For discussion
on 1 June 2006

EC(2006-07)5

ITEM FOR ESTABLISHMENT SUBCOMMITTEE OF FINANCE COMMITTEE

Head 70 – IMMIGRATION DEPARTMENT

Subhead 000 Operational expenses

Members are invited to recommend to Finance Committee the creation of the following permanent post in the Immigration Department with effect from 1 November 2006 -

1 Chief Systems Manager
(D1) ($92,650 - $98,300)

PROBLEM

The supernumerary post of Chief Systems Manager (CSM) (D1) in the Immigration Department (ImmD) will lapse on 1 November 2006. ImmD needs the continued support of the directorate post for planning, managing and co-ordinating information technology (IT) related activities in the Department so as to maintain responsive and high quality services to the public.

PROPOSAL

2. We propose to create one permanent CSM (D1) post in ImmD with effect from 1 November 2006 to head the Technology Services (TS) Division of ImmD and to support the development and implementation of the IT strategic plans of ImmD on an on-going basis.

/JUSTIFICATION .....

JUSTIFICATION

Strategic Use of IT in ImmD

3. The increasing application of IT in the delivery of public services is a global trend. It does not only improve the standard and efficiency of services offered to the general public through enhanced productivity, but also helps an organisation to cope with increasing workload without a corresponding proportional increase in resources. The services provided by ImmD are multifarious and cover many aspects of our daily life, including issue of Hong Kong Identity Cards, marriage registration, issue of entry visas, upholding immigration control at control points, etc. Being one of the departments with the most frequent interactions with the public, ImmD is committed to capitalising on IT and other advanced technologies to further enhance its business performance and improve service delivery to its clients.

4. IT development in ImmD is taken forward in a progressive and co-ordinated manner to achieve synergy through well-defined Information Systems Strategy (ISS) plans. The plans are continuously reviewed to keep pace with technological advancement and changes in business environment. Through implementation of these ISS plans, a number of strategic IT applications have been developed to support different business areas of ImmD. These applications have been fully integrated into the daily business operations of ImmD and become core components of its public services. For example, the Entry/Exit Processing and Records System (EXPRESS) and the Automated Passenger Clearance (APC) and Automated Vehicle Clearance (AVC) Systems provide mission-critical, round-the-clock and efficient boundary control services to cater for the heavy passenger and vehicular traffic. The Smart Identity Card System (SMARTICS) supports the production of smart identity cards for all Hong Kong residents.

Size and Complexity of the Computer Systems in ImmD

5. The computer systems of ImmD are large-scale and complex. They are critical for the handling of large amount of personal data. There are altogether eight core information systems in ImmD, namely the SMARTICS, EXPRESS, APC, AVC, Processing Automation System (PAS), Travel Document Information System (TDIS), Electronic Visit Permit Application System (iPermit) and Operations and Administration Support Information System (OASIS). They have intricate inter-connections (e.g. the interface between SMARTICS and APC/AVC systems). A summary of the functions of these systems is at Enclosure 1. The relevant systems were developed at different times with different technologies. It is therefore essential to have the leadership of an experienced directorate IT

Encl. 1

professional officer to take a holistic and strategic approach in handling all these applications and technologies, to monitor the performance of contractors, and to manage the system performance and interaction to ensure full compatibility and seamless integration with each other and the IT infrastructure. More importantly, ImmD is proactive in the application of IT to support its operations and to continuously enhance its services. The relevant systems and their interfaces have to be upgraded and enhanced from time to time, in the light of evolving public expectations as well as rapid technological advancement. For example, TDIS will be replaced by the Electronic Passport System (e-Passport) in 2007[1] and PAS will be replaced by the Application and Investigation Easy System (APPLIES) in 2006-07.

6. In terms of IT investment, ImmD is among the highest in all government departments. For the past three consecutive years (2003-04 to 2005-06), more than 30% of the total funding provision under Head 710 Computerisation were allocated to various computer projects of ImmD. With the devolution of IT support from the Office of the Government Chief Information Officer (OGCIO) to client government departments, ImmD set up in April 2001 its own IT Management Unit (ITMU), namely the TS Division. The establishment of TS Division enables ImmD to assume full ownership of IT management and operations, and facilitates the speedy delivery of IT systems to address its business needs. At present, ImmD has the second largest ITMU among all government departments, with a total of some 180 IT professional staff, just following the Hong Kong Police Force which already has a permanent CSM post.

Benefits of ISS Projects

7. So far, ImmD has launched two ISS. The first ISS (ISS-1), formulated in 1991 and implemented fully in 1995, achieved a saving of 613 posts worth $200 million per annum at the then prevailing price level. The updated ISS (ISS-2), which commenced development in 2001-02 for completion by 2007, is anticipated to generate a further saving of 530 posts worth $172 million per annum at the present price level. Through the implementation of these ISS projects, ImmD's efficiency in service delivery is enhanced with simplification of work process and strategic use of IT. Processing time for applications can be shortened with the introduction of a modernised and centralised record system. Greater convenience is rendered to the public, such as the reduction in waiting time at control points made possible by automated immigration clearance. Moreover, with

/the .....

[1] The e-Passport will utilise many latest technologies. For example, the holder's photograph and personal particulars will be engraved onto the polycarbonate biodata page by laser technology. Applications through self-service kiosks and e-submission through the Internet will be available upon the introduction of the e-Passport System.

the introduction of APPLIES under ISS-2, the public can submit applications, book appointments, make payments to ImmD through electronic means 24 hours a day and seven days a week. The improved system of record management and retrieval of information developed under ISS-2 will also enable law-enforcement officers to take more effective measures against unlawful employment, illegal immigration, overstaying, human smuggling as well as identity theft and document frauds.

Major IT Achievements

Coping with increasing workload without corresponding increase in resources

8. The workload of ImmD has increased substantially in the past decade. For instance, the number of passengers examined at our cross-boundary control points (air, sea and land inclusive) increased by 108% from 92.1 million in 1995 to 191.3 million in 2005. Cross-boundary vehicular throughput also increased by 73% from 8.4 million in 1995 to 14.6 million in 2005. ImmD's establishment, however, increased at a much slower rate, by 5% from 5 823 posts as at 1 April 1995 to 6 133 posts as at 31 December 2005, when compared to the significant increase in the activities taken on by ImmD. Proper IT application is a key for ImmD to deliver its services more efficiently and effectively.

External Recognition

9. The efforts of ImmD in developing new IT systems to improve service standards have been recognised by the local and international community. The SMARTICS, which supports the issue of smart identity cards, has won four major IT awards, viz. the Grand Award of the Card Technology Breakthrough Awards of the United States' Card Technology and Security Technology 14th Annual Conference and Exhibition; the top prize in the category of e-Government & Service of the Asia Pacific Information and Communications Technology Awards 2004; the Gold Award of the Application Category of the 6th IT Excellence Awards of the Hong Kong Computer Society; and the Champion of Team Award (Innovation/Application of Technology) of the Civil Service Outstanding Service Award Scheme 2005. The APC system (e-channel) has won the China Nominee Award in the category of e-Government and was chosen to compete for the World Summit Award 2005 on behalf of China. These recognitions help promote the good image of Hong Kong and the Hong Kong Special Administrative Region Government, which in turn facilitates ImmD in the pursuit of international co-operation or agreement on immigration matters such as visa free arrangement. With service delivery and decision-making processes becoming increasingly information-based, ImmD will continue to make every possible effort to provide convenient and quality services to the public with the assistance of IT application.

/Need .....

Need for a Permanent CSM Post

10. In the light of the strategic importance of IT applications to ImmD for achieving its business objectives and missions, coupled with the rising public aspiration for better services as well as the rapid pace of technological development, ImmD needs to constantly review and update its ISS plans to make full use of IT to support and enhance ImmD's operation and service delivery. For example, new sets of functionalities and upgraded system capacities are required to be put in place in a timely manner to maintain the high productivity and quality of services amidst the increasing workload on all fronts. ImmD also needs to review, update and implement its IT strategic plans on an on-going basis under a dynamic operation and technical environment as well as new immigration policies and changing public needs. Having regard to the scale and complexity of the IT installations and applications in ImmD as well as the experience gained in the development and implementation of the ISS-2 projects in recent years[2], the above is unlikely to be achievable without the dedicated inputs of a CSM. The holder of the proposed permanent CSM post will play an essential role in the formulation, review and implementation of ImmD's future ISS plans. He/She will also oversee the enhancement of those complicated and inter-dependent IT applications and infrastructure on an on-going basis so as to satisfy the public desire for continuous improvement to ImmD's services.

11. Efficiency aside, system reliability and information security are also very important. Many of the IT applications in ImmD are of large-scale, mission-critical and with a high degree of complexity and inter-dependency. Uninterrupted and high-performance IT service is among ImmD's prime concerns as it is of critical importance to ensure the smooth flow of people across the boundary. These facilities have to be properly managed to uphold their reliability and security under the changing technical and business environments. Given the scale and complexity of the IT systems in ImmD, the management of these sophisticated systems and infrastructure and the need to maintain a high level of information security require the continual services of an experienced technical expert at the directorate level.

12. Apart from maintaining and enhancing the existing production systems, ImmD embarks on new projects from time to time to cope with new business objectives/policies and e-government initiatives. For example, apart from those planned under the current ISS, three major projects with capital outlay

/ranging .....

[2] For example, given various constraints such as the need to ensure undisrupted services to the public and the "exponential" growth in system integration complexity (and thus inter-dependency) with the addition of each new component/functionality, it has come to ImmD's attention that the on-going maintenance/upgrading of the current systems could be no less, if not more, complicated than their first introduction.

ranging from $90 million to $177 million each were approved by the Finance Committee (FC) in 2004-05, namely the installation of necessary computer systems in the Shenzhen Western Corridor and Lok Ma Chau Spur Line Terminus respectively to support the provision of immigration clearance services in these two new control points, and the implementation of e-Passport System. These examples in the past few years illustrate that ImmD needs to implement new project initiatives and adjust priorities from time to time and on an on-going basis in the light of evolving public expectations, international practices and operational needs. They also help explain why we now see the need to turn the existing supernumerary CSM post into a permanent one. It is expected that more new projects will come up continuously to cope with new service initiatives and improvement to public services, such as facilities for electronic travel document holders. Many of the new projects will also likely be large-scale, complicated, mission-critical and time-critical in nature, in the light of considerations such as the need for stringent data protection. They demand technical leadership and oversight at directorate level to ensure their smooth development and implementation.

13. The size and composition of TS Division (currently some 180 IT professional staff including four Senior Systems Managers (SSM)) also justify the need for a permanent CSM post to provide continued directorate leadership. As a complex network of interrelations and interactions exists among projects, systems and sub-divisions within TS Division, between TS Division and other divisions within ImmD, and between ImmD and external stakeholders, the CSM incumbent will be tasked to set priorities and optimise resource utilisation as well as to balance the technological, economical and strategic factors involved in all major decisions.

14. The CSM post, if turned into permanent establishment, will continue to be accountable to the Assistant Director (Information Systems) (AD(IS)) and the departmental organisation structure will remain unchanged. AD(IS) is responsible for overseeing the operation of the Information Systems Branch of ImmD as well as formulating and implementing IT strategies and plans. The CSM will continue to be responsible for the management of the TS Division, in addition to giving IT-related technical advice and support to AD(IS)[3], such as in the formulation of future ISS. In this regard, it is relevant to note that the CSM is the only IT professional officer at the directorate level in ImmD. The job description of the CSM post as well as the proposed departmental organisation structure of ImmD are at Enclosures 2 and 3 respectively.

Encls. 2 & 3

/**ALTERNATIVES** .....

[3] For example, the CSM would advise on specific strategies on all technical areas, including the IT infrastructure for supporting all computer systems in ImmD; the systems architecture for maintaining system efficiency, integration and interoperability; the management of computer systems and database to uphold system reliability and security; the procurement of IT services and equipment; etc.

ALTERNATIVES CONSIDERED

15. ImmD has critically examined the feasibility of identifying a directorate post within the Department to absorb the duties of the CSM, but has come to the view that such an alternative is not feasible. Existing directorate immigration officers do not have professional competence in IT, though they are heavily involved in IT developments such as formulation of user requirements and data protection safeguards. Moreover, they are already fully occupied with their existing responsibilities relating to immigration entry/exit control, visa policies, enforcement and litigation, personal documentation, administration and management support. The option of extending the CSM post on a supernumerary and time-limited basis is considered undesirable. There is an on-going need for the technical leadership of CSM to maintain effective performance and continuous improvement of existing large-scale and complex IT systems in ImmD on a day-to-day basis and to continuously implement new IT project initiatives to cope with the dynamic business environment of the Department, international practices, advancement in technology and public expectations.

16. To allow the lapsing of the CSM post will hamper the efficiency, integration and development of various inter-dependent systems in ImmD. We have considered the option of engaging a non-civil service contract staff or a consultant to lead and control the planning, implementation and operation of the various projects and systems in ImmD. However, due to security concern and to avoid potential conflict of interest in dealing with external consultants/service contractors, we are of the view that the work should continue to be taken up by a civil servant. The option of deploying a SSM to take up the CSM's duties is also not feasible. Having regard to the system complexity, project scale and the number of SSMs in the current hierarchy, it is inappropriate to appoint one of the SSMs to assume the leadership and management role.

FINANCIAL IMPLICATIONS

17. The additional notional annual salary cost at mid-point of the proposal is $1,144,200. The full annual average staff cost of the proposal, including salaries and staff on-cost, is $1,821,000. There are sufficient funds in the 2006-07 Estimates of ImmD to meet the cost of the proposal. The proposal is covered in ECI(2005-06)6 on "Overall directorate establishment position".

CONSULTATION WITH LEGISLATIVE COUNCIL PANEL

18. We consulted the Legislative Council Panel on Security on 2 May 2006. Members generally supported the proposed creation of the permanent CSM post.

/BACKGROUND .....

BACKGROUND

19. FC approved on 8 June 2001 vide EC(2001-02)5 the creation of the supernumerary CSM post in ImmD for the period up to 31 October 2003 to assist the then Deputy Director (Identity Card) of ImmD in steering the implementation of the smart identity card project. The new system has come into operation since July 2003. On 18 July 2003, FC approved vide EC(2003-04)10 the retention of the supernumerary CSM post up to 31 October 2006 to take on the IT-related activities for the implementation of projects under the ISS-2. Since then, the CSM post has also been taking on all IT-related work in ImmD. The job description for the supernumerary CSM post when approved in June 2001 and July 2003 are at Enclosures 4 and 5 respectively. With the substantial IT development and investment in ImmD over the past years, and in view of continuous changes in business requirements and rapid pace of technological advancement, there is a need to make permanent the existing supernumerary CSM post so that ImmD can capitalise on IT to further enhance its productivity and efficiency of service delivery to meet the rising expectation from members of the public.

Encls. 4 & 5

ESTABLISHMENT CHANGES

20. The establishment changes in ImmD for the past two years are as follows –

Establishment (Note)	**Number of posts**		
	Existing (as at 1 April 2006)	As at 1 April 2005	As at 1 April 2004
A	11 (+1)#	11 (+1)	11 (+1)
B	1 619	1 626	1 579
C	4 474	4 530	4 326
Total	**6 104 (+1)**	**6 167 (+1)**	**5 916 (+1)**

Note:

A – ranks in the directorate pay scale or equivalent

B – non-directorate ranks the maximum pay point of which is above MPS Point 33 or equivalent

C – non-directorate ranks the maximum pay point of which is at or below MPS Point 33 or equivalent

( ) – number of supernumerary directorate post

\# – as at 1 April 2006, there is no unfilled directorate post in ImmD

CIVIL SERVICE BUREAU COMMENTS

21. Having regard to the operational need for a technical expert at directorate level to plan, manage and co-ordinate IT-related activities in ImmD, the Civil Service Bureau considers that the proposed creation of a permanent CSM post is functionally justified. The grading and ranking of the post to be created are appropriate having regard to the level and scope of responsibilities involved.

ADVICE OF THE STANDING COMMITTEE ON DIRECTORATE SALARIES AND CONDITIONS OF SERVICE

22. The Standing Committee on Directorate Salaries and Conditions of Service has advised that the grading proposed for the post would be appropriate if the proposal were to be implemented.

Security Bureau
May 2006

Brief Description of Computer Systems for the Immigration Department

1. Entry/Exit Processing and Records System (EXPRESS)

- EXPRESS supports the process of immigration clearance at various control points (including the implementation of the Easy Travel Scheme under which Hong Kong permanent residents can travel in and out of Hong Kong producing only their Hong Kong identity cards).

- EXPRESS workstations with optical character recognition (OCR) readers and document imaging optical character recognition (DIOCR) readers are installed at counters to support the traditional type of immigration clearance.

2. Automated Passenger Clearance (APC) System

- APC system supports self-service immigration clearance at control points by employing smart card and fingerprint recognition technologies.

- e-Channels (comprising entrance and exit door gates, sensors, industrial personal computers, smart card readers, fingerprint scanners, Liquid Crystal Display monitors, etc.) are set up to enable self-service immigration clearance. CCTV system and Digital Video Recording System are also installed to monitor the passenger flow at the e-Channels.

3. Automated Vehicle Clearance (AVC) System

- AVC system supports self-service immigration clearance of cross-boundary vehicle drivers and passengers on board of vehicles by employing smart card, fingerprint and facial recognition technologies.

- AVC lanes comprising entrance and exit display boards, traffic flow light, automated vehicle recognition system (AVRS), vehicle height detector and self clearance checking station are set up at vehicular control points to enable self service clearance. CCTV system and Digital Video Recording System are also installed to monitor the traffic flow.

/***4***. .....

4. iPermit System (IPS)

- IPS supports the processing of applications for visit permits submitted by residents of Taiwan and issuing of visit permits to them through electronic means and the related record management.

- It also enables on-line record checks so as to help verifying iPermits issued to Taiwan visitors.

5. Smart Identity Card System (SMARTICS)

- SMARTICS supports the processing, personalisation and issuing of Hong Kong smart identity cards and the related record management.

- It also enables on-line record checks through SMARTICS workstations to help verifying the authenticity of Hong Kong identity cards.

6. Travel Document Information System (TDIS)

- TDIS supports the processing, printing and issuing of HKSAR passports, Documents of Identity for Visa Purposes, Re-entry Permits and Seaman's Identity Books and the related record management.

- It also enables on-line record checks to verify the authenticity of HKSAR passports, Documents of Identity for Visa Purposes, Re-entry Permits and Seaman's Identity Books.

7. Processing Automation System (PAS)

- PAS is an on-line computer system which supports processing of applications for visas and permits and registration of births, deaths and marriages. This system automates the process from the receipt of application to the issue of documents and collection of fees.

- It also produces management reports for performance monitoring and policy reviewing.

/***8.*** .....

8. Operations and Administration Support Information System (OASIS)

- OASIS is an on-line information system which aims at enhancing productivity in operational and administrative areas. It facilitates management of information relating to personnel, stores and inventory. It also supports electronic compilation of duty roster for automated staff deployment at control points.

- OASIS contains four sub-systems, viz., Duty Roster Information System (DUTYS), Management Information System (MIS), Personnel Information System (PIS) and Stores and Inventory System (SIS).

- Besides, OASIS also provides an effective and efficient means for file and mail exchanges in electronic form among OASIS users.

- OASIS workstations and administrative network are installed to provide an effective and efficient means for communication in electronic form amongst immigration offices.

Enclosure 2 to EC(2006-07)5

Job Description of the Proposed Chief Systems Manager Post

Rank **:** Chief Systems Manager (D1)

Responsible to **:** Assistant Director (Information Systems) of ImmD (GDS(C)2)

Main Duties and Responsibilities –

1. To oversee the computer operations and system maintenance/development within ImmD, and be responsible for the manpower planning, staff management, resource allocation and staff development of the TS Division in ImmD.

2. To formulate management and deployment strategies for building IT infrastructure, systems architecture, applications systems and database management.

3. To facilitate the re-engineering of ImmD's business processes through the use of IT.

4. To formulate, recommend and execute strategies for the procurement of IT services and computer equipment.

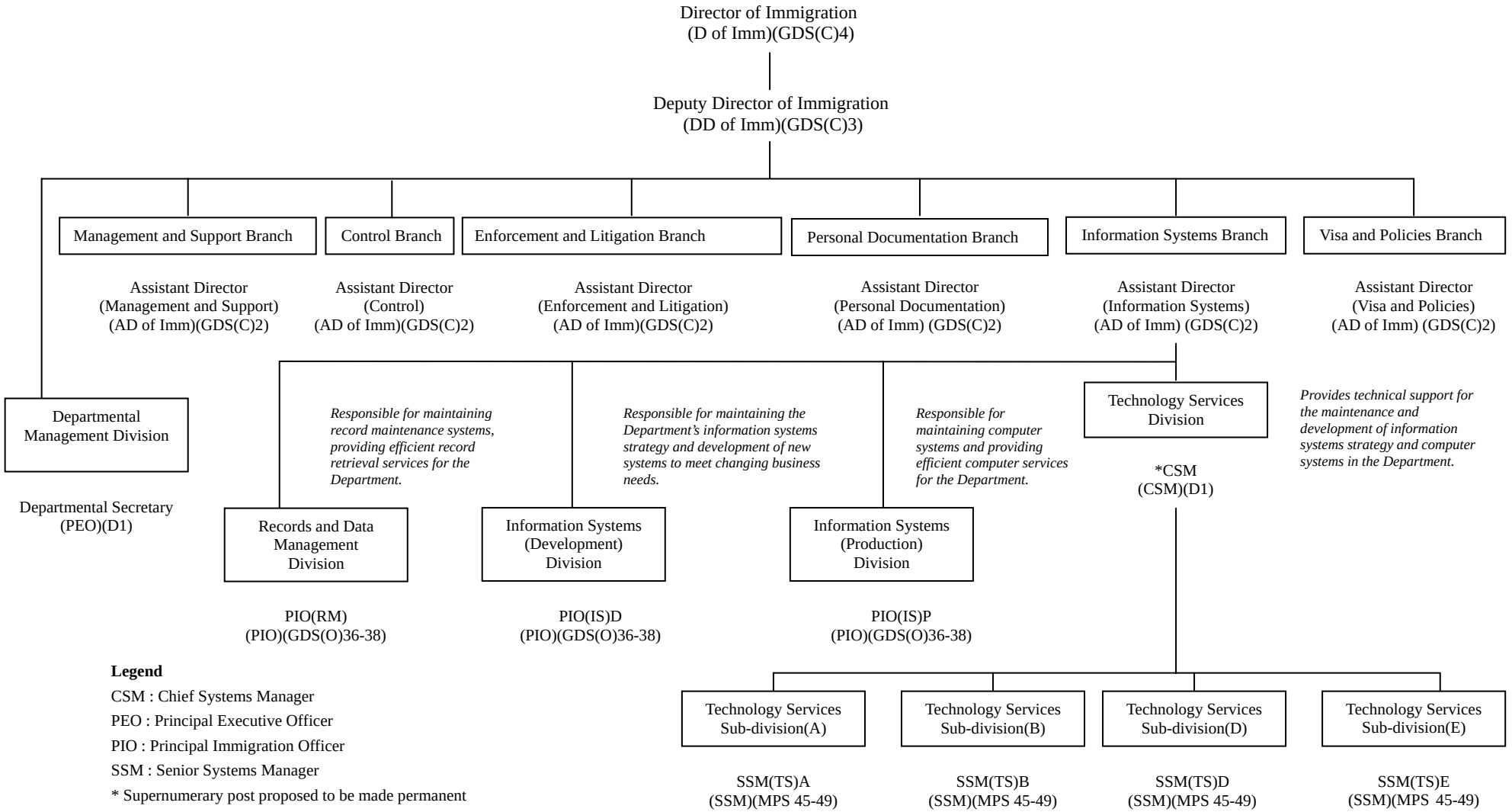
5. To advise on matters related to the IT security policy and security framework in ImmD, assist in their maintenance and upholding and establish appropriate checks and balances to ensure their compliance.

6. To advise on all IT related technical and policy matters and on technology management, promote government's IT standard and practices and enhance IT awareness and competence for ImmD.

7. To act as the IT consultant of ImmD and the central liaison point between the Department and OGCIO on matters concerning service-wide IT standards and initiatives, technology infrastructure and IT manpower deployment.

8. To participate in the development of inter-agency systems in the Government and maintain interoperability with these systems.

Organisation Chart of Immigration Department



Legend

CSM : Chief Systems Manager

PEO : Principal Executive Officer

PIO : Principal Immigration Officer

SSM : Senior Systems Manager

* Supernumerary post proposed to be made permanent

Note: The Technology Services Sub-division (C), which provided technical support to the Information Technology Infrastructure Upgrade project and the development of the Entry/Exit Process Processing and Records System, was disbanded on 1 April 2005.

Job Description of Chief Systems Manager (Identity Card)
(8 June 2001 to 31 October 2003)

Rank **:** Chief Systems Manager (D1)

Responsible to **:** Deputy Director (Identity Card) of ImmD (GDS(C)3)

Main Duties and Responsibilities –

The Chief Systems Manager (Identity Card) was responsible to Deputy Director (Identity Card) [DD(ID)] for planning, directing and monitoring all information technology (IT) related activities relating to the implementation of the new ID card system and the launching of the region-wide ID card replacement exercise. His main duties and responsibilities were as follows –

1. To provide technical advice to DD(ID) on all IT related matters for the smooth and timely implementation of the HKSAR ID card computer system.

2. To give directions on, and be responsible for, all the IT activities relating to the new ID Card Project, including overall planning, management, co-ordination, development, testing, acceptance and implementation of the various IT systems and sub-systems.

3. To monitor and ensure that the necessary technical measures are implemented to protect the privacy of data and system security to the desired level; that the system is efficient, accurate and user-friendly; and that the service reliability and resilience are of the required standards.

4. To formulate, recommend and execute strategies for the procurement of IT services and computer equipment at various stages of the project, and to give advice on the networking strategy as well as the site preparation work for the New ID Card Issuing Offices.

5. To provide advice on tender preparation, tender evaluation, and to participate in contract negotiation.

6. To manage the performance of the IT staff and external contractors, to ensure that the systems are delivered on time, that the system integration work is done smoothly by the various contractors, and to arbitrate or give directives, as necessary, should there be disputes among them.

/7. .....

7. To oversee the interface of the ID card system with other relevant IT and manual systems.

8. To give advice to DD(ID) on the technical requirements pertaining to the inclusion of non-immigration applications in the new ID card.

9. To carry out any other duties assigned by DD(ID).

Enclosure 5 to EC(2006-07)5

Job Description of the Chief Systems Manager Post
(1 November 2003 to 31 October 2006)

Rank **:** Chief Systems Manager (D1)

Responsible to **:** Assistant Director (Information Systems) of ImmD (GDS(C)2)

Main Duties and Responsibilities –

1. To assist in developing IT plans and strategies and allocating IT resources in accordance with ImmD's business needs and overall e-government targets.

2. To facilitate the re-engineering of ImmD's business processes through the use of IT.

3. To deliver and maintain e-business solutions in ImmD by planning, budgeting for, acquiring and managing IT expertise and resources, arranging strategic IT partnership and managing the performance of contractors.

4. To formulate, recommend and execute strategies for IT outsourcing, the procurement of IT services and computer equipment.

5. To engage contract staff through body-shopping contracts [(Note)], manage and conduct performance review on these contract staff.

6. To assist in maintaining and upholding the IT security policy and security framework in ImmD and establish appropriate checks and balances to ensure their compliance.

7. To advise on all IT related technical and policy matters and on technology management, promote government's IT standard and practices and enhance IT awareness and competence for ImmD.

8. To act as the IT consultant of ImmD and the central liaison point between the Department and Information Technology Services Department on matters concerning service-wide IT standards, technology infrastructure and IT manpower deployment.

9. To participate in the development of inter-agency systems in the Government and maintain interoperability with these systems.

(Note) Refer to term contracts for the provision of IT contract staff services arranged by the Information Technology Services Department.