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**Panel on Security**

**Background brief prepared by the Legislative Council Secretariat  
for the meeting on 1 March 2016**

**The Next Generation Smart Identity Card System**

**Purpose**

This paper provides background information and summarises past discussions of the Panel on Security ("the Panel") relating to the Next Generation Smart Identity ("ID") Card System.

**Background**

*Introduction of the smart ID card*

2. The existing smart ID card was introduced in June 2003 to replace the old computerised paper form ID card, the design and supporting computer system of which had become aged and outdated after a decade of use. According to the Administration, the smart ID card employed state-of-the-art technologies to make it more secure and fraud-resistant. To combat forgery, the smart ID card has incorporated a number of sophisticated security features, including optical variable ink, multiple laser image, kineprint with colour-changing images when viewed at different angles and high-quality laser engraved photograph on the polycarbonate card body. The relevant funding proposal was approved by the Finance Committee ("FC") at its meeting on 9 March 2001.

*Legislative framework for the introduction of a smart ID card and the ID card replacement exercise*

3. To provide for the introduction of the smart ID card, the Administration introduced the Registration of Persons (Amendment) Bill 2001 ("the Bill") into the Legislative Council ("LegCo") in December 2001. When the Bill was considered by the relevant Bills Committee, members expressed concern about the inclusion of personal data beyond the purposes of the Registration of

Persons Ordinance (Cap. 177) ("ROPO") in the smart ID card. Having considered members' concern, the Administration moved Committee stage amendments ("CSAs") to the Bill to expressly provide that the inclusion of non-registration of persons data in the smart ID card required the consent of the cardholder and to provide for the removal of such data stored in the smart ID card if so requested by the cardholder concerned. The Bill as amended by these CSAs was passed in March 2003.

4. A territory-wide exercise for replacement of ID cards with smart ID cards commenced in August 2003 and was completed in March 2007. According to the Administration, the Immigration Department ("ImmD") had issued more than 11 million smart ID cards between June 2003 and December 2013. During the period, there were about 55 000 cases involving card replacement, representing approximately 0.49% of the total number of cards issued.

#### *The Next Generation Smart ID Card System*

5. In January 2015, the Panel was briefed on the Administration's proposal to implement the Next Generation Smart ID System and to introduce the next generation smart ID card through a one-off territory-wide ID card replacement exercise from 2018 to 2022. Members were advised that the Smart ID Card System was designed for optimal use for about 10 years. Being developed in the early 2000s, its hardware and software were becoming obsolete. It was becoming increasingly difficult to secure system maintenance and technical support due to limited and dwindling market supply of the outdated technologies. The core software packages supporting the Smart ID Card System had become obsolete and ultimate support from the manufacturers had ceased. The funding proposal was subsequently approved by FC at its meeting on 15 May 2015.

#### **Deliberations of the Panel**

6. The Panel had discussed issues relating to the Next Generation Smart ID Card System at a number of meetings and the major deliberations are summarised in the following paragraphs.

#### Whether there was a need for replacement of smart ID cards

7. Some members expressed concern about the need to replace the smart ID cards seven years after completion of the last card replacement exercise in 2007. According to the Administration, the serviceable life span of the existing smart ID card had been guaranteed by the manufacturer for 10 years under normal usage. While the Administration had secured extension of the existing system

maintenance agreements to the end of 2018, the first batch of smart ID cards issued in 2003 would by then have been in use for about 15 years. Since its first issuance in 2003, there had been over 64 000 cases of malfunction of the chips in existing smart ID cards till end 2014. Members' attention was drawn to the possibility of increasing massive card failure following the ageing of existing smart ID cards. The Administration stressed that it would be irresponsible to continue using the existing smart ID cards and related system far beyond their serviceable lifespan, as a massive breakdown and malfunction of existing smart ID cards might result in confusion in immigration clearance and pose threat to the security of Hong Kong.

#### Protection of information stored inside a new smart ID card

8. Members expressed concern about whether there would be adequate protection of information stored inside a new smart ID card and examined in detail the proposed new chip interface. Some members also expressed concern about whether the use of Radio Frequency Identification ("RFID") technology would enable the reading of information stored inside smart cards within a certain distance without being noticed by the cardholders. The Administration explained that the proposed new smart ID cards would adopt a bi-level encryption mechanism. To read information stored inside a smart ID card, an authorised optical card reader for reading the card face would be needed. Only after the authentication was successful would the encrypted communication channel be established between the smart ID card and the card reader. The Administration stressed that for the card reader to retrieve data from the chip, the distance between it and the card had to be within 2 cm, and the scope of information obtainable from a new smart ID card with optical card reader would be kept to a minimum. The proposed technology was already widely used in many advanced countries.

9. Members were reassured that the question of information stored in a new smart ID card being read from a distance with RFID technology would not arise. On members' concern about privacy protection, the Administration advised that ImmD had submitted the first Privacy Impact Assessment Report and the relevant parts of the feasibility study to the Privacy Commissioner for Personal Data.

#### Scope of information stored in the chip of a smart ID card

10. Some members enquired about the scope of information stored in the chip of a smart ID card. Concern was also raised about the possibility of storage of information other than that set out in ROPO in the chip of a smart ID card. According to the Administration, information stored in the chip of an existing smart ID card was provided for in ROPO. Information such as name, Chinese

Commercial Code of the Chinese name, sex, photograph, fingerprint templates, right of abode status as well as the condition of stay, if any, in the case of a non-permanent resident, was stored on the smart ID card. The storage of information other than that provided in ROPO would require the consent of the cardholder concerned. In this connection, the Office of the Government Chief Information Officer was conducting a separate technical study to review other possible uses of smart ID cards.

### **Latest development**

11. The Administration will brief the Panel on its proposal to create a supernumerary post of Assistant Director of Immigration in ImmD to oversee the development and implementation of the Next Generation Smart ID Card System at the meeting on 1 March 2016.

### **Relevant papers**

12. A list of the relevant papers on the LegCo website is in the **Appendix**.

Council Business Division 2  
Legislative Council Secretariat  
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## Appendix

### Relevant papers on smart identity card

Committee	Date of meeting	Paper
Panel on Security	3.3.2000 (Item I)	<a href="#">Agenda</a> <a href="#">Minutes</a>
Panel on Security	1.6.2000 (Item IV)	<a href="#">Agenda</a> <a href="#">Minutes</a>
Panel on Security	24.10.2000 (Item II)	<a href="#">Agenda</a> <a href="#">Minutes</a>
Panel on Security	11.11.2000 (Item I)	<a href="#">Agenda</a> <a href="#">Minutes</a>
Legislative Council	6.12.2000	<a href="#">Motion on "Smart identity Card</a>
Panel on Security	18.1.2001 (Item IV)	<a href="#">Agenda</a> <a href="#">Minutes</a>
Panel on Security	6.2.2001 (Item IV)	<a href="#">Agenda</a> <a href="#">Minutes</a>
Panel on Security	14.2.2001 (Item I)	<a href="#">Agenda</a> <a href="#">Minutes</a>
Panel on Security	7.11.2001 (Item II)	<a href="#">Agenda</a> <a href="#">Minutes</a>
Panel on Information Technology and Broadcasting and Panel on Security (Joint meeting)	20.12.2001 (Item II)	<a href="#">Agenda</a> <a href="#">Minutes</a>
Panel on Security	9.4.2002 (Item III)	<a href="#">Agenda</a> <a href="#">Minutes</a>

<b>Committee</b>	<b>Date of meeting</b>	<b>Paper</b>
Panel on Security	10.7.2002 (Item IV)	<a href="#">Agenda</a> <a href="#">Minutes</a>
Legislative Council	2.6.2004	<a href="#">Official Record of Proceedings (Question 7)</a>
Legislative Council	2.3.2005	<a href="#">Official Record of Proceedings (Question 6)</a>
Legislative Council	16.1.2008	<a href="#">Official Record of Proceedings (Question 18)</a>
Legislative Council	23.1.2008	<a href="#">Official Record of Proceedings (Question 7)</a>
Legislative Council	15.5.2013	<a href="#">Official Record of Proceedings (Question 10)</a>
Legislative Council	26.2.2014	<a href="#">Official Record of Proceedings (Question 9)</a>
Bills Committee on the Registration of Persons (Amendment) Bill 2001	---	<a href="#">Report</a>
Panel on Security	6.1.2015 (Item IV)	<a href="#">Agenda</a> <a href="#">Minutes</a>
Panel on Security	3.2.2015 (Item IV)	<a href="#">Agenda</a> <a href="#">Minutes</a>
Panel on Security	3.3.2015 (Item VI)	<a href="#">Agenda</a> <a href="#">Minutes</a>

<b>Committee</b>	<b>Date of meeting</b>	<b>Paper</b>
Finance Committee	8.5.2015	<a href="#">Agenda</a> <a href="#">Minutes</a>
Finance Committee	15.5.2015	<a href="#">Agenda</a> <a href="#">Minutes</a>

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