

ITEM FOR FINANCE COMMITTEE

CAPITAL WORKS RESERVE FUND
HEAD 710 – COMPUTERISATION
Immigration Department
New Subhead “Hong Kong Special Administrative Region Identity Card”

Members are invited to approve a new commitment of \$747,037,000 for implementing the first phase of the Hong Kong Special Administrative Region Identity Card Project.

PROBLEM

The computer system supporting the issue of the existing identity card (ID card) will reach the end of its life expectancy in 2002, and needs to be replaced.

PROPOSAL

2. The Director of Immigration (D of Imm), with the support of the Secretary for Security, the Secretary for Information Technology and Broadcasting and the Director of Information Technology Services, proposes to create a new commitment of \$747,037,000 for implementing the first phase of the Hong Kong Special Administrative Region (HKSAR) ID Card Project.

JUSTIFICATION

Need for a new system and a new smart ID card

3. The existing form of ID card was introduced in 1987 and the supporting computer system (i.e. the Registration of Persons (ROP) system) was

commissioned in 1982. The design of both the ID card and the ROP system have
/commissioned

become obsolete. The existing ID card is no longer forgery-proof and the use of counterfeit or unlawfully altered ID cards has been detected from time to time. In the past five years, a total of 155 counterfeits, 2 286 photo-substitutions/unlawful alterations and 1 866 cases of impersonations were detected.

Encl. 1 4. In an information systems strategy review commissioned in May 1999, the consultants concluded that the existing ROP system would reach the end of its life expectancy by the end of 2002 and ought to be replaced. The Immigration Department (ImmD) commissioned a separate study on the feasibility of a new ID card and the supporting computer system in November 1999. The study was completed in June 2000 and its key recommendations are summarised at Enclosure 1. The study identified three options for replacing the ID card and the ROP system: a non-smart ID card similar to the current one, a smart ID card for Imm D's core business only, and a smart ID card with multi-application capacity. After thorough examination of the consultants' recommendations, the Administration considers that a new ID card in the form of a smart card with multi-application capacity and a new supporting computer system should be introduced in 2003, to be followed thereafter by a region-wide ID card replacement exercise to be completed within four years.

The new smart ID card

5. The Administration considers that a smart ID card, supported by a new ROP system, is preferable to a non-smart ID card because the former can take advantage of the modern technology in card production and usage. It can employ more sophisticated cryptographic techniques to protect the data and ensure that it cannot be fraudulently altered or accessed by unauthorised parties. It will store the holder's basic personal information as well as the template of his thumbprints to facilitate secure authentication of the card holder's identity. If the card holder is a temporary resident, his conditions of stay (including limit of stay) will also be captured. Also, the proposed smart ID card will provide the infrastructure for ImmD to consider the introduction of an automated passenger clearance system at control points in future.

6. Furthermore, the smart ID card will have multi-application capacity and the potential to bring to the public many additional benefits. Apart from ImmD's core businesses, the smart ID card will have the capacity for other non-immigration applications, which may initially include electronic authentication (i.e. driving licence, change of address, library card), digital certificate, and other

/e-commerce
e-commerce applications. Subject to feasibility studies on these applications, the Administration will consult relevant Panels of the Legislative Council on whether

and how these are to be introduced. Funding approval for such applications, if it is decided to implement them, will be sought separately at the appropriate time.

ID card replacement exercise

7. The Administration also considers that it is necessary to launch a region-wide ID card replacement exercise so that all eligible HKSAR residents will have a new and more secure ID card. We plan to implement the new ID card project in two phases. The first phase will begin around May 2003 when the new computer system will be put on live trial. We will provide our normal ID card service to the public, except that new applications will be processed by the new computer system and that the applicants will be issued with the new ID card. After the system has been fully tested for two months, the second phase will begin in around July 2003 when all HKSAR residents will be invited to come forward by batches in accordance with specified age groups to have their existing ID cards replaced, with a view to completing the replacement exercise within four years.

8. In each of the two previous ID card replacement exercises conducted in 1983 and 1987, eight New ID Card Issuing Offices (NICIOs) were set up to serve a population of 4.45 million and 4.8 million respectively. These two exercises took 3.7 years and 4.4 years respectively. In the forthcoming exercise, the estimated number of ID cards to be replaced will reach 6.8 million and we plan to complete the replacement exercise in four years. This means that some 6 000 replacement ID cards will have to be issued per working day in addition to the current daily intake of 2 000 (these are mainly applications from newly arrived immigrants, children upon reaching the age of 11, holders of juvenile ID cards who need to change to adult ID cards upon reaching the age of 18, and persons with damaged or lost ID cards). To cope with this demand, we will set up nine NICIOs in the coming replacement exercise.

Benefits

9. The implementation of the HKSAR ID Card Project will bring substantial benefits as follows –

(a) Enhanced security features of ID card

Advanced technology and anti-forgery techniques will be used in producing and personalising the new smart ID card. Secure and sophisticated anti-forgery features will be included on card face to prevent

/counterfeits

counterfeits and look-alike cards. The storage of the template of the card holder's thumbprints in the ID card will ensure more secure and accurate

verification of identity.

(b) Increased public satisfaction

The public will benefit from the new ID card's improved protection on data security and privacy, and greater convenience, e.g. more efficient and secure authentication of their identity and potential for one card for multiple usage. For instance, with the biometric data (i.e. the template of two thumbprints) stored on the ID card, immigration officers with the aid of a special reader can authenticate the card holder's identity on the spot and, where appropriate and necessary, conditions of stay, thus avoiding the need to hold up the card holder for further checks.

(c) Efficiency improvements in Government departments

The new ROP system will enhance efficiency in processing applications through simplification of work processes and strategic use of new technology.

The existing microfilm records will be converted into digital images under the new computer system. As a result, immigration officers will be able to access these records on-line within minutes, shortening the processing time for all applications.

Improvements in both software efficiency and system technology will provide faster response and greater resilience. The new system will continue to operate and provide continued service to the public even if there is a disruption in power supply or failure in some parts of the system, e.g. database server.

(d) Improved access control and data integrity of ROP system

There will be stringent access controls on sensitive data, including biometric data, by encryption of the data stored in the system, and during transmission within and between ImmD offices. With the microfilm records converted and stored online, a tighter control on access to ROP records can be achieved by according different levels of access authorities and the maintenance of audit trail reports. The data on the ID card will be protected by sophisticated cryptographic data technique to ensure that fraudulent data or fraudulent cards cannot be created.

(e) Infrastructure for other uses

The biometric identification technology adopted in the new smart ID card will serve as the infrastructure for ImmD to consider the introduction of an

/automated

automated passenger clearance system. Subject to the result of a separate feasibility study, it is expected that the implementation of automated

passenger clearance will enable ImmD to open more counters for the travelling public and hence reduce the passengers' waiting time for clearance at the control points.

The ID card replacement exercise will enable ImmD to update the addresses of all HKSAR residents. Such information will be passed to the Registration and Electoral Office to facilitate future introduction of automatic voter registration. The adoption of a multi-application smart ID card may also allow participating Government departments to deliver their service to the public in a more efficient and cost-effective manner, and with better quality through a convenient and common platform. Such applications may reduce the number of personal documents (such as driving licence and library card) that need to be carried by a resident.

With the capacity to store digital certificate, the new ID card will greatly facilitate electronic transactions which require user identification, bringing convenience to members of the public and promoting the development of e-commerce. The implementation of the smart ID card scheme will be a significant step forward in enhancing our overall information infrastructure and achieving our objective under the "Digital 21" Information Technology Strategy to develop Hong Kong into a leading digital city in the globally connected world¹.

(f) Savings in resources

With the conversion of the existing microfilm records into digital images, ImmD will be able to save manpower and space for maintenance of the microfilm repository. In addition, the new method of capturing biometric information does not require the use of ink and traditional paper-based photograph, hence reducing manual effort and consumables required in collecting biometric information from the card holders.

Cost savings

10. Compared to the existing mode of operation, the implementation of the proposed new system will bring about savings of \$425.25 million over the period from 2002-03 to 2007-08. These include –

- /(a)
- (a) realisable savings of \$29.40 million arising from savings in consumables and maintenance costs that would be required under the

¹ The Digital 21 Information Technology Strategy was an all-encompassing strategy on the use of information technology to take advantage of the opportunities in the digital world. Formulated in 1998 by the Information Technology and Broadcasting Bureau, the Strategy set out the vision, initiatives and targets of how the Government, business, industry and the academia can work together to make Hong Kong a leading digital city in the globally connected world.

existing system;

- (b) notional savings of \$3.25 million arising from savings in accommodation and staff efforts in printing data cards for producing existing ID cards; and
- (c) cost avoidance of \$392.60 million which represents the costs which would otherwise have to be incurred for supporting the issue and replacement of the ID card by using the existing system and mode of operation.

Encl. 2 We set out at Enclosure 2 a detailed breakdown of the realisable savings, notional savings and cost avoidance.

11. Apart from the above one-off savings on the implementation of the new system, there will be realisable savings of \$5.98 million a year on a recurrent basis which will come from savings in consumables and maintenance costs that would be required under the existing system.

12. The above savings do not include savings that would be achieved upon the introduction of an automated passenger clearance system, nor do they include savings derived from other non-immigration, value-adding applications. It is not possible to quantify these savings at this stage as the applications are still subject to separate feasibility studies.

Cost and benefit analysis

Encl. 3 13. A cost and benefit analysis of the proposed system is at Enclosure 3. In terms of realisable savings, the costs will heavily outweigh the savings because this is basically an infrastructural investment and substantial expenditure will have to be incurred in replacing the ID cards for all Hong Kong residents free of charge. In addition, before the completion of the necessary feasibility studies, savings derived from the implementation of an automated passenger clearance system and other non-immigration applications cannot be included in the present analysis. The intangible benefits stated in paragraph 9 above, in particular the improvements in card security, increased public satisfaction, efficiency of Government departments and the projection of Hong Kong's image as a leading digital city add to the justification for the implementation of the project.

/FINANCIAL

FINANCIAL IMPLICATIONS

Non-recurrent expenditure

14. We estimate that the total non-recurrent cost for implementing the new ID card project will be \$1,541,441,000 over a seven-year period from 2001-02 to 2007-08 for the purchase of computer hardware and software, implementation services, record conversion, site preparation, publicity and blank smart ID cards. We propose to seek Members' approval of a new commitment in two phases, \$747,037,000 in Phase 1 and \$794,404,000 in Phase 2. A breakdown of the costs required in the two phases is at Enclosure 4.

Encl. 4

15. This paper seeks Members' approval of a non-recurrent commitment of \$747,037,000 to meet the requirement in Phase 1. Details of the cost estimates are as follows –

	2001-02	2002-03	2003-04	2004-05	2005-06	Total
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
(a) Hardware and software	22,012	22,012	176,099	-	-	220,123
(b) Implementation services	11,509	9,519	76,152	-	-	97,180
(c) Record conversion	128,156	56,862	16,555	-	-	201,573
(d) Site preparation	5,429	9,683	240	-	-	15,352
(e) Miscellaneous	1,640	15,245	14,718	14,718	14,785	61,106
(f) Smart card	-	8,670	78,030	-	-	86,700
(g) Contract staff	371	531	230	-	-	1,132
(h) Contingency	16,875	11,767	32,278	1,472	1,479	63,871
Total	185,992	134,289	394,302	16,190	16,264	747,037

16. As regards paragraph 15(a), the expenditure of \$220,123,000 is for the acquisition of hardware and software for the new ROP system which will cover the process of registration, card personalisation and management, application

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management and record management. The hardware for the system includes general computer equipment (such as database servers, application servers, workstations and printers), communication and network equipment (such as routers and local area networks), scanning equipment (such as barcode and document

scanners), biometric equipment (such as fingerprint enrolment scanners and fingerprint verification scanners) and smart card specialised equipment (such as laser engravers for personalising the smart ID card, smart card chip encoders, handheld smart card readers for ImmD uses and special kiosks for the public to view the data in their smart ID cards). Software packages to drive and support the hardware will also be required. Since the new system is expected to maintain a very high level of security and data privacy, the critical components will have to be tamper-resistant while specialised hardware and software will have to be built into the system to ensure that the desired results are achieved.

17. As regards paragraph 15(b), the expenditure of \$97,180,000 is for engaging contractors to design, develop and test the new ROP system and to integrate various components including hardware, software and application programs together. It also includes contracting consultants to conduct a number of consultancy studies, e.g. the second Privacy Impact Assessment (PIA) and the security review. Since the new ID card system is a complex system and there are a number of sub-systems provided by different vendors, it is not possible to buy products off-the-shelf. Customised programs will have to be developed for the system and it is necessary to engage professional contractors to do the job. Furthermore, as the system has very stringent requirements in terms of protection of data privacy and security, various consultancy studies will need to be conducted to ensure that we can really deliver what we have promised to the public.

18. As regards paragraph 15(c), the expenditure of \$201,573,000 is for conversion of nearly 40 000 rolls of microfilmed ROP records to digital images (95 million images) within three years. It also includes the cost for converting some paper indices to image form as well as the cost of database migration. The record conversion exercise is critical to the smooth running of the region-wide ID card replacement exercise because it will make the historical records available on screen so that the verification officer can quickly confirm that the person who submits the ID card application is the one who had been issued with an ID card. If the information is not shown in the computer, the verification officer will have to retrieve the microfilm rolls. Given that one roll of microfilm can contain thousands of old ID application records, the problem of microfilm roll contention will arise. From the data protection point of view, more stringent access control can be implemented if the records are computerised as access to such records will require the use of passwords and will be monitored by audit trail reports.

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19. As regards paragraph 15(d), the expenditure of \$15,352,000 is for site preparation of the offices for system development and testing, the backup area for the imaging system and the computer hall.

20. As regards paragraph 15(e), the expenditure of \$61,106,000 is for the acquisition of miscellaneous items such as start-up consumables like printer toner, security labels, optical disks, computer tapes; for procuring office and training equipment, data safe, fire extinguishing systems; for providing training to project team staff; and for the launching of promotion and education campaigns in 2001-02 to enhance public awareness of the smart ID card.

21. As regards paragraph 15(f), the expenditure of \$86,700,000 is for the procurement of the first batch of 1.2 million customised blank smart ID cards. Because of the very high data security, data privacy and card durability requirements, card suppliers will have to invest substantially in research and development and in setting up dedicated production lines. Our understanding is that reputable card suppliers are not likely to be interested in conducting the necessary research and development even if the work is funded, if they are not assured of an order of not less than one million blank cards. Therefore, we have to seek a funding provision to cater for 1.2 million blank cards. We will ensure that delivery of and payment for the bulk of the order will be subject to the condition that the cards will fully meet our requirements and can pass the necessary acceptance test.

22. As regards paragraph 15(g), the expenditure of \$1,132,000 represents the cost for employing five contract staff to provide clerical support to the project team during the system development and implementation stage.

23. As regards paragraph 15(h), the expenditure of \$63,871,000 represents a 10% contingency on the cost items set out in paragraphs 15(a) to (e) and a 5% contingency on the cost item set out in paragraph 15(f).

24. We plan to make a separate submission to Members in February 2002 to increase the commitment by \$794,404,000 to carry out the activities in Phase 2. Major items are for the purchase of the remaining batch of blank smart ID cards and the employment of some 559 contract staff to conduct the region-wide ID card replacement exercise. Phase 2 will also include the provision for nine NICIOs and for the procurement of an Appointment System and a Tag System. The

/Appointment

Appointment System is for the public to make appointment to attend the NICIO for ID card replacement via Internet or telephone. The Tag System is to allocate tag number to each applicant so that he will know when to attend the counter for interview when his number is called. Detailed justifications on individual items will be provided at that time.

Other non-recurrent expenditure

25. In addition, the new ID card project will entail an additional non-recurrent expenditure of \$1,104,087,000, straddling Phases 1 and 2, in respect of the accommodation costs and in-house staff costs for both system development and the ID card replacement exercise. The cost breakdown is as follows –

	2001-02 \$'000	2002-03 \$'000	2003-04 \$'000	2004-05 \$'000	2005-06 \$'000	2006-07 \$'000	2007-08 \$'000	Total \$'000
(a) Accommodation	672	1,703	24,105	26,351	26,351	26,351	6,773	112,306
Sub-total	672	1,703	24,105	26,351	26,351	26,351	6,773	112,306
(b) In-house staff costs								
(i) System development	28,271	52,166	25,052	-	-	-	-	105,489
(ii) Replacement exercise	-	19,973	178,853	211,549	210,997	210,997	53,923	886,292
Sub-total	28,271	72,139	203,905	211,549	210,997	210,997	53,923	991,781
Total	28,943	73,842	228,010	237,900	237,348	237,348	60,696	1,104,087

26. As regards paragraph 25(a), the expenditure of \$112,306,000 is for payment of rent to accommodate the project team for system development as well as for the nine NICIOs. This amount will be absorbed by the Government Property Agency (GPA) from within its existing resources.

27. As regards paragraph 25(b)(i), the expenditure of \$105,489,000 represents the staff cost for setting up a project team for system development and implementation of the new ROP system. It comprises 1 055 man-months of immigration service grade staff (involving one Deputy Director of Immigration and 48 non-directorate posts), 400 man-months of information technology professional

/grade

grade staff (involving one Chief Systems Manager and 19 non-directorate posts) and 136 man-months of general grade staff (involving five non-directorate posts). This team will be responsible for working with vendors on system design and development of various sub-systems for the personalisation of the smart ID card, card engraving, card management, application management and record management of the future system. They will also be responsible for the infrastructure support, site preparation and installation support, computer operation

support, performing user acceptance tests, pursuing legislative amendments and procedural changes, preparing documentation and arranging training and trial runs for the new computer system.

28. As regards paragraph 25(b)(ii), the expenditure of \$886,292,000 represents the staff cost for conducting the ID card replacement exercise. It comprises 11 328 man-months of immigration service grade staff (involving 226 non-directorate posts) and 3 219 man-months of general grade staff (involving 67 non-directorate posts). Among the 293 staff required for the replacement exercise, 233 staff (170 immigration service grade staff and 63 general grade staff) will go to the nine NICIOs for processing, checking, verifying and authenticating the applications for the issue of smart ID cards. Another 40 staff (39 immigration service grade staff and one general grade staff) will be responsible for the production of smart ID cards, which includes authenticating the applicant's identity against the database record before producing the ID card and overseeing the whole ID card production process. The remaining 20 staff (17 immigration service grade staff and three general grade staff) are responsible for overseeing and planning the replacement exercise, providing training, and handling of appeal cases.

Encl. 5 29. We set out at Enclosure 5 details of the above non-recurrent staffing requirement. Subject to Members' funding approval of the ID Card Project, we will seek the Establishment Subcommittee's support for the creation of the two supernumerary directorate posts mentioned in paragraph 27 (one Deputy Director of Immigration and one Chief Systems Manager). In our submission to the Establishment Subcommittee, we will also seek an increase in the establishment ceiling of the ImmD for creating the 42 non-directorate posts required in 2001-02 as these have not been included in the 2001-02 draft Estimates. The non-recurrent staffing requirement for the remaining period from 2002-03 to 2007-08 will be included in the annual Estimates of the respective year.

Recurrent expenditure

30. We estimate that the annual recurrent expenditure of the proposed project is as follows –

	2002-03	2003-04	2004-05	/(a) 2005-06 onwards
	\$'000	\$'000	\$'000	\$'000
(a) Hardware and software maintenance	3,962	10,094	41,791	41,791
(b) Contract service	-	15,591	17,008	17,008

(c) Smart card	-	15,671	26,865	26,865
(d) Miscellaneous	-	4,648	4,648	4,648
(e) Accommodation	-	5,101	5,135	5,135
Sub-total	3,962	51,105	95,447	95,447
(f) Staff costs	-	11,816	13,130	12,663
Total	3,962	62,921	108,577	108,110

31. As regards paragraph 30(a), the annual expenditure of \$41,791,000 is for hardware and software maintenance, as well as the software licence fees. As some of the hardware and software have to be purchased in early 2002 for system development and testing purposes, maintenance charges for these equipment will become payable in early 2003 upon expiry of the one-year warranty.

32. As regards paragraph 30(b), the annual expenditure of \$17,008,000 is for acquisition of contract services for on-going technical support and maintenance of the system.

33. As regards paragraph 30(c), the annual expenditure of \$26,865,000 is for the additional card cost of 540 000 blank smart ID cards required per annum. This requirement is in addition to that required for the replacement exercise and is estimated on the basis of the existing annual card consumption of the ROP offices.

34. As regards paragraph 30(d), the annual expenditure of \$4,648,000 is for miscellaneous items like the purchase of consumables, rental of communication lines and maintenance of office equipment.

35. As regards paragraph 30(e), the annual expenditure of \$5,135,000 is for providing accommodation for additional staff, card personalisation equipment and the training and testing site. The expenditure will be absorbed by GPA from within its existing resources.

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36. As regards paragraph 30(f), the annual expenditure of \$12,663,000 represents –

- (a) the staff cost of 22 posts (comprising 13 information technology professional grade staff, six immigration service grade staff and three general grade staff) in the ImmD for the administration, enhancement and round-the-clock online operation of the system, for providing help-desk facility for users and for managing the outsourced

maintenance of the system on an on-going basis, partly offset by the deletion of two Immigration Officer posts for the maintenance and support of the existing ROP system; and

- (b) net additional staff cost arising from the adoption of the new workflow for processing new ID cards applications (though there will be a net reduction of 63 posts under the new workflow).

Encl. 6 Details of the staffing requirement are set out at Enclosure 6.

Implementation plan

37. We plan to implement the project according to the following schedule –

Activity	Timing
(a) Tendering for the supply of hardware, software and implementation services	March 2001 to October 2001
(b) Legislative amendment – submission of a draft amendment bill	End 2001
(c) System design and development	October 2001 to October 2002
(d) System testing	September 2002 to November 2002
(e) User acceptance testing and training	November 2002 to July 2003
(f) System implementation	May 2003
(g) Replacement exercise	July 2003 to June 2007

/BACKGROUND

BACKGROUND INFORMATION

38. On 19 October 2000, we issued a Legislative Council Brief informing Members that the Executive Council at its meeting on 17 October 2000 has decided that –

- (a) a new ID card and a new supporting computer system should be introduced in early 2003;

- (b) the new ID card should take the form of a smart card and have the capacity to support multiple applications;
- (c) the incremental implementation of the multi-application smart ID card scheme should be endorsed in principle and announced for public consultation; and
- (d) after the new ID card system is in full operation, a region-wide ID card replacement exercise should be conducted for residents in Hong Kong by batches, in accordance with specified age groups, with a view to completing it within four years.

39. A consultation campaign was launched in November 2000. The first part of the campaign was conducted by way of briefings to the 18 District Councils. The second part of the campaign consisted of seven roving exhibitions in shopping malls and the Immigration Tower and launching of a web page on the new ID card project at ImmD's web site. The results of the consultation campaign were encouraging. All 18 District Councils indicated support in principle to the new ID card project. The exhibitions and web page, which attracted over 110 000 visitors and 61 100 votes on the card face design, also demonstrated that there was strong public support on the use of a multi-application smart ID card. Separately, at the special meeting of the Legislative Council Panel on Security held on 11 November 2000, all professional and academics attending the meeting expressed clear support on the proposed new ID card project.

40. The Information Infrastructure Advisory Committee was also consulted on the proposed project on 30 November 2000. The general view was that a new generation of ID cards should adopt smart cards with the capacity to support multiple applications, and that the Administration should take concrete measures to address the security and data privacy concerns and to accommodate the continuous advancement in smart card technology in the implementation of multi-applications.

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41. We consulted the Legislative Council Panel on Security on the funding proposal on 18 January, 6 February and 14 February 2001. Some Members had expressed concerns over the quantity of cards to be purchased in Phase 1, data privacy, data security and the timing of legislative amendments. Taking into account Members' comments, the Administration now proposes to reduce the number of blank cards to be purchased under Phase 1 from 2.5 million to 1.2 million. Moreover, the Administration undertook to adopt stringent data protection measures to safeguard data security and privacy (Enclosure 7) and to submit a relevant draft amendment bill to the Legislative Council for vetting by the end of

Encl. 8

2001. The scope of proposed legislative amendments currently identified is at Enclosure 8. It will cover a wide range of privacy issues identified by the PIA consultants relating to data to be collected; the content of data items to be stored in the chip for immigration applications and non-immigration applications; how the data on the card, the ROP database and associated images will be used; and the provision of criminal sanctions against unauthorised storage, use or disclosure of data, etc. Consideration will be given to the need to move the prohibition on disclosure of data from the ROP Regulations to the ROP Ordinance. Besides, a Code of Practice will be drawn up by ImmD in consultation with the Privacy Commissioner for Personal Data.

Security Bureau
February 2001

**Feasibility Study on Options for the Introduction of
a New ID Card and a New ROP System**

The feasibility study has identified various measures to re-engineer the business process and develop an advanced technical system, with a view to increasing operational efficiency, providing better customer service and enhancing the security of the entire ID card system. The essential ones are as follows –

- (a) the new ID card should use a secure base material for card production and utilise laser engraving technology for card personalisation to ensure, together with a combination of physical card security features, that the card will be highly secure and fraud-resistant;
- (b) the new ID card should capture the card holder's facial image and two thumbprints. This will provide the facility to securely authenticate a card holder's identity and lay the foundation for automating some currently manual processes (such as passenger clearance procedures);
- (c) a new computer system using up-to-date supporting infrastructure, network design and equipment should be developed to achieve better response and performance. In addition, the new system will have improved resilience and disaster recovery capabilities so that in the event of faults, service to the public will not be interrupted;
- (d) the old ID card application records (presently stored in microfilms) should be converted into digital images to facilitate on-line retrieval of records. This new mode of document storage will enhance the efficiency and effectiveness of the ID card-issuing processes and achieve savings in resources; and
- (e) a region-wide ID card replacement exercise should be conducted when the new computer system is in full operation so that all Hong Kong residents can obtain a new, secure ID card within a reasonable period of time.

2. On the choice of card, Consultants have identified the following options –

- (a) a non-smart ID card; or
- (b) a smart ID card which is capable of supporting ImmD's core business only;
or
- (c) a smart ID card which supports multiple applications, i.e. ImmD's core business plus other value-added applications.

3. According to the Consultants' estimate, the costs of implementing the three different options are as follows –

Option	Cost
Non-smart card	HK\$2.48 billion
Smart card for ImmD only	HK\$2.77 billion
Multi-function smart card	HK\$3.06 billion

4. The above costs include the cost of purchasing blank smart ID cards, developing a new supporting computer system, procuring hardware and software, converting old microfilm records into digital images, setting up new offices for the replacement exercise, site preparation, rent, publicity, as well as staff for the project team and the replacement of ID cards. The difference between the three options rests mainly with the card cost. The non-smart card option is the cheapest because the card is a simple plastic card with no chip on it. A smart card for ImmD's core businesses will cost HK\$290 million more than the non-smart card option because of the availability of the chip. A multi-function smart card will cost another HK\$290 million more because a more sophisticated and powerful chip is needed to support multiple applications.

Savings Arising from the Implementation of the New HKSAR Identity Card Project

Savings	In HK\$ million						
	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Total
(A) Realisable Savings							
(i) Savings in Maintenance Costs for Existing System	-	1.84	2.01	2.01	2.01	2.01	9.88
- ROP Midrange and front end equipment and software							
- Microfilm reader-printer installed at ROP Records Section							
- Microfilming Camera and accessories at Microfilming Office							
- AGISS Cameras							
- Datacard printers							
(ii) Savings in Consumables	-	3.64	3.97	3.97	3.97	3.97	19.52
- AGISS cameras							
- Datacard printers							
- Microfilm reader-printers							
Sub-total	-	5.48	5.98	5.98	5.98	5.98	29.40
(B) Notional Savings							
- Accommodation for fewer staff	-	0.18	0.20	0.20	0.20	0.20	0.98
(In terms of head count, ImmD will require less staff upon implementation of the new system as a result of changes in operation mode. The net savings in the number of staff is 63 at various ROP Offices. Saving in 48.4 square metres is expected.)							
- Printing of Data Card for the production of identity card	-	0.43	0.46	0.46	0.46	0.46	2.27
(Due to the ageing of the Data Card Printer, an overall wastage rate of 23% is recorded in the past year. Currently, about six Assistant Clerical Officers are required to ensure the data card standard. We therefore expect to achieve notional savings of (6 x 23%) Assistant Clerical Officer posts at various ROP Offices.)							
Sub-total	-	0.61	0.66	0.66	0.66	0.66	3.25

Savings	In HK\$ million						
	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Total
(C) Cost Avoidance (using the existing system and mode of operation)							
(i) Avoidance of Additional ImmD Staff for the Replacement Exercise (i.e. If the replacement exercise was carried out under the current mode of operation, for example, additional of 74 staff comprising 5 Immigration Assistants, 55 Clerical Assistants, 7 Photographers I and 7 Photographers II would be required for the verification and microfilming teams.)	-	13.39	17.85	17.85	17.85	4.46	71.40
(ii) Cost Avoidance on Accommodation Due to conversion of microfilm records to digital images, less space is required to accommodate the staff supporting the verification and microfilming processes. Storage of the microfilm cartridges is no longer required.	-	3.09	3.37	3.37	3.37	3.37	16.57
(iii) Avoidance of other costs including							
a. Expenditure for Printing Department for the replacement exercise - to install new equipment - to maintain the new equipment - to deploy additional staff to the ID Card Production Team	21.46	1.54	2.88	2.88	2.88	1.33	32.97
b. ImmD's accommodation requirement for the replacement exercise - to accommodate additional staff deployed to the verification team - to house the additional microfilm readers at Verification Unit	-	0.86	1.14	1.14	1.14	0.28	4.56
c. Replacement/Installation of new equipment and their maintenance for ImmD - to replace datacard printers at the ROP branch offices - to install additional datacard printers at the NICIOs for the replacement exercise - to install additional AGISS Cameras at the NICIOs for the replacement exercise - to install new microfilm cameras and rollfilm readers - to install new microfilm reader-printers - to maintain the new equipment	2.90	45.57	8.63	8.63	8.63	8.63	82.99
d. Consumable cost for the Replacement Exercise - to pay for the Printing Department the charges on card production - to pay for the consumable of the datacard printer - to pay for the consumable of the microfilm reader-printer - to pay for the consumable of the camera	-	34.52	46.03	46.03	46.03	11.50	184.11
Sub-total	24.36	98.97	79.90	79.90	79.90	29.57	392.60
Total Savings	24.36	105.06	86.54	86.54	86.54	36.21	425.25

Cost and Benefit Analysis for the Implementation of HKSAR Identity Card Project

	CASHFLOW (in HK\$'000)							
	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Total
Costs								
Non-recurrent								
Expenditure ^(Note)	186,664	152,724	622,788	226,633	226,707	209,343	28,888	1,653,747
Staff costs	28,271	72,139	203,905	211,549	210,997	210,997	53,923	991,781
Sub-total	214,935	224,863	826,693	438,182	437,704	420,340	82,811	2,645,528
Recurrent								
Expenditure	-	3,962	51,105	95,447	95,447	95,447	95,447	436,855
Staff costs	-	-	11,816	13,130	12,663	12,663	12,663	62,935
Sub-total	-	3,962	62,921	108,577	108,110	108,110	108,110	499,790
Total Costs	214,935	228,825	889,614	546,759	545,814	528,450	190,921	3,145,318
Savings								
Realisable Savings	-	-	5,480	5,980	5,980	5,980	5,980	29,400
Notional Savings	-	-	610	660	660	660	660	3,250
Cost Avoidance	-	24,360	98,970	79,900	79,900	79,900	29,570	392,600
Total Savings	-	24,360	105,060	86,540	86,540	86,540	36,210	425,250
Net Savings	(214,935)	(204,465)	(784,554)	(460,219)	(459,274)	(441,910)	(154,711)	(2,720,068)
Net Cumulative Savings	(214,935)	(419,400)	(1,203,954)	(1,664,173)	(2,123,447)	(2,565,357)	(2,720,068)	

Note : Including the cost for 564 temporary staff.

Expenditure of the HKSAR Identity Card Project

Activities	2001-02 (Aug - Mar 02) \$'000	2002-03 \$'000	2003-04 \$'000	2004-05 \$'000	2005-06 \$'000	2006-07 \$'000	2007-08 \$'000	Total \$'000
Non-recurrent								
(A) Phase 1 (Target month for Funding Approval - March 2001)								
Hardware and Software Purchase	22,012	22,012	176,099	-	-	-	-	220,123
Implementation Services	11,509	9,519	76,152	-	-	-	-	97,180
Record Conversion	128,156	56,862	16,555	-	-	-	-	201,573
Site Preparation	5,429	9,683	240	-	-	-	-	15,352
Miscellaneous	1,640	15,245	14,718	14,718	14,785	-	-	61,106
Smart Card	-	8,670	78,030	-	-	-	-	86,700
Contract Staff	371	531	230	-	-	-	-	1,132
Contingency	16,875	11,767	32,278	1,472	1,479	-	-	63,871
Total for Phase 1	185,992	134,289	394,302	16,190	16,264	-	-	747,037
(B) Phase 2 (Target month for Funding Approval - February 2002)								
Hardware and Software Purchase	-	12,051	-	-	-	-	-	12,051
Implementation Services	-	1,910	2,840	-	-	-	-	4,750
Smart Card for Re-issue	-	-	59,137	116,204	116,204	116,204	-	407,749
Publicity	-	1,250	2,400	2,500	2,500	1,500	1,100	11,250
Site Preparation	-	-	83,661	-	-	-	5,489	89,150
Contract Staff	-	-	44,496	59,328	59,328	59,328	14,867	237,347
Contingency	-	1,521	11,847	6,060	6,060	5,960	659	32,107
Total for Phase 2	-	16,732	204,381	184,092	184,092	182,992	22,115	794,404
<u>Non-recurrent Commitment from Finance Committee</u>	185,992	151,021	598,683	200,282	200,356	182,992	22,115	1,541,441

Activities	2001-02 (Aug - Mar 02) \$'000	2002-03 \$'000	2003-04 \$'000	2004-05 \$'000	2005-06 \$'000	2006-07 \$'000	2007-08 \$'000	Total \$'000
(C) Other non-recurrent expenditure								
Accommodation								
Rental Cost	672	1,703	24,105	26,351	26,351	26,351	6,773	112,306
Staff Resources								
System Development	28,271	52,166	25,052	-	-	-	-	105,489
Replacement Exercise	-	19,973	178,853	211,549	210,997	210,997	53,923	886,292
<i>Sub-total</i>	28,943	73,842	228,010	237,900	237,348	237,348	60,696	1,104,087
Total for Non-recurrent	214,935	224,863	826,693	438,182	437,704	420,340	82,811	2,645,528
Recurrent								
Hardware and Software Maintenance	-	3,962	10,094	41,791	41,791	41,791	41,791	181,220
Contract Service	-	-	15,591	17,008	17,008	17,008	17,008	83,623
Smart Card	-	-	15,671	26,865	26,865	26,865	26,865	123,131
Miscellaneous	-	-	4,648	4,648	4,648	4,648	4,648	23,240
Accommodation	-	-	5,101	5,135	5,135	5,135	5,135	25,641
<i>Sub-total</i>	-	3,962	51,105	95,447	95,447	95,447	95,447	436,855
Staff Cost	-	-	11,816	13,130	12,663	12,663	12,663	62,935
Total for Recurrent	-	3,962	62,921	108,577	108,110	108,110	108,110	499,790
Grand Total	214,935	228,825	889,614	546,759	545,814	528,450	190,921	3,145,318

Estimated Staffing Requirement for Implementation of the HKSAR Identity Card Project

Non-recurrent Staffing

I. System Development

Rank	Annual Staff Cost (HK\$)	2001-02			2002-03			2003-04		
		No.	Man-month	Staff Cost (HK\$)	No.	Man-month	Staff Cost (HK\$)	No.	Man-month	Staff Cost (HK\$)
Deputy Director	2,244,144	1	10	1,870,120	1	12	2,244,144	1	7	1,309,084
Principal Immigration Officer	1,672,272	2	16	2,229,696	2	24	3,344,544	2	11	1,532,916
Assistant Principal Immigration Officer	1,387,620	2	16	1,850,160	2	24	2,775,240	2	14	1,618,890
Chief Immigration Officer	1,201,320	2	18	1,801,980	2	24	2,402,640	2	14	1,401,540
Senior Immigration Officer	1,068,240	6	52	4,629,040	7	83	7,388,660	7	43	3,827,860
Immigration Officer	849,936	11	92	6,516,176	15	176	12,465,728	15	84	5,949,552
Senior Immigration Assistant	413,520	1	6	206,760	6	67	2,308,820	6	24	827,040
Immigration Assistant	267,096	4	24	534,192	14	158	3,516,764	14	56	1,246,448
Chief Systems Manager	2,050,476	1	10	1,708,730	1	12	2,050,476	1	7	1,196,111
Senior Systems Manager	1,727,880	1	8	1,151,920	1	12	1,727,880	1	7	1,007,930
Systems Manager	1,182,720	3	26	2,562,560	3	36	3,548,160	3	18	1,774,080
Assistant Computer Operation Manager	846,036	1	8	564,024	1	12	846,036	1	4	282,012
Senior Computer Operator	614,532	1	8	409,688	3	34	1,741,174	3	12	614,532
Computer Operator I	416,340	2	12	416,340	5	57	1,977,615	5	20	693,900
Computer Operator II	275,544	1	6	137,772	6	67	1,538,454	6	24	551,088
Executive Officer I	722,676	1	8	481,784	1	12	722,676	1	7	421,561
Clerical Officer	466,956	1	10	389,130	1	12	466,956	1	4	155,652
Personal Secretary I	461,280	1	10	384,400	1	12	461,280	1	7	269,080
Personal Secretary II	319,524	2	16	426,032	2	24	639,048	2	14	372,778
Total		44	356	28,270,504	74	858	52,166,295	74	377	25,052,054

Non-recurrent Staffing

II. Replacement Exercise

Rank	Annual Staff Cost (HK\$)	2002-03			2003-04			2004-05		
		No.	Man-month	Staff Cost (HK\$)	No.	Man-month	Staff Cost (HK\$)	No.	Man-month	Staff Cost (HK\$)
Assistant Principal Immigration Officer	1,387,620	-	-	-	1	9	1,040,715	1	12	1,387,620
Chief Immigration Officer	1,201,320	-	-	-	10	90	9,009,900	10	120	12,013,200
Senior Immigration Officer	1,068,240	-	-	-	23	207	18,427,140	23	276	24,569,520
Immigration Officer	849,936	94	282	19,973,496	247	1 659	117,503,652	153	1 836	130,040,208
Chief Immigration Assistant	549,408	-	-	-	7	63	2,884,392	7	84	3,845,856
Senior Immigration Assistant	413,520	-	-	-	1	8	275,680	1	7	241,220
Immigration Assistant	267,096	-	-	-	31	277	6,165,466	31	362	8,057,396
Executive Officer I	722,676	-	-	-	1	9	542,007	1	12	722,676
Clerical Officer	466,956	-	-	-	65	585	22,764,105	65	780	30,352,140
Personal Secretary II	319,524	-	-	-	1	9	239,643	1	12	319,524
Total		94*	282	19,973,496	387*	2 916	178,852,700	293	3 501	211,549,360

* Including 94 Immigration Officers on induction training from January 2003 to June 2003.

Non-recurrent Staffing

II. Replacement Exercise

Rank	Annual Staff Cost (HK\$)	2005-06			2006-07			2007-08		
		No.	Man-month	Staff Cost (HK\$)	No.	Man-month	Staff Cost (HK\$)	No.	Man-month	Staff Cost (HK\$)
Assistant Principal Immigration Officer	1,387,620	1	12	1,387,620	1	12	1,387,620	1	4	462,540
Chief Immigration Officer	1,201,320	10	120	12,013,200	10	120	12,013,200	10	31	3,103,410
Senior Immigration Officer	1,068,240	23	276	24,569,520	23	276	24,569,520	23	71	6,320,420
Immigration Officer	849,936	153	1 836	130,040,208	153	1 836	130,040,208	153	465	32,935,020
Chief Immigration Assistant	549,408	7	84	3,845,856	7	84	3,845,856	7	26	1,190,384
Senior Immigration Assistant	413,520	-	-	-	-	-	-	-	-	-
Immigration Assistant	267,096	29	348	7,745,784	29	348	7,745,784	29	87	1,936,446
Executive Officer I	722,676	1	12	722,676	1	12	722,676	1	4	240,892
Clerical Officer	466,956	65	780	30,352,140	65	780	30,352,140	65	196	7,626,948
Personal Secretary II	319,524	1	12	319,524	1	12	319,524	1	4	106,508
Total		290	3 480	210,996,528	290	3 480	210,996,528	290	888	53,922,568

Recurrent Staffing Requirement Arising from Implementation of the HKSAR Identity Card Project

Rank	Annual Staff Cost (HK\$)	2003-04			2004-05			2005-06 onwards		
		No.	Man-month	Staff Cost (HK\$)	No.	Man-month	Staff Cost (HK\$)	No.	Man-month	Staff Cost (HK\$)
(a) Recurrent staffing required for system maintenance and support										
Chief Immigration Officer	1,201,320	1	11	1,101,210	1	12	1,201,320	1	12	1,201,320
Senior Immigration Officer	1,068,240	1	11	979,220	1	12	1,068,240	1	12	1,068,240
Immigration Officer*	849,936	2	22	1,558,216	2	24	1,699,872	2	24	1,699,872
Systems Manager	1,182,720	1	8	788,480	1	12	1,182,720	1	12	1,182,720
Analyst Programmer I	747,060	2	16	996,080	2	24	1,494,120	2	24	1,494,120
Senior Computer Operator	614,532	1	11	563,321	1	12	614,532	1	12	614,532
Computer Operator I	416,340	4	44	1,526,580	4	48	1,665,360	4	48	1,665,360
Computer Operator II	275,544	5	55	1,262,910	5	60	1,377,720	5	60	1,377,720
Assistant Clerical Officer	336,204	1	11	308,187	1	12	336,204	1	12	336,204
Clerical Assistant	232,272	2	22	425,832	2	24	464,544	2	24	464,544
Total		20	211	9,510,036	20	240	11,104,632	20	240	11,104,632
(b) Additional staff cost required for issue of HKSAR ID Card due to New Workflow [@]				2,305,858	-	-	2,024,967	-	-	1,557,864
Total Staff Cost Required (a)+(b)		-	-	11,815,894	-	-	13,129,599	-	-	12,662,496

Notes : * In fact, 4 Immigration Officer (IO)s are required for overseeing the performance of the HKSAR ID Card System. Since 2 IO posts can be deployed from the existing system control section, 2 IO posts are required for funding purpose.

@ Please see Annex.

Annex to Enclosure 6 to FCR(2000-01)82

Additional Staff Cost Required for issue of HKSAR ID Card due to New Workflow
(According to Annual Staff Cost, Ready Reckoner No. 2000/1)

Rank	Annual Staff Cost (HK\$)	2003-04		2004-05		2005-06 onwards	
		Man-month	Staff Cost (HK\$)	Man-month	Staff Cost (HK\$)	Man-month	Staff Cost (HK\$)
Senior Immigration Officer	\$1,068,240	22	\$1,958,440	24	\$2,136,480	24	\$2,136,480
Immigration Officer	\$849,936	231	\$16,361,268	252	\$17,848,656	252	\$17,848,656
Executive Officer I	\$722,676	-11	-\$662,453	-12	-\$722,676	-12	-\$722,676
Immigration Assistant	\$267,096	-44	-\$979,352	-48	-\$1,068,384	-48	-\$1,068,384
Clerical Officer	\$466,956	-22	-\$856,086	-24	-\$933,912	-24	-\$933,912
Assistant Clerical Officer	\$336,204	287	\$8,040,879	307	\$8,601,219	300	\$8,405,100
Clerical Assistant	\$232,272	-589	-\$11,400,684	-658	-\$12,736,248	-672	-\$13,007,232
Office Assistant	\$192,852	-11	-\$176,781	-12	-\$192,852	-12	-\$192,852
Senior Photographer	\$333,036	-11	-\$305,283	-12	-\$333,036	-12	-\$333,036
Photographer I	\$299,784	-55	-\$1,374,010	-60	-\$1,498,920	-60	-\$1,498,920
Photographer II	\$228,000	-406	-\$7,714,000	-444	-\$8,436,000	-444	-\$8,436,000
Workman II	\$159,840	-44	-\$586,080	-48	-\$639,360	-48	-\$639,360
Additional Staff Cost Required			\$2,305,858		\$2,024,967		\$1,557,864

Note : Figures with minus sign represent savings.

CONCRETE SOLUTIONS IN RESPECT OF SECURITY AND PRIVACY

I. Security

Having consulted the Legislative Council Panel on Security, the Government has identified the following solutions to address the security concerns –

- (a) Advanced technology and sophisticated anti-forgery techniques will be used to produce the new ID cards. Polycarbonate, a durable base material, will be used for card production. The printing/personalisation process will be performed by the laser engraving technology whereby laser beams will be used to ‘burn’ the data into different layers of the card. This will make it possible to create a special effect called the “Multiple Laser Image”. Any layman can easily detect if the card is genuine and any attempt to alter the data will cause damage to the card;
- (b) Advanced printing technology will be used to include secure and sophisticated anti-forgery features on the card face to prevent counterfeits and look-alike cards. These features include for example, guilloche design, rainbow printing, microline and microtext, optically changing colours, softened photo background and ultra-violet fluorescent colours;
- (c) Cryptographic data integrity will be used to protect the data stored in the card to ensure that only authorised persons with authorised card readers will be able to read or store data. Each card will use sophisticated encryption algorithm and breaking of every single encryption key will be very difficult and costly, if not impossible;
- (d) Storing data in the chip and using the thumbprint identification technology will ensure more secure and accurate verification of identity;
- (e) Stringent system access control, including passwords, different levels of access authority and audit trails will be used to protect the databases from being accessed by unauthorised persons. Any such attempt will be detected and rejected;
- (f) Departments concerned will maintain their own database as at present so as to guarantee the separation of uses. There will not be any massive collection of data or sharing of database. In addition, sensitive data will be encrypted during transmission. Unauthorised access or alteration to data will not be possible;

/(g)

- (g) State-of-the-art technology will be used at hardware, software and application levels to preserve data confidentiality, integrity and availability. Tamper-resistant hardware security devices will be employed to protect the physical security of the computer system;
- (h) Security experts are being engaged to define the security requirements of the future system and to work out a comprehensive security protection strategy. The study will cover all areas including the card, technical system, multi-application platform, card management, key management, risk assessment, risk management and contingency measures. Their recommendations will be included in the tender document for acquisition of a highly secure system; and
- (i) The new system will have the adequate upgradability so that if the need arises, the security programs in the ID card can be upgraded as necessary.

II. Privacy

2. Having due regard to the advice of the Privacy Commissioner for Personal Data, the Government will adopt the following measures to protect data privacy –

- (a) The personal data to be printed on the surface of the card will be no more than those on the existing ID card;
- (b) The chip will only store the minimal and necessary data. For ImmD's purposes, the data will be those printed on the surface of the card face and the template of two thumbprints. If the card holder is a non-permanent resident, his conditions of stay will also be held;
- (c) For other value-added applications, only minimal data will be held in the chip. Most of the data will be held at the backend computer systems as at present;
- (d) There is no sharing of database between government departments for various applications and there is no central database holding all the information. All the personal data will be held in the computer systems of individual departments as at present. There will not be common use of personal data which is in violation of legislation;
- (e) Card holders in the majority of cases will be free to choose whether or which value-added applications are to be incorporated in the new ID card. The card holder can also view what information the chip contains via self-service kiosks after verification of identity;

/(f)

- (f) Data for different applications on card will be segregated in a secure manner by using advance security techniques. The departments concerned will only have access to those data which are relevant to their own applications;
- (g) Strict access control and advanced encryption algorithms will be adopted to protect the privacy of data in the chip. Even if a person has lost his ID card, his data will not be exposed or accessed by unauthorised persons; and
- (h) The collection, storage, use and disclosure of data will comply fully with the Personal Data (Privacy) Ordinance.

3. The Government is committed to protect privacy rights of individuals. The relevant laws will be observed at all times. On the advice of the Privacy Commissioner for Personal Data, ImmD will employ specialists to conduct Privacy Impact Assessments at various stages of the project. The Privacy Commissioner for Personal Data will be informed of the findings of each assessment. His views will be taken into account in formulating and revising the data protection measures. In addition, the Government will work jointly with the Privacy Commissioner for Personal Data to develop a code of practice to provide clear and specific guidelines to Government departments, for the collection, retention and use, including disclosure of data in the card and the application databases.

SCOPE OF LEGISLATIVE AMENDMENTS REQUIRED

Amendments to the Registration of Persons (ROP) Legislation

Preamble

The long title of the ROP Ordinance may need to be revised to cater for the inclusion of other non-immigration applications (other applications).

Use of ID Card

2. The ROP Ordinance will have to be amended to cover the 'smart' element of the ID card, i.e. the chip on the card which will hold data.

3. If a smart ID card is to support other applications, corresponding amendments may need to be made to the relevant ordinances and regulations as well. However, as the inclusion of other applications onto the smart ID card is subject to separate feasibility studies and public views, it is not possible to specify the exact extent of amendments needed at this stage.

Content of Forms of ID Card

4. Schedule 1 of the ROP Regulations provides for the content of forms of ID card. Data items printed on the surface of the existing ID card are stipulated in this Schedule. As the new ID card will have a chip which is capable of storing data (including the template of a card holder's thumbprints and conditions of stay for non-permanent residents), it is necessary to amend the Schedule to specify clearly which data items are to be printed on the card surface and what immigration data are to be stored in the chip. Our initial view is that the type of other applications to be stored in the chip may have to be defined in the ROP Ordinance and the relevant data items for these applications may need to be stipulated in other relevant legislation. However, this will have to be further examined when we have a firm view on whether and how other applications are to be included onto the smart ID card.

Changes in Registration, Issue and Renewal Requirements

5. Regulation 4(1)(a)(ii) of the ROP Regulations provides for the taking and recording of an ID card applicant's left thumbprint or alternatively, if that is not

/possible

possible, of such other single fingerprint. As the new ID card system requires the capturing of two thumbprints or alternatively, any other two fingerprints, this provision will need to be suitably amended.

Prohibition against Making Alterations to the Chip of a Smart ID Card

6. Regulation 12(1) of the ROP Regulations makes it an offence for a person, who without the authority of the Commissioner of Registration, to make any mark or entry upon, or erases, cancels or alters any mark or entry in an ID card. As the new smart ID card will have data stored in the chip as well, this provision should be amended to cover such data.

Duty to Notify Damages of ID Card

7. Regulation 13(1) of the ROP Regulations requires the holder of the ID card to report and surrender in 14 days his damaged/defaced ID card and apply for a replacement ID card in such a manner as the registration officer may require. Regulation 13(2) authorises a registration officer to issue to that person a replacement ID card and the ID card so surrendered will cease to be valid under Regulation 13B. As the new ID card will have an additional component, i.e. the chip, the regulations may have to be amended to cater for situations where malfunctioning of the chip can be rectified by reloading of new programs but without requiring the issue of a new ID card.

Burden of Proof

8. Regulation 21 of the ROP Regulations states that the burden of proving the truth of the contents of the ID card itself shall lie on the applicant for such ID card, or the person to whom such ID card has been issued, or any other person alleging the truth of such content. Since the data in chip will include other applications and the related data, these provisions should be reviewed to include the data in the chip of a smart ID card.

Prohibition against Use, Possession and Transfer of an Unlawfully Altered Smart ID Card

9. Section 7A of the ROP Ordinance prohibits any person who, without lawful authority or reasonable excuse, uses or possesses a forged ID card or other document issued for the purposes of the Ordinance. Regulation 12(2) of the ROP

/Regulations

Regulations also prohibits a person to possess an ID card which is defaced or unlawfully altered. In addition, section 7AA(1)(b) of the ROP Ordinance debar any person from transferring to another person a forged ID card and other document issued under the Ordinance. These provisions may have to be suitably amended to cover the data in the chip of a smart ID card so as to ensure that a forged ID card includes unlawfully altered data inside the chip.

Introduction of a New Record Management System

10. Section 7(1) of the ROP Ordinance stipulates that the Chief Executive in Council may make such regulations as may be necessary for the purposes of the ROP Ordinance. Section 7(2)(g) provides for the making of regulations relating to the use of films and photographic reproduction of such films. As it is our plan to convert the microfilm records into digital images, a new provision may need to be added to cater for the change.

New ID Card Replacement Exercise

11. During the last two replacement exercises, all Hong Kong ID card holders were called forward to have their old ID cards replaced by batches. A similar approach will be adopted in the forthcoming exercise.

12. Throughout the exercise, orders will be published in the Gazette to require all ID card holders to replace their existing ID cards at the designated new Identity Card Issuing Offices (NICIOs) within a specified period of time and according to age groups. The designated NICIOs and their locations will need to be included in the ROP Regulations.

13. Section 7B(1) of the ROP Ordinance empowers the Secretary for Security to direct members of the public to come forward for replacement of their ID cards issued before a cut-off date. This section will have to be amended by updating the existing cut-off date (i.e. "1 July 1987") to a date immediately upon the introduction of new ID cards.

14. Orders will also need to be made for the invalidation of existing ID cards by batches, after the replacement period is over. Section 7C(1) of the ROP Ordinance empowers the Secretary for Security to declare ID cards issued before a specified date to be invalid. This section will be amended by updating the existing specified date of "1 July 1987" to a date immediately upon the introduction of a new ID card system.

/Fee

Fee for Replacement of Lost, Defaced or Damaged Cards

15. Schedule 2 of the ROP Regulations provides the fee for replacement of an ID card due to lost, deface, damage or change of particulars. It will need to be revised if the fee is to be changed.

Admissibility of Data Inside the Chip

16. Section 4 of the ROP Ordinance provides that certified true copy of records kept by the Commissioner of Registration shall be admissible as evidence in criminal and civil proceeding before court without further proof. Since personal data, facial portrait and thumbprints of an ID card holder will be stored inside the chip of the new ID card, legislative amendment may be required to accommodate admissibility in court of the data inside the chip as prima facie.

Provisions on Protection of Data Privacy

17. New provisions may have to be provided or current provisions may need to be updated for the purpose of protection of personal data. These may include provisions to guard against illegal use or disclosure of records and the soliciting of unauthorised disclosure of data, and to restrict the reading of “non-visible” data in chip and the use of template of thumbprints by agencies other than ImmD.

18. More specifically, amendments to the ROP Ordinance/Regulations and other legislation as appropriate with respect to data privacy protection will cover the following areas –

- (a) data to be collected for the registration of ID card;
- (b) data to be stored in the chip of the new smart ID card;
- (c) administration relating to the registration and issue of ID card;
- (d) how the data on the card, the ROP database and associated images will be used;
- (e) the provision of criminal sanctions against any person attempting to store data, or to use/disclose data or to perform functions on the card in a manner unknown to the person, or against the person’s wishes, or harmful to the person’s interest;

/(f)

- (f) making it an offence to solicit unauthorised disclosure of ROP data; and
- (g) placing limits and/or conditions on the use of ROP data by persons or organisations to whom ROP data is disclosed and making it an offence to breach those limits/conditions.

19. Consideration will also be given to moving the prohibition on disclosure of data (presently contained in the ROP Regulations) to the ROP Ordinance, so that it cannot be overridden by pre-existing provisions in Ordinances giving a power to obtain information.

20. The Privacy Commissioner for Personal Data will be consulted before a list of possible amendments is drawn up.

Amendments to other Ordinances

21. Amendments to other legislation may be needed arising from the inclusion of other applications on the smart ID card, but such amendments can only be defined after there is a firm view on whether and how such applications are to be included. If the driving licence is to be an early application of the smart ID card, the Road Traffic Ordinance (Cap. 374) and its subsidiary Regulations will have to be suitably amended.