Information paper on 4 October 2002

Bills Committee of the Legislative Council Registration of Persons (Amendment) Bill 2001

Experience of Using Smart Identity Cards in Other Countries

INTRODUCTION

As requested by Members at the meeting on 10 July 2002, this paper provides information on the smart identity (ID) card schemes operated by other countries and compares their schemes (including their legislation on data privacy issues) with ours.

SMART ID CARD SCHEMES OPERATED BY OTHER COUNTRIES OR REGION

2. As far as we know, Finland, Brunei and Malaysia have been issuing smart ID cards for some time while the Macau Special Administrative Region (SAR) is planning to do so by the end of this year.

Finland

3. Electronic identification cards (EID), with a validity of three years, are issued to Finnish citizens and foreigners residing permanently in Finland. Apart from being a valid ID card, it can be used for electronic identification and digital signature. The card also serves as an official travel document in a total of 15 European countries. Applications for EID are voluntary.

4. The EID features the holder's photograph and a microchip, with the user's e-number embedded in it. With the EID, it is possible to exchange information over data networks with public authorities, companies and corporate bodies. Currently the card provides access to on-line banking and insurance services, educational services, and services

provided by regional administration and public administration. It is expected that more services will be provided in the future and thus the EID will become a single key for numerous on-line services.

5. Protection of personal data is governed by the Personal Data Act and enforced by the Data Protection Ombudsman, an independent authority operating in connection with the Ministry of Justice.

Brunei

6. The Brunei national multi-application smart ID card (SIC) was officially launched on 29 July 2000. The scheme was initiated by the Department of Immigration and National Registration (INR) of Brunei. All Brunei citizens and permanent residents are required to register with INR for the issue of a SIC at the age of twelve. The SIC will also be issued to foreigners staying in Brunei for a period of more than three months.

7. There are three types of SIC in circulation - the yellow, the purple and the green. The yellow ID card is for Brunei citizens, the purple one for permanent residents and the green one for temporary foreign residents. All SICs take the form of a contact smart card and contain the template of two thumbprints, one digital photograph, general personal data and immigration specific data. Partitions are available for other government agency data.

8. Commencing from 1 August 2000, all holders of Brunei ID card are required to re-register for a new SIC, but the re-registration for green ID card was temporarily frozen until further notice.

9. At the moment, the SIC has the sole function as an ID card. It will be expanded to include driving licence and electronic certificate at a later stage with a view to working towards e-government and e-commerce.

10. Our understanding is that there is no specific legislation for protection of personal data in Brunei.

Malaysia

11. The National Registration (Amendment) Regulations 2001, which formally recognizes the Government Multi-Purpose Card (GMPC) as the national ID card of Malaysia, was introduced in June 2001. The GMPC is an electronic card embedded with a microchip capable of storing and processing a person's personal particulars for the functions and applications prescribed by the Director General of National Registration. No further paper ID cards has been issued since 31 July 2001.

12. The GMPC is a collaboration of five Government Agencies, namely the National Registration Department as the lead agency, Road Transport Department, Immigration Department, Ministry of Health and Royal Malaysian Police. The GMPC is a replacement of the National Identification Card and Driving Licence. It also serves as the access key to facilitate other services and applications. For instance, availability of passport/immigration information in the GMPC facilitates efficient exit and re-entry of cardholders at Malaysian Immigration checkpoints; E-cash and Automated Teller Machine (ATM) facilitate daily transactions; and Transit makes contactless 'Touch and Go' for auto toll and parking An additional application, namely, Public Key Infrastructure possible. (PKI) is planned to be implemented by the end of this year or early next facilitate e-commerce transactions and ensure integrity, vear to authentication and non-repudiation of data.

13. Our understanding is that there is no specific legislation for protection of personal data in Malaysia.

Macau SAR

14. The Macau SAR Government is planning to issue the new smart Resident Identity Card (RIC) in November/December 2002. The Law of Resident Identity Card Regime (Law No. 8/2002), which defines the principles for the issuance of smart RIC, was enacted by the Legislative Assembly on 30 July 2002.

15. The biometric data to be collected by the Identification Department during application of RIC are fingerprints. Right and left index fingerprints of the cardholder will be captured, digitised and encrypted through algorithms before storing in the chip of the card for auto-gate operation at border controls and verification of identity. Although a person can be identified with absolute certainty from this data, reproducing the fingerprint from the digitised information is not possible.

16. The visible data (i.e. data shown on card face) stored in the chip could be read by an ordinary smart card reader. Reading invisible information such as marital status could be effected by the holder through keying in a Personal Identification Number (PIN) or by an officer through using a Security Access Module (SAM). Reading other invisible data, such as fingerprint codes, contact information, driving licence, will only be possible through a SAM, which is to be produced in the Identification Department under the requests of competent departments. It will contain the access right to certain data defined by the relevant department.

17. Government departments and private sector will be allowed to read card face information stored in the chip. Public notaries (possibly also private notaries) will be allowed to read marital status. Only government departments (mainly Police/Immigration Department) will be able to read fingerprint codes.

18. The smart RIC project will be implemented by phases. The replacement of the current Macau Resident ID Card will be compulsory and is expected to last for 4 years. Until late 2003, there will only be data within the competence of the Identification Department, i.e. single ID application. After that, other data will be added, such as student card, driving licence and medical card.

19. The Law of Resident Identity Card Regime has the following measures in addressing the privacy issue:

- (a) allowing the cardholder the option to include the non-identification data in his smart RIC; and
- (b) enabling the cardholder to read his data in the smart

RIC and related database of the Identification Department.

20. A table comparing the smart ID card scheme adopted by the HKSAR and other countries/regions known to have issued or will shortly issue smart ID card is at Annex.

Security Bureau 2 October 2002

	Finland	Brunei	Malaysia	Macau SAR	Hong Kong SAR
Date of Implementation	December 1999	July 2000	July 2001	November/ December 2002	May 2003
Function of the Smart ID Card	 Multi-application National ID card Access to various services of the state sector such as notification of change of address, applications for changes to tax cards, registration as job-seeker with the labour exchange, etc. Other usages include: Employer usage: access to company premises and company's own data network Municipality usage: application for day-care, library services, public transportation 	 Multi-application Only single application (ID card) at the outset. Driving licence and electronic certificate will be introduced at a later stage. 	 Multi-application National ID card Driving licence Passport information Immigration information Automatic Teller Machine (ATM) E-cash Transit (contactless 'Touch and Go' for toll and parking) Public Key Infrastructure (PKI) for e-commerce, to be implemented by end of 2002 or early 2003 	 Multi-application ID card Digital certificate Auto-gate operation Capacity reserved for inclusion of more functionalities, such as student card, driving licence, medical card, etc. Emergency point of contact 	 Multi-application ID card Digital certificate Library card Driving licence Change of address Capacity reserved for e-purse and other future applications to be identified

Comparison of Smart ID Card Scheme adopted by the HKSAR and other countries/regions

	Finland	Brunei	Malaysia	Macau SAR	Hong Kong SAR
	 Banking usage: using bank account via the network, raising loans, investment services Citizen usage: individual solutions, e.g. secured e-mail As official travel document for travelling in 15 European countries. 				
Compulsory or Voluntary for Replacement of Smart ID Card	Voluntary	Compulsory	Compulsory (Paper type ID card has ceased to be issued since 31 July 2001.)	Compulsory	Compulsory
Population Involved	• Finnish citizens and foreigners residing permanently in Finland whose particulars have been entered in the Population Information System with identity verified reliably.	permanent residents aged twelve or above and temporary residents	 All citizens of Malaysia or permanent residents aged twelve and above (about 18 million). 2.2 million cards have been issued since its rollout. 	• All residents of Macau SAR aged five and above.	• All residents who are required to register for an ID card under the Registration of Persons (ROP) Ordinance and ROP Regulations (about 6.8 million).

	Finland	Brunei	Malaysia	Macau SAR	Hong Kong SAR
for Registration of Persons	 The Identity Card Act of Finland only specifies the content of an ID card but not the particulars to be collected at the time of application. However, the Act stipulates that ID cards are issued to Finnish citizens and aliens residing permanently in Finland whose particulars have been entered in the population information system and whose identity has been verified reliably. Under the Population Information Act, the following personal data shall be recorded in the population information system: As identification information – personal identity code, electronic transaction identifier, name, address, 	 the following particulars shall be furnished by the applicants: Name (including Chinese characters, if any) Full address of place of residence Race Place of birth Date of birth Sex Physical abnormalities, if any Citizenship Blood group Photograph Fingerprint impressions Such other particulars as the registration officer may consider necessary 	 The National Registration Regulations stipulates that the following particulars shall be furnished by the applicants: Name Previous identity card number, if any Full address of place of residence Race Religion (only for Muslims) Place of birth Date of birth Sex Physical abnormalities Citizenship Photograph Thumbs impressions Such other particulars as the registration officer may consider necessary 	The Macau SAR Law on Residents' ID Card Regime only specifies the content of the ID card but not the particulars to be collected at the time of application. However, the ID card application form shows that the following particulars are to be collected: Name Sex Date of birth Nationality Place of birth Photograph Marital status Profession Residential address Contact telephone number Name of spouse Document details of the spouse Name of father	 The ROP Regulations stipulate that the following particulars shall be furnished by the applicants: Name Residential and business address Nationality claimed Place of birth Date of birth Sex In the case of new arrivals, the names of countries which they have resided continuously for 6 months or more prior to their entering Hong Kong Name and ID card number of spouse Names, sex and age of children Profession, occupation, trade or employment

Finland	Brunei	Malaysia	Macau SAR	Hong Kong SAR
 residence, place of residence, information on real estate, building and apartment Information relating to parents, marriage, spouse and children Information on citizenship, legal capacity and date of death Information on native language and communication language, profession, postal address, corresponding address Voting right information Membership of religious community Information on decisions made by the multi-member body handling social welfare issues relating to the taking of children into custody 			father Name of mother Document details of the mother Fingerprint impression (right index finger) Signature of applicant (or parents) List of documents submitted Additional information	 In case of non-permanent resident, his condition of stay (COS) and limit of stay (LOS) Photograph Thumbprint impressions Such other particulars as the registration officer may consider necessary

	Finland	Brunei	Malaysia	Macau SAR	Hong Kong SAR
	 ID card number Name Sex Personal identity code Date of issue Date of expiry Nationality (Finnish citizens only) Issuing authority Photograph of the holder Signature of the holder 	 Registration Act and Regulations do not specify the particulars to be printed on the card face. In the lack of a Brunei ID card, no further information is available 	 ID card number Name Residential address Sex Citizenship Religion (only for those of Muslim faith) Old ID card number Serial number 	 Serial number Date of first issue Date of current issue Date of expiry Name of the card holder Date of birth Height Place of birth and sex codes Portrait Category of Macau SAR residential status Signature Optical character recognition code (Information obtained from the Macau SAR Law on Residents' ID Card Regime) 	 ID card number Name (English and Chinese) Chinese commercial codes (if applicable) Date of birth Photograph (for persons of or over the age of 11) Place of birth code Symbols denoting sex, place of birth, residential status, change of name, change in date/place of birth Date of first registration of an ID card Date of issue of the smart ID card
Data stored in the Chip	 Card face information Certificates may be stored, upon application, to enable electronic transaction 	the definition of		 Visible data on card face Names of the card holder's parents Marital status 	 Card face information Templates of the left and right thumbprints or any two fingerprints (for persons of or over the

Finland	Brunei	Malaysia	Macau SAR	Hong Kong SAR
 within administration, social and health services, on-line authentication, encryption and digital signature. The following information will be stored onto a certificate: name of the issuer of the certificate name of the certificate holder electronic transaction identifier of the certificate holder validity of the certificate data on the method for calculating the public key of the certificate holder the country code of the issuer of the certificate 	• It is understood that	information Passport number Expiry date of passport E-cash information PKI (The above information is obtained from the website and the relevant authorities. Cannot find such information in the National Registration Act or Regulations.)	digital certificate	age of 11) • Photo image of the card holder (for persons of or over the age of 11) • In case of non-permanent resident, his COS and LOS. • Digital certificate (at cardholders' choice)

	Finland	Brunei	Malaysia	Macau SAR	Hong Kong SAR
	 data on the calculation method used by the certificate authority for signing the certificate data on the certificate policy used data on the usage of the certificate other necessary technical data required for the use of the certificate. 				
Memory of the Chip	16K	8K	32K	32K (May move to 64K in 2003 if chips of 64K are available in the market and reliable.)	64K when the technology
Contact or Contactless Card	Contact	Contact	Hybrid (contact and contactless)	Contact	Contact
Validity of the Smart ID Card	• 3 years	• 10 years for citizens and permanent residents aged 17 and above.	 No expiry date specified 	• Below 18 years of age: valid for 5 years	 No expiry date specified

	Finland	Brunei	Malaysia	Macau SAR	Hong Kong SAR
		 aged 17 and above. 5 years for citizens and permanent residents aged between 12 and 16. For temporary residents, according to period stated in the passport. 		 Between 18-59 years of age: valid for 10 years Over 60 years of age: with no expiry date. 	
Privacy Safeguards (in ID card legislation)	The Identity Card Act of Finland does not contain any particular provision on privacy matters	 Regulation 11(1) of the National Registration Regulations of Brunei stipulates that the register shall not be open to inspection by the public. Regulation 11(2) confines the power of inspection on the registration register to public officers duly authorized by the Commissioner of National Registration, or a police officer carrying out a police investigation. Regulation 24(1)(k) prohibits any public 	 National Registration Regulations stipulates that the register shall not be open to inspection by the public. Regulation 12(2) confines the power of inspection on the registration register to public officers duly authorized by the Director General of National Registration, or a police officer carrying out a police 	 Article 14 of the Macau SAR Law on Residents' ID Card Regime prohibits the unauthorized use of PIN, unauthorized access to the ID card computer system, interference with the circuits in the chip, hacking and unauthorized alteration of and damage to the data. Offenders will be liable to imprisonment terms and a fine. Allowing the card holder the option to include the non-identification data 	 Regulation 12 prohibits any person without authority to mark any entry upon, erase, cancel, alter any mark or entry, deface or destroy an ID card, or in possession an ID card which is defaced or unlawfully altered. Regulation 24 of the ROP Regulations stipulates that a registration officer shall not disclose photographs, fingerprints and particulars without the written permission of the Chief secretary for

Finland	Brunei	Malaysia	Macau SAR	Hong Kong SAR
	officer to publish or communicate to any person any information contained in the register except in the public interest and with the permission of the Commissioner. Offenders will be liable to imprisonment terms and a fine.	communicate to any person any information contained in the register save in the public interest and with the permission of the Director-General, or for the purpose of criminal proceedings. Offenders will be liable to imprisonment terms and a fine.		 Administration. To further strengthen the privacy safeguards, the ROP (Amendment) Bill 2001 has proposed the inclusion of the following measures: To add the "smart element" of the new ID card to the ROP Ordinance so that the prohibitions on unauthorized entry, erasure, cancellation or alteration of ID card (Regulation 12) can also apply to the data in the chip
				 To repeal Section 7(2)(f) such that Chief Executive in Council will no longer be empowered to make regulations on the disclosure of personal data To add a new Section

Finland	Brunei	Malaysia	Macau SAR	Hong Kong SAR
				 9 in order to impose restrictions on the use of particulars To move Regulation 24 to the ROP Ordinance (as new Section 10) in order to raise its status To add a new Section 11 to make unauthorized access, storage, use or disclosure of ROP particulars an offence. Offenders will be liable to imprisonment terms and a fine To specify in the new Regulation 11A that verification of identity by way of thumbprint match can be done only if there are reasons to double the identity of a person

	Finland	Brunei	Malaysia	Macau SAR	Hong Kong SAR
Privacy Safeguards (in other legislation)	 Protection of personal data is accorded by the Personal Data Act. The Personal Data Act is enforced by the Data Protection Ombudsman (DPO) who is an independent authority operating in connection with the Ministry of Justice. The Personal Data Act of Finland is similar to the PD(P)O of Hong Kong in the following areas: The Controller shall process personal data lawfully and carefully, in compliance with good processing practice. The personal data processed must be necessary for the declared purpose of processing. 	legislation on protection of data privacy.	legislation on protection of data privacy.	 Macau does not have any authority with specific powers in the fields of privacy or personal data, but a number of provisions scattered in the legislation shall have a similar effect. Article 30 of the Macau Basic Law recognizes that Macau residents have a right to privacy. Article 79 of the Civil Code is specifically on personal data. It sets out that a data owner shall have the right to know about any data relating to himself in any database and the purposes of the collection, as well as the right to demand rectification or update of such data. 	 Personal Data (Privacy) Ordinance [PD(P)O] and the Code of Practice on the ID Card Number and other Personal Identifier are in force to protect personal data privacy. An Office of the Privacy Commissioner for Personal Data is established to enforce the PD(P)O. Six data protection principles are stipulated in the PD(P)O: Data shall not be collected unless the data are collected for a lawful purpose directly related to a function or activity of the data user, the collection of data is necessary, and the data are adequate but not exhaustive in relation to that

Finland	Brunei	Malaysia	Macau SAR	Hong Kong SAR
Act, etc.				other use
• The Controller shall				• All practical steps
carry out technical				shall be taken to
and organizational				ensure that a person
measures necessary				can ascertain a data
for securing personal				user's policies and
data against				practices in relation
unauthorized access,				to personal data, be
accidental or				informed of the kind
unlawful destruction,				of personal data held
manipulation,				by a data user, and be
disclosure, transfer or				informed of the main
unlawful processing				purposes for which
• When collecting data,				personal data are to
the Controller shall				be used
see to it that the data				• A data subject shall
subject can have				be entitled to
information on the				ascertain whether a
Controller, the				data user holds
purpose of the				personal data on him
processing of				and request access to
personal data, regular				personal data
destinations of				• Section 57 & 58 of the
disclosed data, as				PD(P)O provides for
well as how to				circumstances under
proceed in order to				which data protection
make use of the rights				principle 6 or 3 is
of the data subject in				exempted, as

Finland	Brunei	Malaysia	Macau SAR	Hong Kong SAR
 respect of the				appropriate, e.g. for
processing operation.				safeguarding security,
• Everyone shall have				defence or international
the right of access,				relations, or for
after having supplied				prevention or detection
sufficient search				of crime, etc.
criteria, to the data on				
him in a personal data				
file, or to a notice that				
the file contains no				
such data				
• There are also				
provisions under				
which the Controller				
can derogate from the				
duty of providing				
information to the				
data subject, e.g. if				
this is necessary for				
the protection of				
national security,				
defence or public				
order or security, for				
the prevention or				
investigation of				
crime, etc.				
• It is interesting to note				
in the Personal Data				

	Finland	Brunei	Malaysia	Macau SAR	Hong Kong SAR
	Act that personal data can be processed for special purposes such as research, statistics, official plans and reports, public register, genealogical research, direct marketing and other personalised mailing				
Multi- Application in the ID Card Legislation	 No particular provision on the multi-application in page 1 of this chart is mentioned in the Identity Card Act. The Act only states that by means of an electronic ID card, a person can be authenticated in certified electronic transaction and where necessary, the person can electronically sign and encrypt documents and messages he sends. The ID card legislation 	 None The ID card legislation does not place any restriction on the incorporation of future non-immigration applications into the card. Neither is it a requirement that all non-immigration applications must be voluntary. 	 The National Registration (Amendment) Regulations 2001 provides that "an identity card" means a Government multi-purpose Card which is construed to mean an electronic card embedded with an electronic microchip capable of storing and processing a person's personal particulars for the functions and applications prescribed 	 The Law of Resident ID Card Regime provides for the storage of digital certificate and emergency point contact. Setting up a Committee that defines the policy of adding non-identification data to the chip of the smart ID card and proposes to the Chief Executive the inclusion of particular data. The ID card legislation does not place any 	 A new provision will be added to the existing ROP Ordinance to empower the Chief Executive in Council to specify in a new Schedule 5 the non-immigration applications that require the storage of additional data in the chip or printing of additional information on the card face to be incorporated into the new smart ID card. (At the initial stage,

Finland	Brunei	Malaysia	Macau SAR	Hong Kong SAR
does not place any restriction on the incorporation of future non-immigration applications into the card. Neither is it a requirement that all non-immigration applications must be voluntary.		 by the Director General from time to time and includes a high security identity card with chip. No particular provision on multi-application in page 1 of this chart is mentioned in the National Registration Act or Regulations, except that: "driving licence" was added in the National Registration Regulations as "driving licence shall be construed as provided under the Road Transport Act 1987" the definition of "registration office" was extended to include: (a) the National Registration Department or any branch of the National 	restriction on the incorporation of future non-immigration applications into the card. Neither is it a requirement that all non-immigration applications must be voluntary.	 only the digital certificate issued by the Hong Kong Post will be embedded in the chip and requires the storage of additional data.) For implementation of non-immigration applications, their relevant underlying legislation will be updated wherever appropriate.

Finland	Brunei	Malaysia	Macau SAR	Hong Kong SAR
		Registration		
		Department;		
		(b) the Road Transport		
		Department or any		
		branch of the Road		
		Transport		
		Department;		
		(c) the Immigration		
		Department or any		
		branch of the		
		Immigration		
		Department; or		
		(d) any premises as may		
		be determined by the		
		Director General of		
		National Registration.		
		• The ID card legislation		
		does not place any		
		restriction on the		
		incorporation of future		
		non-immigration		
		applications into the		
		card. Neither is it a		
		requirement that all		
		non-immigration		
		applications must be		
		voluntary.		