

## **ITEM FOR ESTABLISHMENT SUBCOMMITTEE OF FINANCE COMMITTEE**

### **HEAD 47 - INFORMATION TECHNOLOGY SERVICES DEPARTMENT Subhead 001 Salaries**

Members are invited to recommend to Finance Committee the creation of the following supernumerary posts in the Information Technology Services Department -

1 Chief Systems Manager  
(D1) (\$92,650 - \$98,300)  
for a period of two years

1 Chief Systems Manager  
(D1) (\$92,650 - \$98,300)  
for a period of three years

### **PROBLEM**

The Director of Information Technology Services (DITS) does not have adequate directorate support in the department to co-ordinate the overall planning and management of the following computerisation projects -

- (a) the enhancement of use of information technology in schools of the Education Department (ITED) and projects under the Information Systems Strategy of the Education Department (ED);
- (b) the Computerised Social Security System (CSSS) of the Social Welfare Department (SWD);

/(c) .....

- (c) the Air Cargo Clearance System (ACCS) of the Customs and Excise Department (C&ED); and
- (d) the Enhancement/Extension of Electronic Data Interchange (EDI) system of the Trade and Industry Bureau (TIB).

## **PROPOSAL**

2. We propose to create one supernumerary post of Chief Systems Manager (CSM) in the Information Technology Services Department (ITSD) for a period of two years to provide professional support to ITED and other computer projects for ED, and another supernumerary post of CSM for three years to oversee the planning, development and implementation of the CSSS of SWD, the ACCS of C&ED and the EDI system of TIB.

## **JUSTIFICATION**

### **(A) A supernumerary CSM post for ITED and other projects for ED**

3. The objective of the ITED is to promote the use of information technology (IT) in teaching and learning across the curriculum in all public sector schools. The scope of the project which requires ITSD's professional advice includes -

- (a) provision of more computer equipment and computer-assisted learning packages and internet services to schools;
- (b) launching pilot schemes on more extensive computer-assisted teaching and learning in order to establish best practices for using IT in education;
- (c) setting up an IT Education Resources Centre to provide professional support to teachers in adopting IT as a teaching tool and to schools in managing their own IT systems; and
- (d) commissioning a consultancy study on the feasibility of establishing an education-specific Intranet to facilitate communication and sharing of information among teachers, between teachers and students, and between schools and parents.

Encl. 1 Further details of the ITED are given in Enclosure 1.

4. Owing to the scope and complexity of the ITED project, there is an immediate need for a CSM to be responsible for providing the necessary professional advice to ED and liaising with vendors and external service providers to ensure that the project could be implemented on time and within budget. The roles of the proposed CSM in ITED are detailed below.

#### ***Strategic planning in the use of IT in schools***

5. The proposed CSM would assist the senior management of ED in the formulation of strategic policy and plans in the best application of IT in schools. He would assist them in the exploitation of IT in teaching and learning, laying down guidelines on IT standards and practices in schools, effective co-ordination of central support services and resources, defining IT training requirements for teachers, and the evaluation and reviewing mechanism for the effectiveness of the use of IT in education. He would give technical recommendations on the launching of pilot schemes to identify and establish the best practices in teaching and learning.

#### ***Establishment of computer networks for schools***

6. The implementation of the ITED project entails a significant increase in the computer equipment and facilities installed at schools. (Please see Enclosure 1.) To ensure good value for money in such IT investment, the proposed CSM would give professional advice on the overall design of the local area network in schools and the wide area network among schools for internet connectivity, security policy in such networks, the procurement and roll-out strategies. He would assist ED to set up outsourcing contracts, liaise with a large number of contractors and suppliers, and oversee the scheduled completion of all site preparation and equipment installation work at schools. In the commissioning of a consultancy study into the feasibility of an education-specific intranet, he would give technical advice on tender preparation and evaluation, and monitor the progress of the consultancy study.

#### ***Establishment of an IT Education Resources Centre***

7. The proposed CSM would take an active part in designing the structure and arrangements of the IT Education Resources Centre. The work

/includes .....

includes assisting ED in the planning of IT related operation of the centre and providing professional advice on the development of educational software. He would also assist in the setting up of eight teams of technical experts (four for primary schools and four for secondary schools) comprising inspectors and school masters to help schools and teachers resolve technical difficulties in using IT in teaching and learning.

***Heading an IT team in ITSD to support the ITED project***

8. To ensure the successful implementation of the ITED project, the proposed CSM would head a team of IT staff to provide professional and technical input in the planning and support of infrastructure, procurement, system integration, site preparation, rollout, technology development, programme management, advanced training for teachers and second-line support to the eight teams of technical experts. The required manpower input is equivalent to 11 ITSD staff, 11 contract-in staff and over 55 IT service providers. The CSM would ensure that there are well-co-ordinated efforts between the work of the IT team and their counterparts in ED and schools. He would represent ITSD in high level meetings with ED, school representatives, vendors and contractors to ensure timely implementation of the ITED project.

***Other computer projects for ED***

9. In addition to his substantial involvement in the ITED project, this CSM would also be responsible for providing strategic support in all other computer projects for ED. In this connection, under ED's Information Systems Strategy (ISS) from 1993-94 to 1997-98, Finance Committee approved in May 1994 the creation of a CSM post in ITSD to implement the various ISS projects. This post lapsed in November 1997 upon completion of most projects. A new ISS for ED is underway and the proposed new CSM post would assist in the conducting of various feasibility studies and implementation of new projects planned under the new ISS. The proposed CSM would also offload some of the staff management functions currently assumed by the Assistant Director of Departmental Services Branch 2. The Assistant Director at present has to directly supervise three Senior Systems Managers as a result of the recent lapse of the CSM post created in 1994.

/(B) .....

**(B) A supernumerary CSM post for CSSS, ACCS and EDI**

Encl. 2 10. The CSSS, ACCS and EDI are major computer projects which, on successful implementation, will bring significant improvement to the efficiency of services of the user departments. (A brief description of the three projects is given in Enclosure 2.) In view of the importance and magnitude of these projects, the overall steer and close involvement of a CSM is crucial to the successful delivery of the projects on time, within budget, and to specification. The main duties of the proposed CSM post are detailed below.

***Overall planning***

11. The CSM would be responsible for steering the overall direction of the projects. The work includes laying down policies and strategies applicable to the projects; evaluating and recommending the overall system, network, application and data architectures; monitoring progress of development and expenditure; overseeing system testing and implementation. He would ensure that issues such as quality, budget, coordination, risks and contingency measures are taken into account so that the projects would progress smoothly according to agreed specifications.

***Contract management***

12. The implementation approach of these projects requires multiple tenders to be let and contracts to be awarded, including systems design and integration, the supply of additional computer equipment, training, documentation, data migration/conversion, and post-implementation services. The proposed CSM has to draw up the specifications to be included in the tenders and contracts; evaluate and recommend tenders for services, hardware and software; supervise the performance of contractors; scrutinise design and check the functionalities of the systems being developed; and resolve any contract disputes that may arise.

***Supervision of in-house staff and external contractors***

13. Given the scale and technical complexities of the projects, a large number of external contractors and ITSD staff are required for the implementation of the three projects. This includes 52 staff in the Analyst Programmer grade, 73 contract-in staff and over 50 external contractors. With such a large span of

/control .....

control, it is necessary to have a dedicated CSM to provide the overall leadership, guidance, supervision and, in particular, effective co-ordination between the work of external contractors, ITSD staff, and staff of the client departments.

***Liaison with client departments, contractors and outside organisations***

14. The proposed CSM is required to have extensive liaison and collaboration with directorate officers of user departments in securing top level commitment and attention to IT implementation. Only then can the IT needs be defined clearly to meet the operational objectives of the departments in a cost effective manner. Externally, he would represent government, solely or together with representatives from other concerned departments, in discussions with computer suppliers, consultants, and service companies during contract negotiation and execution stages. For the ACCS project, he would actively participate in discussions and liaison with the six approved cargo operators for the new airport at Chek Lap Kok in order to establish effective electronic links between them and C&ED to facilitate the transfer of cargo information and customs clearance instructions, and the tracking of movement of consignments between air cargo operators. For the EDI project, he has to liaise closely with the five Government Approved Certification Organisations, and work together with his counterparts in the Tradelink Electronic Document Services Limited who are developing computer applications in parallel under a franchise to cater for computer support to the trading community at large.

15. While the proposed CSM would focus his attention in the three projects, he would also oversee the provision of IT services to the user bureau/departments concerned (i.e. SWD, C&ED, TIB and the Trade Department) to ensure the overall integration of computer systems in the user environments.

**(C) Durations of the proposed posts**

16. At present there are a total of seven permanent CSM posts in ITSD, three of them are responsible for central administrative and technical services and four are providing support to strategic computer projects of various departments. With the increasing number of computer projects in the Government, each of the existing CSMs has been subjected to a substantial increase of workload. In view of the required substantial involvement at CSM level to ensure the successful

/delivery .....

delivery of ITED, CSSS, ACCS and EDI, the DITS has reviewed the staffing situation and concluded that it is necessary to create additional CSM posts to look after these projects.

17. For the ITED project, it will commence in April 1998 and take two years to complete all the site preparation and equipment installation. The second ISS for ED will spread over a much longer period. We propose that a supernumerary post of CSM be created initially for two years to tie in with the duration of the ITED project. We will review the continued need of this post in due course. The job description of the proposed post is given in Enclosure 3. (The proposed organisation chart is given in Enclosure 5.)

Encl. 3

Encl. 5

18. For the other three computer projects, the preparatory work is being absorbed by existing staff at the preliminary stages, but such input will not be adequate as developments of these projects come into full swing. We propose that a supernumerary post of CSM be created for three years to oversee the three projects. The degree of CSM involvement in the projects would be different at different stages of development. The ACCS project is expected to be completed by October 1999, the CSSS by early 2001, the EDI expansion in phases with full implementation by July 2001. As the ACCS and EDI projects have to cope with the volatile business environment in Hong Kong and interface with external organisations, the continued attention of a CSM is required after initial implementation so that any post-implementation problems can be resolved speedily. On the other hand, the CSM's attention during the concluding stage of the CSSS project is most critical to overall project success. Thus, the proposed creation of the supernumerary CSM post for three years would dovetail neatly with the implementation plans of the three projects as a whole. The job description of the proposed post is at Enclosure 4. The proposed organisation chart is given in Enclosure 5.

Encl. 4

## FINANCIAL IMPLICATIONS

19. The additional notional annual mid-point salary required for the proposed post is -

/\$ .....

	\$	No. of Post
CSM	1,144,200	1
CSM	<u>1,144,200</u>	<u>1</u>
	<u>2,288,400</u>	<u>2</u>

The annual average staff cost of the proposal, including salaries and on-costs, is \$4,126,824.

20. We have included sufficient provision in the 1998-99 draft Estimates to meet the cost of this proposal.

#### **CIVIL SERVICE BUREAU COMMENTS**

21. The Civil Service Bureau supports the creation of the two supernumerary posts for a period of two years and three years respectively and considers the ranking and grading of the proposed posts appropriate having regard to their duties and level of responsibilities.

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

22. As the posts are proposed on a supernumerary basis, we will report this creation, if approved, to the Standing Committee on Directorate Salaries and Conditions of Service in accordance with the agreed procedure.

-----

Finance Bureau  
February 1998



**Brief description of the project of “Enhancement of use of information technology in school education”**

In view of the increasing application of IT in all aspects of modern-day life, schools should equip students with the appropriate IT skills for further studies and the workplace. IT also has great potential for enhancing effectiveness in teaching and learning by enriching the content and making the process more interactive and thus interesting.

2. To enhance the use of IT in school education, Finance Committee approved on 5 December 1997 (vide FCR(97-98)73) a non-recurrent commitment of \$2,583 million to implement a package of measures to promote the use of IT in teaching and learning across the curriculum in all public sector schools. It also approved a recurrent grant ranging from \$55,000 to \$76,000 per annum per school for the purchase of IT-related consumables and delegated the authority to the Secretary for the Treasury for future annual revisions of the rates of the recurrent grant in accordance with the movement of the Consumer Price Index (B).

3. The package of measures to enhance the use of IT in school education include -

- providing on average 82 sets of computer and peripherals for each of the 395 public sector secondary schools, including replacement of outdated Liquid Crystal Display (LCD) projection systems and 286/386/486 microcomputers in each of the 405 secondary and 67 special schools;
- providing on average 25 sets of computer and peripherals in each of the 495 public sector primary school sites;
- providing on average 30 sets of computer and peripherals in each of the 67 special schools;
- providing up to 64 additional sets of computer and peripherals in each of the ten pilot primary school sites;
- providing up to 134 additional sets of computer and peripherals in each of the ten pilot secondary schools;

/providing .....

- providing an additional 21 sets of computer and audio-visual peripherals for 103 public sector secondary schools which already have a multi-media room;
- providing 40 sets of computer and peripherals to upgrade the existing rooms in each of the 27 prevocational schools;
- upgrading the existing Computer Education Resources Centre into the Information Technology Education Resources Centre;
- commissioning a consultancy study on the feasibility of establishing an education-specific Intranet; and
- training of about 30 000 teachers to equip them with the necessary IT knowledge and skills.

4. Finance Committee noted that the implementation of the project would require a non-recurrent staff requirement of 11 posts in ITSD (including a CSM) in 1998-99 and 1999-2000.

**Brief Description of the CSSS, ACCS and EDI**

**Computerised Social Security System (CSSS) in the Social Welfare Department (SWD)**

The use of information technology in SWD is limited. The existing Social Security Payment System, which came into operation in 1994, cannot generate the needed management information to support the monitoring of the social security schemes.

2. An Information Systems Strategy Study (ISSS) of SWD and a feasibility study on CSSS were completed in July 1997. The implementation of CSSS was proposed as Phase I of the ISSS for SWD. Apart from providing the social security payment functions, the CSSS should be capable of -

- (a) allowing on-line input of data and case details, and providing easy, prompt and user-friendly retrieval of information;
- (b) providing ready management information to facilitate policy analysis and reviews;
- (c) enabling changes in policy, management and operations of the social security schemes to be effected with minimum lead time and development efforts; and
- (d) interfacing with other new computerised information systems in SWD.

3. On 28 November 1997, Finance Committee approved (vide FCR(97-98)67), inter alia, the implementation of CSSS of SWD at an estimated expenditure of \$224.741 million over the period from 1998-99 to 2000-01 and an increase in the establishment ceiling of ITSD in 1997-98 to cover the creation of additional non-directorate posts. It noted that the non-recurrent staff requirements in ITSD comprised 261 man-months over the three years of development and implementation, including a part-time CSM (18 man-months) to lead the team.

4. The implementation plan of the project is as follows -

<b>Activities</b>	<b>Expected completion date</b>
Tendering for implementation of CSSS	End August 1998
Development and implementation of CSSS	End September 2000
Data migration and CSSS goes live	Early October 2000
Manual conversion to CSSS on line	End March 2001

**Air Cargo Clearance System (ACCS) of Customs and Excise Department (C&ED)**

5. C&ED does not have a dedicated computer system for cargo clearance at the existing airport at Kai Tak. Customs officers manually scrutinise cargo manifests supplied by carriers to detect contrabands and goods which are prohibited or restricted for import or export. There will be significant changes to the operational environment at the new airport at Chek Lap Kok, such as round the clock operation, a much increased flight capacity, and an increase in the number of cargo operators from one to six. As a result, a dedicated computer system is required to enable C&ED to exercise efficient and effective control on the clearance of air cargo at the new airport.

6. The ACCS has the following main functions -

- (a) to provide electronic links between C&ED and individual cargo operators;
- (b) to provide an electronic link between ACCS and the department's central Customs Control System (CCS) to facilitate the retrieval, correlation, analysis and updating of intelligence; and
- (c) to provide automated matching of the particulars of cargo with the intelligence in CCS and the lists of prohibited and restricted items.

7. Finance Committee approved (vide FCR(96-97)112) on 28 February 1997 the implementation of the ACCS of C&ED at an estimated

/expenditure .....

expenditure of \$127.796 million over the period from 1997-98 to 1999-2000. It also noted that 366.5 man-months of staff resources in ITSD (including ten man-months of CSM) would be required from 1997-98 to 1999-2000.

8. The project consists of three phases -

<b>Functions</b>	<b>Delivery date</b>
Exchange of consignment information, constraint code and action code with cargo operators	April 1998
Import Cargo Management, Transshipment Management, Smuggling Trend Management, Cargo Selection, Cargo Examination and Interface with the Customs Clearance System	April 1999
Export Cargo Management, Management Information and Disaster Recovery in Chek Lap Kok	October 1999

#### **Electronic Data Interchange (EDI) System Enhancement/Extension of the Trade and Industry Bureau (TIB)**

9. The existing Government EDI system has to be enhanced/expanded to cater for the projected increase in caseload in respect of Restrained Textiles Export Licences (RTEs) and Trade Declarations (TDECs), to shorten the turnaround time for processing RTE applications and to improve the effectiveness of the licensing control system, and to facilitate the processing of TDECs submitted in Chinese. The implementation plan is as follows -

<b>Activities</b>	<b>Target date</b>
Close counters for receiving paper lodgements of RTE and TDEC	1999
Introduce full EDI for the submission of RTE and TDEC	2000

10. Finance Committee approved (vide FCR(96-97)117) on 21 March 1997 a non-recurrent expenditure of \$153.599 million from 1997-98 to 2000-01 to expand and enhance the existing EDI system. It also noted that a total of 208.8 man-months of staff resources in ITSD (including six man-months CSM) would be required from 1997-98 to 2000-01.

11. To achieve full efficiency in export licensing for restrained textiles trade, we have to extend the use of EDI system to cover trade documents supporting the issue of export licenses; viz, certificates of origin, production notifications and combined documents for outward processing arrangements. We also need to strengthen control in issuing these trade documents. A request to further enhance the EDI system for these purposes was submitted to Finance Committee vide FCR(97-98)22 on 20 June 1997. A non-recurrent expenditure of \$35.817 million over the period from 1997-98 to 1999-2000 and an increase in the establishment ceiling of ITSD in 1997-98 to cover the creation of non-directorate posts were approved. Finance Committee also noted that 148.25 man-months staff resources in ITSD (including two man-months of CSM) would be required from 1997-98 to 1999-2000. The implementation plan is as follows -

Activities	Target date
Traders may start to send in their applications through the EDI facilities	July 1999
Introduce full EDI for the submission of certificates of origin, production notifications and combined documents for outward processing arrangements	July 2001

**Proposed Job Description of Chief Systems Manager  
for the ITED Project and Other Projects for the ED**

**Post Title** : Chief Systems Manager (Departmental Services)21  
**Proposed Rank** : Chief Systems Manager (D1)  
**Accountable to** : Assistant Director (Departmental Services)2

**Duties and Responsibilities :**

- (a) To head a division in the Departmental Services Branch 2 of ITSD and oversee the provision of IT professional advice to client departments under the division's schedule.
- (b) To be responsible for providing all the necessary professional advice and government IT standards, policies and practices to ED on the implementation of the ITED project and other computer projects in ED.
- (c) To assist senior management of ED in the formulation of strategic plans, monitoring, evaluation and review mechanism for the implementation of the ITED project and other projects in ED.
- (d) To provide professional advice to ED on the infrastructure design, security, internet connectivity for schools, procurement, guidelines for system implementation and on-going support for the ITED project.
- (e) To steer and direct IT staff in delivering the IT services to ED.
- (f) To provide professional advice to ED in the exploitation of IT in teaching and learning.
- (g) To co-ordinate relevant central support resources within ITSD and other IT contractors to ensure successful development, implementation and on-going support of the ITED project and other projects.
- (h) To assist ITSD management to formulate and promulgate IT-related standards, methodologies and policies.

**Proposed Job Description of Chief Systems Manager  
for CSSS, ACCS and EDI**

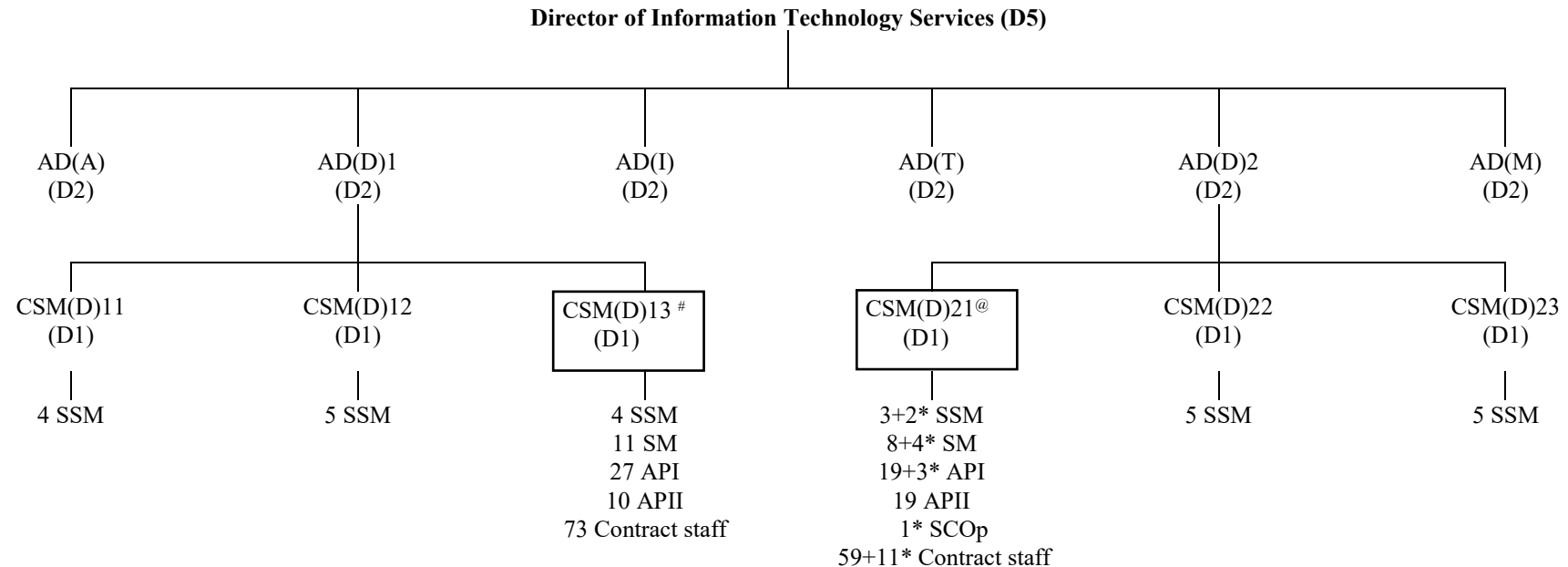
**Post Title** : Chief Systems Manager (Departmental Services)<sup>13</sup>  
**Proposed Rank** : Chief Systems Manager (D1)  
**Accountable to** : Assistant Director (Departmental Services)<sup>1</sup>

**Duties and Responsibilities :**

- (a) To head a division in Departmental Services Branch 1 in ITSD and be responsible for the planning, management, contract supervision, co-ordination and implementation of the selected computerisation projects.
- (b) To be responsible for the provision of information technology (IT) services to user departments.
- (c) To be responsible for recommending the overall system architecture, network architecture and data architecture in support of the implementation of computerisation projects.
- (d) To be responsible for systems initiation of approved projects, systems development and testing hardware/software procurement, support and operations.
- (e) To steer and direct IT staff in delivering the computer related products and services.
- (f) To provide advice on all IT technical and policy matters to the users.
- (g) To co-ordinate relevant central support resources within ITSD and other IT contractors in order to ensure successful development and implementation of computerisation projects.
- (h) To assist ITSD management to formulate and promulgate IT-related standards, methodologies and policies.



## Proposed Organisation Chart of Information Technology Services Department



### Legend

AD(A) - Assistant Director (Administration)  
 AD(D) - Assistant Director (Departmental Services)  
 AD(I) - Assistant Director (Infrastructure)  
 AD(T) - Assistant Director (Technical Services)  
 AD(M) - Assistant Director (Management Consultancy Services)

CSM - Chief Systems Manager  
 SSM - Senior Systems Manager  
 SM - Systems Manager  
 API - Analyst/Programmer I  
 SCOp - Senior Computer Operator

\* - Posts related to the ITED project  
 # - CSM post to be created for the ACCS, EDI and CSSS projects  
 @ - CSM post to be created for the ITED project