

ITEM FOR FINANCE COMMITTEE

CAPITAL WORKS RESERVE FUND

HEAD 710 – COMPUTERISATION

Immigration Department

New Subhead “Introduction of Biometric Hong Kong Special Administrative Region Passport and Strategic Enhancement of the Travel Document Information System”

Members are invited to approve a new commitment of \$152,759,000 for introducing biometric Hong Kong Special Administrative Region passport and enhancing the existing supporting system to form the electronic Travel Document Information System.

PROBLEM

The adoption of passports bearing biometric identification information (hereafter referred to as “biometric passports”) following the specifications recommended by the International Civil Aviation Organization (ICAO¹) is fast becoming an international trend. Failure on our part to incorporate biometric identifier into the Hong Kong Special Administrative Region (HKSAR) passport would likely jeopardise visa-free treatment enjoyed by its holders and hamper our efforts to obtain visa-free access to more countries.

PROPOSAL

2. Having regard to the international trend for enhanced passport security, the biometric HKSAR passport should be introduced in early 2007 to safeguard and promote the travel convenience enjoyed by HKSAR passport holders and to tie with the first tide of applications for renewal of HKSAR passports issued in 1997. The Director of Immigration, with the support of the Secretary for

/Security.....

¹ ICAO is a specialised agency of the United Nations responsible for, among other things, devising travel document standards for compliance by contracting members with a view to enhancing the effectiveness of control on passport fraud and maintaining the integrity and security of passports and other travel documents.

Security and the Secretary for Commerce, Industry and Technology, proposes to create a new commitment of \$152,759,000 to introduce the biometric HKSAR passport and to enhance the corresponding supporting computer system to form the electronic Travel Document Information System (eTDIS).

JUSTIFICATION

3. Article 154 of the Basic Law provides that the Central People's Government shall authorise the HKSAR Government to issue HKSAR passport in accordance with the law. Over three million HKSAR passports have been issued since the resumption of sovereignty. Currently 133 countries or territories grant visa-free access or visa-on-arrival to holders of the HKSAR passport.

The ICAO Recommendations

4. Following the September 11 terrorist attack, all contracting members of the ICAO agreed to step up the integrity and security control of passports and other travel documents. After detailed research and consultation, the ICAO issued in May 2004 the Technical Report on Biometrics Deployment in Machine Readable Travel Documents (MRTDs). The ICAO selected facial recognition as the globally interoperable biometrics for machine-assisted identity confirmation with MRTDs, and recommended high-capacity, contactless integrated circuit chips as the medium to store identification information in MRTDs. Contracting members have the option of using one or two secondary biometrics (namely fingerprints and iris) to supplement facial recognition for personal identification. These technical specifications will assist contracting members to implement a worldwide, standardised system of identity confirmation.

5. In the case of the United States (US), the Enhanced Border Security and Visa Entry Reform Act in 2002 requires, among other things, that countries whose citizens enjoy visa-free travel to the US must issue passports with biometric identifiers no later than 26 October 2004 if they wish to continue to enjoy the visa-free facility. The deadline was subsequently extended to 26 October 2005.

6. The US is not alone. Apart from counter-terrorism, many economies see biometric passports as an effective tool to counter passport forgeries as well as illegal migration and other transnational crimes facilitated by passport frauds. Major countries are likely to follow the US lead to impose similar entry requirements on those economies that wish to gain or retain visa-free access for their citizens. The European Union, for example, is actively considering similar new measures.

/7.

7. A global trend to issue biometric passports is gathering momentum especially among the technologically advanced economies. Canada and the US will introduce biometric passports by late 2005. Among the 27 countries enjoying visa-free access to the US, 19 countries (Australia, Belgium, Brunei, Denmark, Finland, France, Germany, Ireland (Republic of), Italy, Japan, the Netherlands, New Zealand, Norway, Singapore, Slovenia, Spain, Sweden, Switzerland and the United Kingdom (UK)) have concrete plans to issue biometric passports in the next couple of years. We understand that many countries (including the US and the UK) will only include the mandatory ICAO requirement of facial image in the chip to be embedded in the biometric passport, but some others may include fingerprint image as well.

8. Failure on our part to incorporate biometric identifier into the HKSAR passport would likely jeopardise visa-free treatment enjoyed by its holders and hamper our efforts to obtain visa-free access to more countries. Conversely, early introduction of biometric HKSAR passport will be an effective demonstration of our resolve and ability to contribute to international efforts to counter terrorism, illegal immigration and forgery.

Ageing of Existing Computer System

9. The existing computer system, the Travel Document Information System (TDIS), developed for issuing the current HKSAR passport and other travel documents (such as Document of Identity and Re-entry Permit) will reach its life expectancy by 2007. The system will become out-dated and obsolete by then, leading to maintenance problems and degradation of service, if its hardware and software are not replaced substantially in time. If we were not to introduce the biometric passport, it would still be necessary to expend substantial resources to upgrade the TDIS to produce the existing type of HKSAR passport and other travel documents. We propose to develop and enhance the TDIS to form a new computer system, namely the eTDIS, for the processing and issuance of biometric HKSAR passport and other HKSAR travel documents.

Features of the Biometric HKSAR Passport

10. The design of the biometric HKSAR passport book will have the following main features to enhance its security –

- (a) In line with the advice of the International Criminal Police Organization, the biodata page of the biometric HKSAR passport, which contains the holder's photograph and personal data, will be placed on the penultimate page instead of the inner side of the back cover, making illicit alteration more difficult.

/(b)

- (b) The biodata page will be made of polycarbonate in view of its durability, stability against temperature and humidity changes and high mechanical strength. The holder's photograph and personal particulars will be engraved onto the polycarbonate biodata page by laser technology.
- (c) The contactless chip and its antenna will be embedded between the end page and back cover. This would make unauthorised alteration more difficult as both the biodata page (the penultimate page) and the contactless chip containing the personal data and facial image in digital form will need to be altered.

Features of the eTDIS

11. The eTDIS will utilise latest technology to achieve a paperless working environment, to minimise manpower requirement through automation and to produce passports with more security features. Applications through self-service kiosks and e-submission through the Internet will also be made possible upon the introduction of the eTDIS. Immigration Department (ImmD) will explore different means of collection based on the one-visit principle to enhance convenience for applicants.

Benefits

12. The successful introduction of biometric HKSAR passport and eTDIS will enable ImmD to achieve the following benefits –

(a) **Enhancing the security of HKSAR passport**

The integration of biometric information into the biometric HKSAR passport, together with other state-of-the-art anti-forgery technologies, will enhance the security and integrity of the passport.

(b) **Safeguarding travel convenience**

As explained in paragraph 8 above, the introduction of biometric HKSAR passport will safeguard and promote the travel convenience enjoyed by HKSAR passport holders.

(c) **International commitment**

Early introduction of biometric HKSAR passport will be an effective demonstration of our resolve and ability to contribute to international efforts to protect aviation security as well as to counter terrorism, illegal migration and other transnational crimes facilitated by passport frauds.

/(d)

(d) **Improving customer services**

The eTDIS will provide a more speedy and convenient service to the public in the following ways –

- (i) the time required for processing applications will be shortened from 15 to 10 working days as a result of increased efficiency through streamlined procedures;
- (ii) applicants will have more avenues for submitting passport applications, including self-service kiosks and e-submission; and
- (iii) applicants may check the progress of applications through electronic communication channels such as Interactive Voice Response System and the Internet.

Cost Savings

13. The introduction of the biometric HKSAR passport and eTDIS will bring about annual recurrent savings of \$111,860,000 from 2008-09 onwards, comprising –

- (a) **Realisable savings** of \$52,090,000 – This represents annual savings in staff cost of \$19,931,000, maintenance cost of \$13,313,000 for the existing TDIS and cost of \$18,846,000 for old type passport books and laminates. The staff savings which involve a net deletion of 11 posts of immigration service grade staff and 22 posts of general, common and information technology (IT) grades staff will be realised progressively from 2007-08 and onwards. The immigration service grade staff can be redeployed to meet other operational needs and cope with the increasing workload or new service delivery initiatives of ImmD. As for the general, common and IT grades staff, they will also be redeployed within ImmD or to other government departments in the normal manner.
- (b) **Cost avoidance** of \$59,770,000 – This represents the avoidance of creation of 117 posts for handling projected increase in the number of passport applications at an annual staff cost of \$34,305,000 and the cost of \$25,465,000 for procuring passport books and laminates currently in use.

Encl. 1 14. We set out at Enclosure 1 a detailed breakdown of the savings and cost avoidance.

/Cost

Cost and benefit analysis

Encl. 2 15. A cost and benefit analysis on the introduction of biometric HKSAR passport and eTDIS is at Enclosure 2.

FINANCIAL IMPLICATIONS**Non-recurrent expenditure**

16. We estimate that the implementation of biometric HKSAR passport and eTDIS will require a total non-recurrent expenditure of \$152,759,000 over a three-year period from 2005-06 to 2007-08, broken down as follows –

	2005-06	2006-07	2007-08	Total
	\$'000	\$'000	\$'000	\$'000
(a) Hardware and software	4,719	67,494	5,237	77,450
(b) Implementation and contract staff services	1,335	45,559	5,380	52,274
(c) Site preparation	4,166	10,414	304	14,884
(d) Consumables and miscellaneous	-	539	-	539
(e) Communication lines	-	338	-	338
(f) Contingency	511	6,217	546	7,274
Total	10,731	130,561	11,467	152,759

17. As regards paragraph 16(a), the expenditure of \$77,450,000 is for the acquisition of hardware and software for the processing of passport applications, passport personalisation and management, as well as workflow and record management. The hardware 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 document scanners), and biometric and passport specialised equipment (such as laser engraving machine for personalising the data page of HKSAR passport, contactless chip encoders and self-service kiosks for the public to submit applications). Software packages to drive and support the hardware will also be required.

18. As regards paragraph 16(b), the expenditure of \$52,274,000 is for the acquisition of service from external service providers and contract staff to implement the project. Main activities include project management, overall project co-ordination, system analysis and design, system development, system installation and testing, system integration services, production roll-out, nursing system and provision of technical support.

19. As regards paragraph 16(c), the expenditure of \$14,884,000 is for site preparation including fitting-out costs for the branch offices, installation of data ports and power points, as well as trunking and cabling works at ImmD offices.

20. As regards paragraph 16(d), the expenditure of \$539,000 is mainly for the acquisition of start up consumables, such as test chips and passport books, backup tapes, toner cartridges and optical disk, etc.

21. As regards paragraph 16(e), the expenditure of \$338,000 is mainly for the installation of communication lines.

22. As regards paragraph 16(f), the expenditure of \$7,274,000 represents a 5% contingency on the cost items set out in paragraphs 16(a) to (e).

Other non-recurrent expenditure

23. In addition, the introduction of biometric HKSAR passport and eTDIS will entail an additional non-recurrent expenditure of \$58,064,000 in respect of the in-house staff costs and accommodation costs for both system development and implementation. The cost breakdown is as follows –

	2005-06	2006-07	2007-08	Total
	\$'000	\$'000	\$'000	\$'000
(a) Staff cost	22,677	27,062	4,466	54,205
(b) Accommodation	1,053	2,287	519	3,859
Total	23,730	29,349	4,985	58,064

24. As regards paragraph 23(a), the expenditure of \$54,205,000 represents the staff cost of immigration service grade and IT professional grade staff for setting up a project team to manage and implement the project. It comprises 564 man-months of immigration service grade staff (involving 24 non-directorate posts) and 243 man-months of IT professional and general grades staff (involving ten non-directorate posts). We set out at Enclosure 3 details of the non-recurrent staffing requirement. The project team will be responsible for monitoring the performance of the external service providers as well as project management and monitoring of the project activities like system analysis and design, development, site preparation, installation support, performing user acceptance tests on the computer system and forensic tests on personalised passport, devising new procedures, preparing documentation, arranging and conducting training and implementing the project.

Encl. 3

/25.

25. As regards paragraph 23(b), the expenditure of \$3,859,000 is for providing accommodation for the project team for system development, testing and training of staff.

Recurrent expenditure

26. We estimate that additional recurrent expenditure arising from the project is \$121,284,000 per annum as from 2008-09, as set out below –

	2006-07	2007-08	2008-09 and onwards
	\$'000	\$'000	\$'000
(a) Passport books	-	100,693	83,431
(b) Hardware and software maintenance	1,184	20,592	21,295
(c) On-going support services	-	7,533	8,014
(d) Transaction fee	-	7,051	5,987
(e) Communication lines	-	2,242	2,242
(f) Consumables and miscellaneous	-	138	138
	Sub-total	1,184	138,249
(g) Accommodation	-	177	177
	Sub-total	-	177
	Total	1,184	138,426
			121,284

27. As regards paragraph 26(a), the annual expenditure of \$83,431,000 is for the acquisition of passport books and consumables for the passports, including contactless chips and polycarbonate sheets for biodata pages.

28. As regards paragraph 26(b), the annual expenditure of \$21,295,000 is for hardware and software maintenance, as well as software licence fees to support the system.

29. As regards paragraph 26(c), the annual expenditure of \$8,014,000 is for system support and maintenance services provided by external service providers for the system.

30. As regards paragraph 26(d), the annual expenditure of \$5,987,000 is for the transaction fee for e-submission applications, EPS payment, SMS message, etc.
31. As regards paragraph 26(e), the annual expenditure of \$2,242,000 is for rental of data lines.
32. As regards paragraph 26(f), the annual expenditure of \$138,000 is for the purchase of consumables such as backup tapes and toner cartridges.
33. As regards paragraph 26(g), the annual expenditure of \$177,000 is for providing accommodation for the staff of external service provider delivering on-going support services.
34. There is no additional recurrent staffing requirement for the project.

Revenue

35. The Government will receive revenue in the form of fees for biometric HKSAR passport. The cost and hence the fee to be charged for the new form of passport will depend on the result of the tendering exercise, but will be set on a cost-recovery basis.

IMPLEMENTATION PLAN

36. Our plan is to introduce the biometric HKSAR passport by early 2007. The proposed implementation plan is as follows –

Activity	Timing
Tendering	mid-2005 to December 2005
System design and development	January 2006 to November 2006
User acceptance test	November 2006 to March 2007
User training	November 2006 to March 2007
System roll-out	April 2007

/BACKGROUND

BACKGROUND INFORMATION

37. We consulted the Legislative Council Panel on Security on the proposal on 1 February 2005. Members supported the proposal. Some Members proposed to advance the introduction of the new form of passport to late 2006, if possible, so as to cater for the need of residents who wished to travel abroad during the Christmas holidays. The Administration responded that given the scale and complexity of the project, the proposed timetable was already a compressed one. In response to a Member's enquiry, the Administration said that the introduction of biometric passport would not require legislative amendment as the information to be stored in the chip would be the same as that shown on the biodata page of the passport. The Member also enquired about the fee for the new form of passport and was advised that it would be set on a cost-recovery basis.

Security Bureau
February 2005

Savings Arising from the Introduction of Biometric HKSAR Passport and eTDIS

Savings	\$'000							
	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	Total
(A) Realisable savings								
Staff cost	-	-	13,760	19,931	19,931	19,931	19,931	93,484
Consumables and maintenance	-	-	13,313	13,313	13,313	13,313	13,313	66,565
Old type passport books & laminates	-	-	18,846	18,846	18,846	18,846	18,846	94,230
Total realisable savings	-	-	45,919	52,090	52,090	52,090	52,090	254,279
(B) Cost avoidance								
Staff cost	-	-	48,324	34,305	34,305	34,305	34,305	185,544
Old type passport books & laminates	-	-	34,633	25,465	25,465	25,465	25,465	136,493
Total cost avoidance	-	-	82,957	59,770	59,770	59,770	59,770	322,037
Total savings	-	-	128,876	111,860	111,860	111,860	111,860	576,316

Cost and Benefit Analysis for the Introduction of Biometric HKSAR Passport and eTDIS

	Cash flow (\$'000)							Total
	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	
Cost								
Non-recurrent								
Expenditure	10,731	130,561	11,467	-	-	-	-	152,759
Staff cost	22,677	27,062	4,466	-	-	-	-	54,205
Accommodation	1,053	2,287	519	-	-	-	-	3,859
Sub-total	34,461	159,910	16,452	-	-	-	-	210,823
Recurrent								
Expenditure	-	1,184	138,249	121,107	121,107	121,107	121,107	623,861
Accommodation	-	-	177	177	177	177	177	885
Sub-total	-	1,184	138,426	121,284	121,284	121,284	121,284	624,746
Total cost	34,461	161,094	154,878	121,284	121,284	121,284	121,284	835,569
Savings								
Realisable savings	-	-	45,919	52,090	52,090	52,090	52,090	254,279
Cost avoidance	-	-	82,957	59,770	59,770	59,770	59,770	322,037
Total savings	-	-	128,876	111,860	111,860	111,860	111,860	576,316
Net shortfall	34,461	161,094	26,002	9,424	9,424	9,424	9,424	259,253
Net cumulative shortfall ^(Note)	34,461	195,555	221,557	230,981	240,405	249,829	259,253	

Note : The project is recommended despite the net cumulative shortfall as –

- (a) The incorporation of biometric identifier into the HKSAR passport is the requirement by the International Civil Aviation Organization, failing which would jeopardise visa-free treatment enjoyed by HK passport holders.
- (b) ImmD aims at achieving full cost recovery when setting the fee level for issuance of biometric passport.

Estimated Staffing Requirement for Introduction of Biometric HKSAR Passport and eTDIS

Non-recurrent Staffing Requirement										
Rank	Annual Staff Cost \$	2005-06			2006-07			2007-08		
		Total No. of Staff	Man-month	Staff Cost \$	Total No. of Staff	Man-month	Staff Cost \$	Total No. of Staff	Man-month	Staff Cost \$
Assistant Principal Immigration Officer	1,183,332	1	12	1,183,332	1	12	1,183,332	1	3	295,833
Chief Immigration Officer	1,032,444	2	24	2,064,888	2	24	2,064,888	2	6	516,222
Senior Immigration Officer	911,340	7	72	5,468,040	7	84	6,379,380	3	9	683,505
Immigration Officer	694,188	14	132	7,636,068	14	168	9,718,632	6	18	1,041,282
Executive Officer I	651,192	1	12	651,192	1	12	651,192	1	3	162,798
Assistant Clerical Officer	293,640	1	12	293,640	1	12	293,640	1	3	73,410
Senior Systems Manager	1,368,420	1	12	1,368,420	1	12	1,368,420	1	3	342,105
Systems Manager	1,109,088	2	24	2,218,176	2	24	2,218,176	2	6	554,544
Assistant Computer Operation Manager	709,428	1	3	177,357	1	12	709,428	1	3	177,357
Analyst/Programmer I	664,956	3	27	1,496,151	3	36	1,994,868	3	9	498,717
Analyst/Programmer II	479,544	1	3	119,886	1	12	479,544	1	3	119,886
	Total	34	333	22,677,150	34	408	27,061,500	22	66	4,465,659
