedia Super Corridor Multi-Purpose Card (MPC). The other component being the Payment Multi-Purpose Card (PMPC). Apart from

the four government applications, the GMPC also incorporates E-cash and Public Key Infrastructure (PKI) applications[#], while the PMPC will cover credit card, debit card, ATM and E-cash applications. Although the two cards are being currently developed separately, the MPC objective is to eventually merge the applications of these two cards into a single platform supporting both the government and payments applications.

11.   The Malaysian government is confident that the card will be well received by the public after its benefits have been clearly explained to them. Besides, the GMPC has proven to be a catalyst in creating a test-bed for new leading edge homegrown technologies.

SMART ID CARD PROJECT OF TAIWAN

12.   In 1998, the Taiwan administration planned to introduce a smart card that would serve as an identity document and carry health care information. A 15-company consortium was selected for the contract.

13.   The Taiwan administration entered into negotiations with the consortium in August 1998. Three months later, the talks broke down over the administration's unwillingness, in the face of public pressure, to allow the card to be used for purchases at retail locations, as well as for identification and health care purposes. The purchase feature was key to the system operators because it offered them an opportunity for a lucrative revenue stream, as they planned to charge merchants a fee – no amount was specified – for accepting the card for purchases.

14.   Since the card would be linked to a central database maintained by the Taiwan administration, operators of the smart card system would be in a position to offer merchants a wealth of data about consumers. Because of the fear that the smart card system operators would access such personal data and resell it to merchants for targeted marketing, there was an uproar of protest over potential privacy violations, particularly among the intellectuals. Backpedaling in the face of criticism, the Taiwan administration promised not to ram through the project until the public's privacy concerns were addressed.

15.   Another factor contributing to the breakdown in negotiation

---

[#]   Public Key Infrastructure covers the use of public key cryptography and digital certificates as the accepted means of authentication and access conrol over untrusted networks, such as the Internet. While public key cryptography addresses issues of data integrity and transaction privacy, certificates address concerns of authentication and access control.

between the Taiwan administration and the consortium was the business model proposed by the former. For the multi-purpose smart ID card project, the Taiwan administration wanted to adopt a 'Build, Operate and Transfer' model. Under this model, the consortium needed to build the system and be responsible for operating the system for 20-30 years. The Taiwan administration did not have to fund the project at all. Under this operation mode, the consortium could only get revenue from the financial and e-commerce transactions. Because of privacy concerns relating to the operation of the ID scheme by the private sector, the Taiwan administration decided to remove the financial functions from the smart ID card, leaving behind only the PKI functions. As the revenue from the PKI transactions was expected to be much lower, there was no incentive for the consortium to take up the smart ID card scheme, given the business model.

Security Bureau
9 November 2000