Consultation Paper on

Registration System for IT Professionals

Sin Chung Kai
Legislative Councillor (Information Technology)
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PROLOGUE

Introducing a registration system to IT profession was one of my election pledges as set out in the revised Digital Hong Kong 2005. I undertook to conduct a study of this issue in my Legco term. For the purpose of this study and in order to gauge public' s views, I have started many informal discussions in the last four years. In March 2002, I initiated the first phase of consultation. Various discussion sessions with different IT professional bodies to exchange views relating to IT industry' s professional development were held. I have taken into account these views and the findings of this study in drawing up the proposal in this Consultation Paper. I would like to thank all individuals and representatives of IT professional bodies who offered their advice.

The preliminary results of our discussions indicate a general view that a registration system should be set up for Hong Kong' s IT profession. We realize that new legislation may be required for IT professional accreditation but we have not reached a consensus on how to achieve this. I am conscious that views on professional standards and practices on developing professionalism differ from one individual to another and are inevitably subjective. It is therefore extremely important that IT professionals, employers who hire IT staff, academics or any interested parties who concern about professional status of IT profession provide me with their views and help me develop a rightly balanced strategy in addressing this issue.

The purpose of this Consultation Paper is to consult with interested parties on the introduction of a registration system to IT professionals. This paper analyses the reasons for introducing an IT professional registration system; details types of registration system used by other professions; and recommends two registration models for IT profession. This Consultation Paper is as a part of the first phase of the consultation process, which is presumed to be complete by the end of September 2002. I will make further discussions on this issue after the results of this phase of consultation have been evaluated.

Public input will add value to the policy development process. I therefore encourage those who have an interest to contribute their comments on this Consultation Paper and the proposals made therein.

This Consultation Paper is also available at my website:

http://www.sinchungkai.org.hk

Comments on this Consultation Paper could be sent to me on or before September 30, 2002 by –

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EXECUTIVE SUMMARY

Reasons for introducing a registration system to IT profession — Paragraph 1.2 – 1.16

1. New economic challenges, protection of public interest and advocacy of professionalism in IT industry are the underlying reasons to bring in an IT registration system in Hong Kong.

Current practice to promote the IT professional status in Hong Kong — 1.19 – 1.27

2. At the present, the Government has imposed limited regulation on IT profession. Hong Kong' s IT professional standards are mainly promoted through education and training, IT professional bodies, Hong Kong IT Skills Assessment Centre and some vendor-specific programmes.

A registration system for IT profession — 2.4 – 2.32

3. Various types of registration, namely, notification, certification and licensing have been used in other professions to govern their professional activities. Having considered to the level of potential risk associated with IT and the pace of technological development, we recommend IT profession to adopt a certification-based registration system.

4. Models used by two professional groups: Registered Professional Housing Managers and Registered Social Workers, under the category of certification-based registration system have been studied with a view to assess the appropriateness of these models if they are applied to IT profession.

Hong Kong Institute of Information Technology (HKIIT) — 3.2 – 3.5

5. If we assume to model the Registered Professional Housing Managers system, a new IT statutory authority, named Hong Kong Institute of Information Technology (HKIIT) would have to establish for the purpose of

overseeing the professional development and registration matters of IT profession.

IT Professional Registration Board

3.6 – 3.9

6. We recommend that when formulating the registration system for IT profession, an IT Professional Registration Board will be set up irrespective of which model is followed.

7. If, alternatively, we assume to follow the Registered Social Workers system, a Provisional IT Professional Registration Board will be formed for the transitional arrangement of registration matters. This provisional authority will be dismissed accordingly when the Registration Board is formally established.

Coverage, assessment criteria, level of registration, renewal procedure and disciplinary process

3.10 – 3.16

8. We consider that greater efforts should be made to ensure the higher standards of qualifications in the proposed registration system. Coverage and assessment criteria of registration ought to be based around on requirements currently used by the IT professional bodies as well as standards of other professions in Hong Kong and, the decision should be made by consensus of the IT professional bodies.

9. We recommend that the registration system may grant different levels or classes of registration for professionals in different areas of IT discipline to register.

10. We recommend that IT professionals would be required to renew their registration regularly and a range of sanctions should be available to govern their professional conduct. The form of renewal and sanction could be made with reference to the mechanism used in other professions.

Information Technology Professional Registration Bill 3.17 – 3.19

11. Each legally recognized profession has their own ordinance to govern their professional activities. We, therefore, propose to introduce an Information Technology Professional Registration Bill, with the purpose to provide a legislative framework for registration and to authorize the power to IT profession for self-regulation.

Next steps 3.20 – 3.21

12. The first phase of consultation is expected to be complete by the end of September 2002. Views from all quarters of the community are welcome. Preliminary findings will be released in October 2002 after the results of this consultation process have been evaluated. Depending on the opinions that we have gathered, we anticipate that the second phase of consultation will begin in late-October/early-November 2002 if most of the respondents show their support for the introduction of registration system to IT profession.

1. INTRODUCTION

1.1 In his 1997 Policy Address, the Chief Executive outlined his vision to make Hong Kong a leader in the information world of tomorrow. It is a truism that the use of information technology is key to Hong Kong' s long-term competitiveness and overall economic expansion. To foster the development of local IT industry, however, we need an intelligent workforce in possession of top-notch and renewable IT skills; we need quality IT manpower capable of providing IT services in high standard of care and in responsible manner.

- **Why do we need to introduce a registration system for IT profession?**

1.2 Information technology has formed an intrinsic part of the way in which we work, learn, play, shop and communicate with each other. This is not to say that nothing at all could happen without IT, but its absence would at least cause disruptions and difficulties. With the widespread use of information technology in our knowledge-based economy, this not only give rise to the birth of IT profession but also gradually impose much demand and requirements on the standards of practice of IT professionals. In this study, we identify a number of reasons in favor of introducing a registration system to IT profession. This includes

- New economic challenges;
- Protection of public interest; and
- Advocacy of professionalism in the IT sector

Economic Challenges

1.3 The global nature of today' s world economy makes open international trade a particularly high priority. As business operation is no longer limited to a single region, this in turn, will generate tremendous opportunities of market expansion and economic growth. The process of globalization also enlarges the labor market for highly skilled IT professionals on one hand, but also exposes us to worldwide competition. An internationally recognized certification will be a global passport to help IT professionals exploit new markets and opportunities.[1]

1.4 China's market liberalisation, following its accession to the WTO has profound impact to IT industry in Hong Kong. While enormous business opportunities will be generated, Hong Kong IT companies and professionals will face more intense competition in the mainland market from other foreign companies. Facing the fierce competition, Hong Kong needs to become a centre of excellence offering world-class IT skills and services which are required by the international and mainland companies. We therefore should step up to upgrade the standards of our IT manpower. Introducing a recognized registration system to IT profession is one of the possible measures.

[1] ITBB, *Hong Kong: Connecting the World, Report of the Task Force on IT Manpower July 2001*, HKSAR.

Protection of Public Interest

1.5 IT professionals are often involved in the design of systems that affect the public interest. However, we have all witnessed cases where such individuals with little formal education claim to be IT professionals. Practice of IT profession requires extraordinary trust by the public and justifies a high standard of care. Everyone has increasingly greater expectations of IT professionals than of the technologies themselves.

1.6 Professionalization of IT industry provides at least in two ways which IT profession will be more accountable and responsible to the public. First of all, the possession of a recognized certification is an assurance that only those with approved standards and professional competence will be allowed to do certain jobs. Such “minimal standards of practice” protects the public against the incompetence and malpractice of IT professionals. On the other hand, a professional registration system would enable employers accurately and reliably to determine applicants' knowledge and skills proficiency levels by simply referring to the applicants' certifications or credentials awarded by the authorized statutory agency. This would further reduce employers’ costs and risks when hiring new staff.

1.7 More importantly, professionalization usually incorporates an enforceable code of practice. The purpose of this ethical code is to recapitulate the fundamental principle – respect and uphold the primacy of customer welfare. In addition to calling on professionals individually to be trustworthy, to maintain their competence, to be honest in dealing with customers, this code of practice also enjoins IT professionals to take collective action to improve the quality of care. Such practices are essential if we wish to improve our service quality, reduce its variability, and expand our reach of customer.

Advocacy of IT Professionalism

1.8 From the past discussions with the representatives from IT professional bodies and institutions, the majority of views is that IT professional registration system should be introduced in order to establish a clearly defined and coherent profession. The reasons include -

- Attaining higher professional status of IT profession;
- Enhancing professional development of IT industry; and
- Promoting and safeguarding the interests of IT professionals.

Attaining higher professional status of IT professionals

1.9 According to an interpretation of the Council of Grand Justices of Judicial Yuan in Taiwan, the concept of “professionals” is referred to professions, which are highly related to public interest or citizens’ rights in terms of life, personal safety and property.[2]

[2] 吳清水，「我國圖書館專業人員專業地位論--從實務面分析」，國立中央圖書館臺灣分館館刊，第五卷第四

Generally, a profession requires mastery of a complex body of knowledge and specialized skills, requiring both formal education and practical experience. At the heart of every profession is a legally sanctioned control over a body of knowledge and a commitment to service. The professions of medicine, law and engineering prominently exemplify these underlying principles.

1.10 We identify that many job specifications of IT are clearly met the above criteria. IT professionals perform work affecting safety and welfare in which having a direct effect on the community and its members. The conceptual knowledge of IT is codified in the curricula of degree and training programs. We also acquire skills typically focused on the process of guiding others in their trade and business. Obviously, IT is a profession which is based on a distinctive body of knowledge and skills.

1.11 What makes IT profession different from other traditional profession is that it is a relatively new profession without its specific and clear professional standards. We therefore need to establish a set of concrete and clear professional standards by introducing an IT registration system to build up the confidence of the public on IT as a recognized profession.

Enhancing professional development of IT industry

1.12 Either in content or in technology, the field of IT changes rapidly. The introduction of a registration system can facilitate our professionals to update their knowledge and skills in response to the changing market needs. This is not only as a means of assessing one's personal progress in his or her profession, but serves as a motivator for one's continuing education. In the long term, IT professionals will be more easily to adopt a norm of retraining and to strengthen their abilities to learn as well as to re-tool throughout their career.

1.13 A registration mechanism is also as a means to enhance our professional standards through continual review and revision in light of advances of technology. To succeed as a basis for credentialing, the standards of practice must command substantial respect and trust of the community it serves. The quality of standards of practices can be ensured by regular evaluation to guarantee the body of knowledge is continually updated to account for the rapid change in technologies. This is necessary to improve the quality of local manpower and to increase the competitiveness of our IT industry.

Promoting and safeguarding the interests of Hong Kong's IT professionals

1.14 In the meantime, IT profession has not coalesced to form a clearly defined and coherent profession that members of the industry can identify with. This lack of unity has made it difficult for the IT field to have its own voice and to address problems that affect the entire field, for example, chronic shortages of IT workers and fragmentation among

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the professional bodies.

1.15 The unfair treatment of IT professionals is a salient example to demonstrate how the welfare of an emerging profession is being neglected and exploited. As more and more people who use computers-related technologies seek professional help from us in taking care of their concern about safe and reliable operations of these technologies, they expect us to be responsive, competent, ethical and able to anticipate future breakdowns. But the fact is that the value we add to our customers does not remunerate under the professional grade if our job is not related to engineering discipline. This is totally unfair to our IT professionals who equally require formal education plus solid practical experiences to perform their jobs. If we consider that IT is affecting the broad public interest including matters of safety, economic and social consequences as well as the quality of life, so, what are the reasons behind for IT profession being treated differently from other professionals like Engineers, Chemist, Surveyors and so on? This issue, however is not received much attention in our industry.

1.16 The prevalence of technologies gives rise to the IT-related jobs. IT is a new profession. We understand that it is not easy for an emerging profession to establish its professional status. However, in view of the increasing role of IT industry, the drastic changes of global economy and for the sake of public interest, we need a registration system to legally validate the practices in our field. To conclude, the purpose of introducing a registration system to IT profession is to –

- **Ensure safe practice of IT profession;**
- **Protect the public from poor IT practice; and**
- **Maintain high levels of professionalism and accountability in IT sector**

▪ How is "profession" defined?

1.17 Defining IT is not a simple exercise. The Online Ethics Center for Engineering and Science defined profession is "the practice of it directly influences human well-being and requires mastery of a complex body of knowledge and specialized skills which are acquired through formal education and practical experience".

1.18 We consider that IT occupation is a profession because our society has become very much dependent upon the use of IT which directly affects the well-being of general public. IT Professionals are also required to have practical experience and to undergo formal education and training in order to perform IT-related jobs.

▪ Current practice to promote the IT professional status in Hong Kong

1.19 Currently, limited statutory regulation is imposed on IT profession. Unlike other

legally bound profession such as medicine and law, IT does not have its own Ordinance to govern its professional activities. An individual does not bear any legal liability if he/she entitles himself/herself as IT professional. Also, there is no legislation to regulate the professional responsibility and legal liability of IT professional. An exception is for those IT professionals who are engaged themselves in IT jobs in relating to engineering discipline. In this case, they may be eligible to register as professional engineers from Hong Kong Institution of Engineers (HKIE) under the Engineers Registration Ordinance (Cap.409). Other than this route, Hong Kong's IT professional standards are promoted through -

Education and training -

1.20 In Hong Kong, there are eight University Grants Committee (UGC)-funded institutions offering IT and related degree studies at postgraduate and undergraduate level. The total number of places offered each year for IT programmes (e.g. computer engineering, information technology, information systems, etc.) is over 2,500. Since there is no restrictive entry requirement in IT and related field, many graduates with degrees in mathematics, science or some branches of engineering (e.g. electronic and electrical engineering, communications technology mathematical science, etc.) other than computer/information can also go into this industry.

1.21 Both UGC-funded institutions and the Vocational Training Council (VTC) offer sub-degree courses in IT for those who may not able to receive university education. There is an estimated supply of around 3,000 IT personnel with sub-degree qualification for entering into the workforce for IT-related employment each year.

1.22 The VTC and the Employees Retraining Board (ERB) also offer IT-related courses and certification programmes for our workforce to upgrade their IT skills. Moreover, these institutions have jointly run an IT Assistant Training (ITAT) programme, targeting junior IT assistant level for those with secondary 3 or above education.

1.23 Continuing and professional education programmes are offered by many of the UGC-funded institutions (e.g. School of Professional and Continuing Education (SPACE) of the University of Hong Kong, School of Continuing and Professional Education (SCOPE) of the City University of Hong Kong, etc.), which provide students with various IT-related courses and certification programmes on a self-financed basis.

Professional bodies -

1.24 IT professional bodies have been active in promoting IT professionalism in Hong Kong. There are fourteen IT professional bodies offering individual membership. These professional bodies develop their own membership system. A summary of Hong Kong's IT professional bodies and their membership requirements are at *Appendix A & B.*

1.25 In order to gain full membership of IT professional bodies, IT professionals are

usually required to hold an IT-related academic qualifications together with proven working experience in IT sector. Some of these professional bodies also require their members to observe rules and code of ethics. Most of the membership are not legally bound and only serve as value-adding asset to IT professionals. But membership awarded by notable professional bodies is highly recognized by many employers.

Hong Kong IT Skills Assessment Centre (HKITSAC) - (www.hkitsac.org)

1.26 Established in 2000, HKITSAC is managed by the IT Training and Development Centre of VTC with an aim to provide recognized IT skill-based, task-oriented assessment and certification to the public. HKITSAC is a government-led initiative with the endorsement of the Hong Kong Computer Society and supported by the HKIE and the British Computer Society, Hong Kong Section.

Vendor-specific certifications -

1.27 Apart from the memberships awarded by the IT professional bodies, vendor-specific certifications are another popular choice for many IT professionals in response to the pressing demand for skilled IT professionals. Since the vendor-specific certification is product-oriented and the skills are not transferable, this kind of certification will not be covered in this Consultation Paper.

▪ Overseas practice

1.28 During the course of this study, we review literature from other countries regarding to their practices in introducing accreditation mechanism to IT industry. There is no international consensus on the issue of IT registration, although there is consensus that effective monitoring and accountability mechanism should be put in place to protect the public. Overall, the purpose of IT registration in other countries seems to be to protect the public from misconduct, incompetence, malpractice and abuse by setting and enforcing standards of practice for IT professionals.

1.29 Definitions of what constitutes “IT” differ between countries and states. But the accreditation system in other countries are usually initiated by three parties, namely, international IT professional bodies (refers to those who have set up their chapters, sections or divisions in the regions other than their originated countries), local IT professional bodies (refers to those who concentrate their services in their own countries and have linkages with other international IT professional bodies), and the government (refers to the Administration who control the power of a state or country).

1.30 Various systems are used for regulating IT profession internationally. Basically, they can be classified into three ways. Firstly, the government takes the leading role to promote the professionalism in IT industry. Japanese and Chinese governments, for instance, are the examples to demonstrate how the government’ s determination in raising IT professional status is manifested in their IT policy. Secondly, the profession itself, either the international professional bodies or the local trade members takes an active role

to advocate a higher professional status. The government only acts as a passive promoter with minimal intervention attempting to foster the professional development of the industry. Thirdly, the registration system is initiated and managed collaboratively by the government and IT professional bodies. An example is the National IT Skills Certification Program in Singapore.

1.31 Academic qualification and IT working experience are the two basic entry criteria for registration in other countries. Their registration systems are rarely established by legislation. Where a registration authority is existed, it is either appointed by the government or as an independent statutory body. The authority usually is composed of a variety of members, such as representatives from notable IT professional bodies. A variety of sanctions are used by registration authorities for disciplinary offences, ranging from verbal or written reprimands to permanently removing the IT professional's name from the register. Overseas registration bodies generally charge fees for applications, initial registration and renewals. Most overseas registration systems also require some form of competency assessment and include a disciplinary process. A summary of overseas practice is at *Appendix C & D.*

2. TYPES OF REGISTRATION

2.1 In developing a registration system, one of the most critical decisions to be made is the type of framework that is best suited for IT profession. The type of tasks performed in a particular occupation and the associated risks will determine the most appropriate form of registration. Ideally, occupation should be regulated at the lowest level possible, to avoid unnecessary inflexibility, barriers to entry and the creation of exclusive and elite sub-groups within the occupation.

2.2 The type of registration selected will have a variety of implications, most notably financial and workforce implications. The costs of registration will be borne by individual IT professionals, their employers and/or the government. There will be cost implications in the short term (e.g. costs associated with existing staff becoming registered) and long term (e.g. payment of annual registration fees).

2.3 Each system will have different impacts on the availability and supply of IT professionals. For example, if registration is too onerous or is set at a high level, some people may choose not to enter the occupation because they perceive they would not be able to meet the required standard, thereby creating a dearth of IT manpower. Having reviewed the overseas literature on the issue of registration system, three types of registration, namely, notification, certification and licensing are described briefly below.

- **Notification**

2.4 Under a notification-based system, professionals are required to give their name and address and pay a fee to a Registration Board. Notification does not usually require any demonstration of competence. Notification is normally required where the threat to public safety is minimal. It provides a means of identifying professionals so information can be provided to them and may be used to enforce other legislation. For example, in New Zealand, there is a register of second-hand dealers to assist the Police in investigating thefts. Because a notification-based system does not generally restrict entry by virtue of competence or any other criteria, it does not require a complaints or disciplinary process. For these reasons, the capacity of a notification-based system to address question of poor IT practice is questionable.

- **Certification/Registration**

2.5 Under a certification-based system, a Registration Board would have the power by law to certify that individuals were competent to practice in their occupation. A set of requirements or criteria is applied to assess competency. Only people who have been through the certification process have the right to use a particular occupational title. Certification does not preclude other people practicing in the occupation, but uncertified professionals are not able to call themselves by the certified title.

2.6 Certification provides the public with an assurance that certified professionals have met certain requirements. Certified professionals are also subject to a complaints and disciplinary regime. An example of certification is the model applying to social worker. People who wish to use the title Social Worker in Hong Kong must satisfy certain qualification criteria. With a certification-based system the public could be assured that certified IT professionals meet a minimum competency standard and are subject to a complaints and disciplinary process.

2.7 Certification could be compulsory or voluntary. For example, employers might choose to adopt a policy of only employing certified IT professionals. Alternatively, legislation could be brought in to ensure that statutory IT functions were carried out only by certified IT professionals.

2.8 Professions, which do not require Practising License, are prohibited the use of particular title, but the restriction is not as demanding as that of professions requiring Practising License/Certificate. For instance, regulation only restricts the use of a particular title, i.e. "Registered Professional Housing Manager" under the Housing Managers Registration Ordinance (Cap.550). The law however, do not restrict any persons to entitle themselves as "housing manager" or to practice the work of housing manager.

2.9 In Hong Kong, we identify that there are totally seven types of profession fall into this category, which include architect, engineer, landscape architect, planner, professional housing manager, social worker and surveyor. Each of them has its own Ordinance to govern its occupational activities. A summary of accreditation system of these professions is at *Appendix E*.

■ Licensing

2.10 There are two types of licensing: licensing tasks and licensing the workers in an occupation.

2.11 Licensing tasks - Under this regime, licensed practitioners are granted an exclusive right to perform certain tasks in the legislation. For example, only certain groups of medical practitioners are allowed to prescribe drugs. Regulation of this kind is generally used where poor performance of a particular task is likely to impose severe costs or consequences on users of the service.

2.12 Licensing workers in an occupation - This regime explicitly prohibits all but licensed professionals from working in a certain occupation. Entry to the occupation is dependent upon the practitioners meeting prescribed standards. Entry qualifications normally involve specific educational qualifications and criteria related to the individual's fitness to practice. A disciplinary process is also a feature of this system.

2.13 Licensing workers is the least flexible form of occupational regulation as those not meeting the entry requirements are unable to practice in that occupation. Practitioners belong to the professions, which require Practicing License shall not perform their jobs in Hong Kong, unless they are the holders of Practicing License. Otherwise, they risk a fine and imprisonment. Professionals are also required to renew their Practicing License/Certificate annually.

2.14 Professions, which require Practicing License, have imposed restriction on the use of particular or certain titles and related terms. For examples, a person is not allowed to use the title of registered pharmacist and the terms of chemist, druggist, pharmacist, pharmaceutical chemist, members of the Pharmaceutical Society, etc., unless he or she is registered under the Pharmacy and Poisons Ordinance (Cap. 138).

2.15 In Hong Kong, fifteen types of profession fall into licensing-based system, namely, accountant, Chinese medicine professional, chiropractor, dentist, legal professional, medical professional, medical laboratory technologist, radiographer, physiotherapist, occupational therapist, optometrist, midwife, pharmacists, nurse and veterinary surgeon. A summary of professional accreditation standards of these professions is at *Appendix E*.

- **Which type of registration system is best suited for the IT occupation?**

2.16 Some of these types of registration are more appropriate than others. Given the level of potential risk associated with IT, a system based on a notification regime would not seem to meet the objectives of an IT registration system. It is important to ensure that IT practice is safe, of a high quality, and that high level of professionalism and accountability are maintained within the sector.

2.17 Corresponding to the certification- and licensing-based registration system, we have come to conclusion that it is not a right timing to introduce a licensing-based registration system to IT occupation. Some of these arguments are -

2.18 IT is an ever-changing industry. We consider that the pace of technological development will inevitably outpace the rate at which the registration are developing to define IT best practices. A new law may require whenever IT practice is newly developed. This will lead to increasingly complex regulations. Besides, it is also impossible for legislators to update the statute as frequently as the rapid development of IT.

2.19 Licensing implies a mandatory regulation system. We may not require this extremely restrictive form of occupational regulation for IT profession. This is because such regime would explicitly prohibit all but licensed IT professionals from performing services defined in the legislation. While this will force many non-licensed professionals out of work, it may also exacerbate the issue of manpower shortage in the IT sector.

2.20 Although is of growing importance, IT profession does not seem to be as critical to the life or death of their clients as that of those professions required practicing license, such as medical doctor does. As the present professionals would be able to perform their jobs as usual since registration is not a pre-requisite for employment, we therefore consider that **a voluntary certification-based registration system would be appropriate for the IT profession.** The sections in the rest of paper have been structured around the assumption that the certification-based registration system will be more suitable for the IT profession in Hong Kong.

▪ Case studies of certification-based registration system

2.21 In the following section, we will study how two occupational groups, namely, "Registered Professional Housing Manager" and "Registered Social Worker" under the category of certification-based registration system, are operated in Hong Kong.

Case 1 - Registered Professional Housing Managers

2.22 Housing Managers Registration Ordinance (Cap. 550) is a rather new statute, which had been put into enforcement on November 26, 1999. It gives a legal basis for the registration system for the professional housing managers to register. The number of registered professional housing managers is around 530 in early-2002.

2.23 The registration system has a number of features. These include -

- Registration is on voluntary basis
- Qualification standards are controlled by the profession itself;
- Ordinance only controls the use of professional title. It does not prevent persons who are not registered from practicing; and
- A statutory professional body, named Hong Kong Institute of Housing (HKIH) is established to oversee the professional development as well as registration matters of Housing Managers profession.

2.24 The Hong Kong Institute of Housing (HKIH) was established by the government in 1998. Before the establishment of HKIH, it has been suggested to set up a registration system for housing managers in housing sector for some time. In 1997, the Legislative Council passed a bill proposed by the legislator Mr. Edward HO Sing-tin to provide for the incorporation of the HKIH. In 1998, Mr. Ho proposed to move a Private Members' Bill to establish a voluntary registration system for housing managers. Having recognized such proposal was in line with the government' s position in promoting better property management, the Administration supported and eventually took over the proceedings of the Bill.

2.25 In HKIH, a General Council which is elected by members of HKIH, is responsible for appointing its members to form the Housing Managers Registration Board (the Board) to administer the registration matters. Only HKIH member can be appointed as a member of the Board. Composition of the Board is consisted of -

- Not more than 16 members;
- Not less than 12 members whom should be appointed by the General Council of HKIH; and
- Not more than 2 members as the Chief Executive may appoint

2.26 The qualifications for registration of professional housing managers include -

- Applicant should be a member of the HKIH; or
- Member of a housing management body the membership of which is accepted by the Board; or
- Passed examination in housing management and other subjects and received training and experience as the Board may accept; and
- 1 year's relevant professional experience in Hong Kong; and
- Resident in Hong Kong

2.27 Any registered professional housing manager commits a disciplinary offence or has been convicted an office under the Ordinance, his/her name will be removed from the register. Moreover, a person whose name does not appear on the register shall not be entitled to describe himself as a registered professional housing manager. Otherwise, he/she is liable to a fine of HK$50,000 and to imprisonment for 1 year.

Case 2: Registered Social Workers

2.28 Social Workers Registration Ordinance (Cap. 505) was enacted in 1997. As updated in the first quarter of 2000, there are more than 10,000 registered social workers in Hong Kong. The registration system has a number of features. These are -

- Registration on voluntary basis;
- Ordinance controls the use of professional title only. It does not prevent persons who are not registered from practicing;
- No statutory professional body. An independent Registration Board is established to administer registration matters; and
- Academic qualification is the sole requirement for registration.

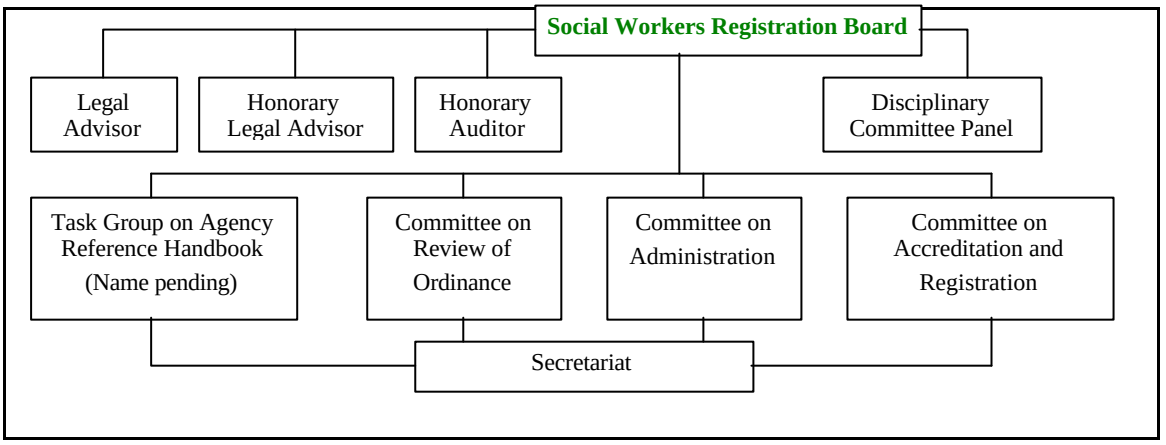
2.29 There are two levels of registration. These are -

- Registered social workers (category 1)
  - Holder of a degree or diploma in social work recognized by the Board; or
  - Occupied a social work post not later than March 31, 1982; and occupied a social work post(s) for not less than 10 years;
  - Resident in Hong Kong
- Registered social workers (category 2)
  - Currently occupies a social work post; and
  - Proposes to obtain a recognized degree or diploma in social work within a reasonable period;
  - Resident in Hong Kong

2.30 The main difference between the models followed by the Social Workers and the Professional Housing Managers is that the former does not have a statutory professional body like the HKIH. A Social Workers Registration Board is formed to administer the registration system. Composition of the Board is consisted of -

- 8 members (qualified social workers in category 1) elected by registered social workers;
- 6 members who are appointed by the CE of whom not less than 3 shall be persons who are neither a registered social worker nor a public officer; and
- The Director of Social Welfare Department

Figure 2.1. Organization Chart of Social Workers Registration Board

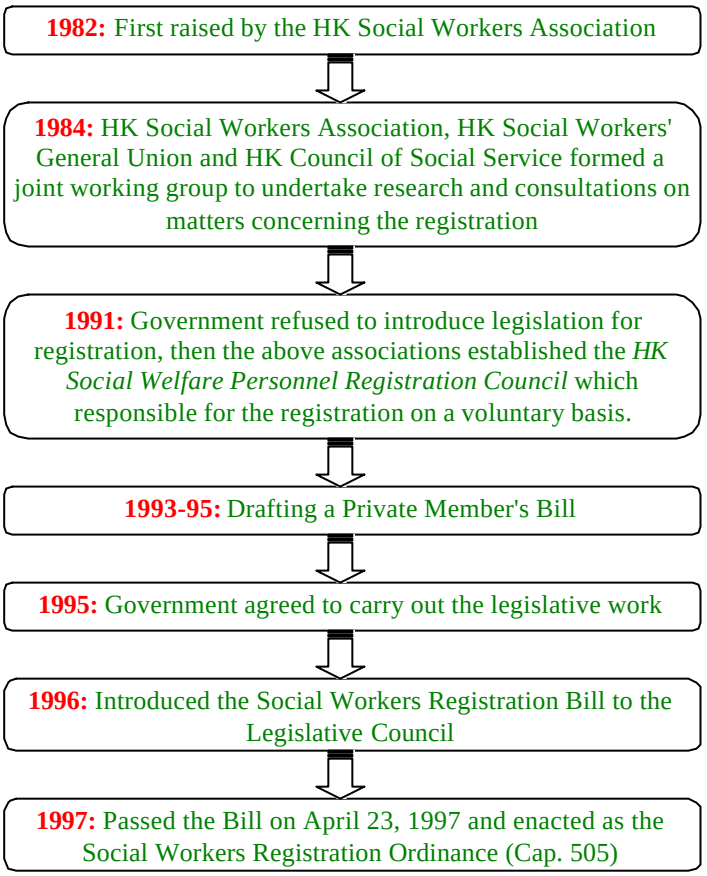


2.31 A provisional registration board was formed before the formal Social Workers Registration Board (the Board) was ready to operate. The Composition of the provisional registration board was consisted of -

- a Chairperson of the Hong Kong Social Welfare Personnel Registration Council (the Council)
- 2 members of the Council appointed by the Chief Executive (CE) from the nominations submitted by the Council
- 2 persons appointed by the CE
- The Director of Social Welfare Department

2.32 Social workers experienced a long and toiling process to attain legal recognition of their profession. The whole process took 15 years to complete, from it first raised by the Hong Kong Social Workers Association in 1982 to the completion of legislation in 1997. The long process purely because the government refused to take the responsibility to introduce the legislation for registration, until legislator Mr. HUI Yin-fat proposed to move a Private Member's Bill in 1995. The formation process of registration system for Social Workers is elaborated in Figure 2.2.

Figure 2.2. Formation of the Social Workers Registration System



3. A REGISTRATION SYSTEM FOR IT PROFESSIONALS

▪ Two models

3.1 As discussed in the last chapter, we suggest that the certification-based system would be appropriate for IT profession. Models used by the Registered Professional Housing Managers and the Registered Social Workers have been described for case of reference. In the following section, we attempt to apply these two models in IT profession. Similarities and differences of each model are further elaborated. We are most interested to hear your views on the appropriateness of these models if they are followed by the IT profession. Besides, we would like to arise some concerns about different aspects of a system for IT registration. You are encouraged to consider these issues as a way of presenting your feedback. A list of major areas for feedback is also set out in next chapter.

Table 3.1 Two models of the registration system for IT profession

Modeled on	
Registered Professional Housing Managers System	**Registered Social Workers System**
Similarities	
■ Registration on voluntary basis ■ Self-regulatory system ■ Law controls the use of professional title only, but not prevent persons who are not registered from practicing ■ Practicing License is not required	
Differences	
■ Establish a statutory IT professional body **- Hong Kong Institute of Information Technology (HKIIT)** ■ A Registration Board is under the control of HKIIT ■ Membership of a statutory professional body is the requirement for registration ■ The Registration Board members are appointed by the General Council of HKIIT	■ Do not have a statutory professional body ■ Membership of a professional body is not a requirement for registration ■ An independent Registration Board is responsible for the registration matters only ■ The Registration Board members are elected by the registered IT professionals

▪ Hong Kong Institute of Information Technology (HKIIT)

3.2 The main difference between the above models is the introduction of a statutory professional body - HKIIT. This new IT statutory authority will be established if the Professional Housing Managers system is modeled. The Institute should be incorporated by law as a statutory professional body with perpetual succession and should have legal

liability. It can be achieved by introducing a Hong Kong Institute of Information Technology Bill to provide a legal recognition for the Institute. The Institute should also establish its own Constitution and By-laws and Code of Professional Conduct for its members to observe. The objectives, composition and membership requirements of this statutory professional body (HKIIT) are suggested as below.

3.3 The objectives of HKIIT would be to -

- Promote the standards and quality of services of IT profession;
- Safeguard the interests of IT profession and those engaged in it;
- Facilitate continuing professional development of IT profession;
- Develop and enforce a code of professional conduct for members to observe;
- Set and review qualifications for membership;
- Maintain a register of membership;
- Liaise with other professional bodies and keep up-to-date with contemporary practice issues.

3.4 The composition of HKIIT should consist of the Chairperson, Vice-chairperson, Secretary, Council Members and Treasurer. Working Committees should be formed to focus on different affairs of the Institute. Members of the Institute should have the power to vote at the General Meeting and to elect representatives to form the General Council. The General Council should have the power to appoint members to the IT Professional Registration Board.

3.5 HKIIT should have full autonomy in setting and reviewing the membership requirements, accepting or rejecting applications. To become the member of the Institute, applicant needs to -

- Meet the minimum academic qualifications;
- Have sufficient professional experience;
- Meet the CPD requirements to maintain the membership;
- Subscribe to the Code of Professional Conduct.

▪ IT Professional Registration Board

3.6 A significant aspect of the proposed registration system will be the Registration Board irrespective of which model is followed by the IT profession. The Registration Board would be established under the legislation to administer the registration matters. Functions and composition of the Registration Board are as below.

3.7 The functions of the Registration Board would be to -

- Establish and maintain a register of registered IT professionals;
- Set, review and publish general information of qualification standards for registration;
- Advise the Government and the Institute on registration matters;

- Examine and verify the qualifications of persons who apply for registration;
- Receive, examine, accept or reject applications for registration and renewal of registration;
- Issue a certificate of registration to the qualified applicant;
- Deal with disciplinary offences;
- Set the fees for registration;
- Issue a code of professional conduct for registered IT professionals.

3.8 The role of the Board would be fundamental to the success of the registration system. For this reason, we are aware that there may be a high level of interest amongst the IT sector in the composition of the Board and the appointment process. For example, members of the Registration Board should be experts in the IT profession. Board members should be appointed by the General Council of the Institute and must be members of the Institute if the model of Registered Professional Housing Managers is adopted. Otherwise, the Registration Board' s members should be elected by IT professionals. The Board should consist of a Chairperson, a Vice-chairperson and certain numbers of board members. The Chairperson and Vice-chairperson should be elected by the Board members. The Board could review the qualifications for registration from time to time to meet the new standards of IT profession whenever arises.

▪ Provisional IT Professional Registration Board

3.9 In the model implemented by social workers, a Provisional Registration Board will be formed for the transitional arrangement before the statutory Registration Board is established. This provisional authority should be formed by the representatives of various IT professional bodies. All of the existing IT professional bodies should have their representatives in the Board. The representatives would be responsible for setting the qualifications for registration and other related matters. The Board should consist of a Chairperson, a Vice-chairperson and certain numbers of board members. The functions and powers of the Board should be same as the official Registration Board. The Provisional Registration Board should be dismissed accordingly once the statutory Registration Board is formed.

▪ Coverage and assessment criteria

3.10 For the professions that do not require Practicing License, their qualification standards are controlled by themselves. Ordinance provides the power to the profession to identify its own qualifications for registration. In this sense, decision about the coverage of registration and assessment criteria should be made by consensus of the existing IT professional bodies. Efforts, however, should be made to ensure the higher standards of qualifications in the proposed registration system. We consider that the qualifications for registration ought to be based around on requirements currently used by IT professional bodies as well as standards of other professions in Hong Kong. Table 3.2. gives a summary of qualifications for registration by making reference to the qualifications concurrently used by the IT professional bodies.

Table 3.2 Coverage and assessment criteria of the proposed IT registration system

The qualifications for a person to become a full member of IT professional bodies in Hong Kong		**Qualifications for registration to be considered in the proposed system**	
Academic qualifications (AC)	**IT-related working experience**	**Academic qualifications (AC)**	**IT-related working experience**
IT-related Degree holder	2 to 4 years	IT-related Bachelor Degree, Master Degree and Doctoral Degree holder	3 years
Non-IT related Degree holder	6 years	IT-related Higher Diploma and Professional Diploma holder	6 years
IT-related Higher Diploma holder	6 years	IT-related Higher Certificate and Professional Certificate holder	8 years
Non-recognized AC holder	15 years	Non-IT related Bachelor Degree, Master Degree and Doctoral Degree holder	6 years
		Non-recognized AC holder	15 years

3.11 A number of different criteria could be applied to determine whether IT professionals are competent and therefore eligible for registration by the Registration Board. In general, the criteria include a combination of the following factors. They include -

- recognized academic qualifications in IT sector;
- evidence of relevant IT-related working experience; and
- professional training.

■ Level of registration and renewal procedure

3.12 IT registration system may grant different levels or classes of registration, for example:

- full registration;
- provisional registration - granted prior to fulfilling all the registration requirements;
- specialist registration - for IT professionals with particular areas of expertise.

3.13 IT industry has a wide range of job areas, and each area requires specialized

skills and knowledge. During the course of consultation with IT professional bodies, some of our professionals belong to particular job area expressed their concern on the classes of registration. They suggested that the system should provide different classes of registration for professionals engaging in different disciplines to register.

3.14 A registration system consisted of different classes or levels of registration is nothing new to Hong Kong. The Medical Council of Hong Kong is concurrently maintaining two classes of registration for the medical professionals, namely, the General and Specialist Register. If it is recognised by our IT professionals that a similar system should be established in IT sector, this issue can be taken into account in the next phase of consultation.

3.15 Under an IT registration system, IT professionals would be required to renew their registration regularly. The renewal process could take the form of the payment of annual practicing certificate or annual license fees, updating registration details, providing evidence of attendance at ongoing training and/or supervision, or re-demonstrating competence by making reference to other professions. Renewal of registration could take place after an appropriate period, for example once a year with a more substantial review of competence and fitness to practice every five years.

- **Disciplinary process**

3.16 One of the roles of the Registration Board would be to investigate complaints, conduct disciplinary hearings and impose sanctions, including de-registration. There would be a right of appeal for decisions made by the Board. Common sanctions used in other professions include withdrawal of an individual's practicing license, suspension, fines, striking their name off the register, requiring their practice to be supervised by a senior professional for a specified period of time, issuing a verbal or written warning, or ordering a professional to undergo additional training or professional development. Usually the type of sanction is proportional to the misdemeanor that has been committed. Consequently, a range of sanctions would be preferable.

- **Legislative framework**

3.17 In Hong Kong, there are 22 legally recognised professions (15 require Practicing License; 7 do not require Practicing License). Each of them has their own ordinance to provide for disciplinary control of their professional activities. In general, functions and powers of the registration board, qualifications for registrations, disciplinary control and penalty for disciplinary offences will be stipulated in the legislation. The law restricts the use of title of all professions. Falsely using the name of title of a profession is liable to a fine and imprisonment.

3.18 To provide a legal recognition for IT profession, we propose to introduce an IT Professional Registration Bill (The Bill). The purpose of the Bill is to provide a legislative framework for registration and to authorize the power to IT profession for self-regulation.

The law itself only introduces minimum control to IT profession. It would not describe the qualifications for registration in details. The ordinance would also stipulate the basic principles for registration and create a framework for the registration system.

3.19 The Bill should outline the formation, functions and powers of HKIIT (if established), the Registration Board, basic qualifications for registration, disciplinary control of the profession, penalty for disciplinary offences, fraudulent registration, etc. The major contents of the Bill should be included -

- Constitution of the Board
- Tenure of office
- Proceedings
- Functions of the Board
- Powers of the Board
- Appointment and duties of Register
- Qualifications for registration
- Application for registration
- Acceptance or refusal of registration
- Expiry of registration and renewal
- Registration Committee
- Certificate of registration
- Removal of name from the register
- Disciplinary offences
- Inquiry committee and rules of conduct
- Disciplinary orders of inquiry committee and costs
- Use of title
- Offences and penalties
- Certification as evidence

A table describing the contents of the Bill is at *Appendix F.*

Next Steps

3.20 The first phase of consultation is expected to be complete by the end of September 2002. It is likely that we will release the preliminary findings of the consultation accordingly in October 2002. Depending on the opinions that we have gathered, our proposal will be postponed if most of the respondents do not convey their support for introducing registration system to IT profession. Alternatively, we anticipate that the second phase of consultation will begin in late-October/early-November 2002.

3.21 After evaluating the findings and taking account of the comments of the concerned parties, we would submit a revised proposal to IT professional bodies and all electors of Information Technology Functional Constituency for seeking their opinions. In the revised proposal, we would refine the arrangements of registration system and detail the administrative procedures as well as the timeframe for carrying out the project. A

finalized proposal will be submitted to the Government in 2003. This means the Bill can probably be enacted in 2003/04. We anticipate that a further year will be required to set up and implement the new registration system.

4. OTHER CONSIDERATIONS

▪ Registration route of engineers

4.1 This chapter highlights the points in considering whether IT profession should follow the registration route of engineering discipline.

4.2 At the present, IT professionals working in relation to engineering may attain their legal recognition from the "Information Discipline" - one of the sixteen disciplines of the Hong Kong Institution of Engineers (HKIE). Members of the Information Discipline can use the title of "registered professional engineers". There are around 150 members in the Information Discipline in Hong Kong.

4.3 In this regard, there are concerns from the industry that instead of introducing an independent registration system, why not the IT profession follow the registration route of engineers, for example, the one operated under the HKIE. Concerns also have been raised as to whether such registration mechanism to IT professionals is sufficiently serving the purpose it is intended by IT professionals to raise the professional standards of our industry. The consensus arising from the recent discussions over this issue was that a registration system for IT profession should be based on the following principles.

i. Promoting IT professional statues should be the most prominent feature in the registration system. **We need an independent system with a whole-hearted commitment to enhance the professional development of IT industry.**

ii. The registration system should accommodate the diverse nature of IT profession. Apart from the engineering, other information-related disciplines, such as information security, application systems development, IT project management, multimedia development, hardware support and systems operation, etc. should be extensively embodied in the registration system in order to reflect the wide range of practices that IT professional group possesses. **Accreditation system, which is subsidiary to other disciplines, will not be the most appropriate form of registration.**

iii. To attract IT professionals to register, **the registration system should be highly reputable that professionals can identify with**.

iv. Cultivating a sense of belonging and better unity should be the primacy of the registration system.

4.4 There is no dispute that some of the existing registration mechanisms, like the

one under the HKIE, provide one of the feasible ways for IT professionals to attain legal recognition. However, after examining further the appropriateness of this kind of accreditation system based on the above principles, we consider that there is a need to re-evaluate the current registration practice, with a view to improve the IT industry' s overall professional standards by providing a widely-accepted registration model to our professionals.

4.5 The need to have a registration system is borne out by recent discussions with various IT professional bodies. It is obvious that majority of the industry would like to see a representative registration system for IT sector; a registration system which will serve to promote the professionalism and, safeguard the welfare and unity of IT industry. Whilst some professional bodies had been aware of the professional issue of our industry, piecemeal recognition on particular group of IT professionals may no longer suffice.

4.6 We are not suggesting at this stage that the Hong Kong IT professionals should not follow the registration route of engineers. Up to this point in time, we maintain an open mind on this issue until all stakeholders and members of the trade have an opportunity to express their views on our proposal. Views from all quarters of the community are welcome.

5. MAJOR AREAS FOR FEEDBACK

This section provides a quick guide for you to provide your feedback on the questions about different aspects of a registration system for IT profession. Please response to as many as of the questions in this guide. We are also interested in hearing about any other options you consider may be missing from this paper.

5.1 We have postulated a number of reasons in favor of introducing an IT registration system in Hong Kong. (para.1.2 – 1.16)
Should there be a registration system for IT profession in Hong Kong? Please tell us why you support or why you don' t.

5.2 We propose that a certification-based registration system is more appropriate for IT profession. (para.2.4 – 2.20)
A certification-based registration system would be best suited for IT profession in Hong Kong. Do you agree?

5.3 We consider two different models, namely, the Registered Professional Housing Managers and the Registered Social Workers, under the certification-based registration system to be followed by IT profession. (para.2.21 – 2.32; para.3.1)
Whish model would be best suited for IT profession in Hong Kong? Please tell us why.

5.4 We suggest to establish a Hong Kong Institute of Information Technology (HKITT) to oversee the professional development as well as the registration matters of IT profession, if we model the Professional Housing Managers system. (para.3.2 – 3.5)
Should HKITT adopt the objectives, functions and forms that we have proposed? Please specify any other functions, objectives and forms the HKITT should have.

5.5 The role of the Registration Board would be to administer the registration system irrespective of which model is implemented. (para.3.6 – 3.9)
Who should appoint the members of the Registration Board? How should members of the Registration Board be appointed? Please specify any other roles and forms the Registration Board should have.

5.6 We suggest that decision on coverage and assessment criteria should be made by consensus of the IT professionals. But we recommend that qualifications for registration ought to be based around on requirements

currently used by IT professional bodies and made reference to the standards of other professions. (para.3.10 – 3.11)
Who should the registration system cover? Which criteria should be used to decide whether a IT professional is eligible to be registered?

5.7 We propose that the registration system may comprise of different classes or levels of registration, such as full registration, provisional registration and specialist registration, etc. (para.3.12 – 3.15)
Should the proposed IT registration system comprise of different levels or classes of registration? Which levels or classes of registration should be able to be granted?

Should there be a renewal process? If yes, what should this involve?

5.8 We propose that a range of sanctions commonly used in other professions should be applied in the registration system. (para.3.16)
What types of sanctions should include in the registration system?

5.9 We propose to introduce an Information Technology Professional Registration Bill. (para.3.18 –3.19)
Do you agree?

5.10 When considering whether IT profession should follow the registration route of engineering discipline, we propose that an IT registration system should be based on a number of principles. (para.4.3)
What is/are your opinion/s on this issue? Do you think that an independent registration system should be established for IT profession?

5.11 Do you have other suggestions to the proposal of introducing a registration system to IT profession? Please elaborate in details.

6. FREQUENTLY ASKED QUESTIONS

6.1 Why do we introduce a certification-based, instead of a licensing-based registration system for IT profession?

We do not deny the possibility of introducing a licensing-based registration system to certain sub-sectors of IT in the longer future. But in the light of current IT development and in recognition of the diverse job nature of IT profession as well as the manpower issue in Hong Kong, a licensing-based system will inevitably lead to an expulsion of a group of IT professionals who fail to meet the strict requirements of Practicing License. This, will in turn, accelerate the shortfall of IT manpower and hamper the development of IT industry. Therefore, we prefer a certification-based system for IT profession.

6.2 Who are "IT professionals"?

We are open to this question. But we believe that this would be better addressed by IT professional themselves, i.e. the HKIIT or Registration Board to define who should be covered by the registration system. Other professions are based on the academic qualification, professional training and proven experience as the basic benchmarks for registration. We suggest that IT profession adheres to these criteria. As a reference, the membership criteria of IT professional bodies is at *Appendix A.*

6.3 Many overseas IT professional bodies issue internationally recognized certificates. Why do we insist to have our own registration system?

Most of these certificates serve as an additional accreditation to the IT professionals. But they are not legally recognized in Hong Kong. A registration system will help to raise the overall professional status of IT profession by giving legal recognition of our profession. Moreover, by establishing the HKIIT, it may also facilitate future multilateral recognition of professional IT qualifications with other countries.

6.4 Will the registration system be able to attain international recognition?

By introducing a registration system, IT professionals are encouraged to improve the service standards and quality we provide. The introduction of good professional practices is essential if we wish to strive for international recognition of our local IT manpower. Hence, a registration system is a useful indication to the world that Hong Kong has a well-trained and competent IT workforce which can readily cope with the changing market trends.

6.5 How does the registration system affect the employers?

A registration system for IT professionals is a long-term investment. It can help the employers achieve greater productivity and efficiency by providing a quality IT manpower to them. With higher standards of IT personnel, employers will be more readily to use IT and e-commerce related applications in their day-to-day operation by which strengthening the competitiveness of their company.

Moreover, the proposed registration system also aims to enhance the culture of "Continued Professional Development" by encouraging and motivating for those already in practice to continue learning with a view to improving their ability to meet the changing needs arising from the rapid development of IT industry. This will help the employers maintain the quality of human resources in the long term.

6.6 Would the registration system affect SMEs in biding Government IT projects?

To improve the quality of government IT projects, we urge the Government to adopt a policy that certain tasks of government IT project should be performed by registered IT professionals. We believe that the proposed registration system will help improve the supply of quality IT personnel to SMEs in the long run. Hong Kong's SMEs are now facing new challenges in the emergence of a knowledge-based new economy. The supply of quality IT professionals will help SMEs apply IT extensively in their operation, bringing the benefits of IT to their business.

6.7 IT is a fast growing industry. How can we ensure the registration system reflecting the changing standards and requirements of this industry?

In our proposal, the entire registration system including qualification requirements would be regularly reviewed and evaluated by the IT professionals, i.e. the Registration Board. This arrangement will significantly enhance the registration system to keep pace with rapid development of IT industry. Thus, professionals who engage IT jobs in the newly emerged areas will not be precluded under the registration system.

6.8 Should we introduce an examination system for registration?

Yes, but it cannot be introduced at this stage as it takes time to establish a comprehensive examination system for a profession. In the long term, we encourage the HKIIT or the Registration Broad to consider the use of examination system as a part of the registration requirement for IT professionals.

Appendix A

A brief comparison: IT professional bodies' membership requirements in Hong Kong

(Individual membership)

Academic ***Q***ualification in IT or related disciplines = ***AQ***; Year(s) of IT related ***W***orking ***E***xperience = ***WE***

Membership/ Requirements	**Fellow**		**Senior/ Professional**		**Member/ Voting/ Full/ Ordinary**		**Associate**	
	AQ	***WE***	***AQ***	***WE***	***AQ***	***WE***	***AQ***	***WE***
1. ACM HK	*--No such class--*		Recognized degree	2	Bachelor degree	2	*--No such class--*	
2. BCS HK (use points-based system)	100 points	8	*--No such class--*		100 points	4	70 points	1
3. HKACE (use credits-based system)	-Senior Professional member for 2 years -30 credits for recognized contribution		-Professional member for 1 year -60 credits		-Associate member - 60 credits (Class as *Professional member*)		-Currently practicing full-time teachers	
4. HKCS	Recognized by the Council		*--No such class--*		i) Recognized degree* *or* BCS exam (Parts 1 & 2)	4	i) Recognized degree* *or* BCS exam (Parts 1 & 2)	2
					ii) Recognized degree** *or* Higher Dip. *or* associate degree** *or* BCS exam (Part 1)	6	ii) Recognized degree** *or* Higher Dip. or associate degree** *or* BCS exam (Part 1)	4
					iii) Recognized non-computing degree	8	iii) Recognized non-computing degree	6
					iv) (Not specify)	15		
5. HKIE Information Discipline	Accredited/ Recognized Degree by the HKIE	-8 years significant responsibility -Reached the level of chief engineer grade in the Government	*--No such class--*		i) Accredited/ Recognized Degree by the HKIE	4 (Note 1(i))	i) Accredited/ Recognized Higher Dip. or Associate Degree by the HKIE	3 (Note 2(i))
					ii) Accredited/ Recognized Degree by the HKIE	6 (Note 1 (ii))	ii) Recognized Higher Cert. By the HKIE	4 (Note 2(ii))
					iii) Non-recognized AQ	15 (Note 1(iii))	iii) Non-recognized AQ	15 (Note 2(iii))
6. HKSMI	*--No such class--*		*--No such class--*		i) Recognized degree in computing or related	4	*--No such class--*	
					ii) Other recognized non-computing degree	6		
					iii) Recognized higher diploma in computing or related	6		
					iv) Recognized diploma in computing or related	8		
					v) Qualification other than above	15		

7. HKTMA	*--No such class--*		*--No such class--*		A qualification in medicine or an appropriate IT qualification	5	Interested in telemedicine and have either a qualification in medicine or an appropriate IT qualification	--
8. IEEE HK Section a) Computer Chapter b) CAS/COM Joint Chapters	-Senior member -Conferred by invitation		Shall be an engineer, scientist, educator, technical executive, or originator in IEEE-designated fields	10	i) Baccalaureate degree	3	For technical and non technical applicants who do not meet the qualifications for member grade	
					ii) A personal has demonstrated competence in work of a professional character	6		
					iii) An executive who has had under his/her direction important technical, engineering, or research work in IEEE-designated fields	6		
9. IEE HK^	Should be a Member	5	*--No such class--*		i) 4 year MEng	2^^	Second class honors degree from accredited courses or a pass degree from a UK honors course (it refers to the class of associate member)	--
					ii) BEng 2nd (Hons) plus 1 further year of learning	2^^		
					iii) Pass Engineering Council examinations or follow other educational routes	2^^		
					iv) Mature candidate route: Non-recognized AQ	15		
10. iProA	(Not specify)	5	*--No such class--*		Relevant degree or professional qualifications	2	Relevant Dip. or Cert.	1
11. ISFS	A founding or full member for 2 consecutive years	4	*--No such class--*		-Completed academic training accredited by ISFS -Pass 2 examinations in computer security and forensics	1	*--No such class--*	
12. ISACA	Certified Information Systems Auditor (CISA): -Successful completion of the CISA exam; and -Min. of 5 years professional Information System auditing, control, or security work experience							
13. PISA	*--No such class--*		*--No such class--*		Recognized degree, info-sec professional certification also considered	3#	Tertiary education	#
14. PMI-HK	*--No such class--*		*--No such class--*		Persons who are interested in project management	--	*--No such class--*	
	Project Management Professional (PMP) Certification: i) Successful completion of PMP Certification Exam -Baccalaureate or equivalent university degree -Min. 4,500 hours of project management experience, i.e. at least 3 years of project management experience within 6-year period prior to the application -Min. 35 hours of project management related education/ training ii) Successful completion of PMP Certification Exam -High school diploma or equivalent secondary school credential -Min. 7,500 hours of project management experience, i.e. at least 5 years of project management experience within 8-year period prior to the application -Min. 35 hours of project management related education/ training								

Notes:

HKCS	*Recognized degree/ Higher Dip./ associate degree in computing discipline ** Recognized degree/ Higher Dip./ associate degree with significant computing contents
HKIE	Note 1 (i): This is structured training route. Candidates are required to pass a Professional Assessment including an interview and an essay writing of 1,600 words (ii): This is general experience route. Candidates are required to pass a Professional Assessment including an interview and an essay writing of 1,600 words (iii): This is mature route. Candidates are required to pass a Professional Assessment including an interview based upon a submission of 5,000 to 10,000 words
	Note 2: (i): This is general experience route. Candidates are required to pass an Assessment Interview (ii): This is general experience route. Candidates are required to pass an Assessment Interview (iii): This is mature route. Candidates are required to pass an Assessment Interview based upon a training and experience report of 1,600 to 2,400 words
IEE HK	^The membership requirements of IEE HK are under restructuring, please consult IEE HK for the updates. ^^Applicant should meet the professional development requirement which is expected to take at least 4 years.
PISA	#Info-sec experience is required

Appendix B

Membership requirements of IT professional bodies in Hong Kong
(Individual membership)

Continuing Professional Development: CPD

Classes of membership	Requirements	Accreditation awarded
Association for Computing Machinery (ACM)--Hong Kong Chapter (www.acm.org.hk)		
3 classes of membership		
a) Professional	-Shall be a voting member -Recognized degree -At lease 2 years of IT related working experience	Certification letter
b) Voting	-Professional member of the ACM Headquarter who holds i) Bachelor's degree (in any subject area); *or* ii) Equivalent level of education; *or* iii) 2 years full-time employment in IT field -Residing in Hong Kong	
c) Student	-Student member of the ACM Headquarter and residing in Hong Kong	
British Computer Society (BCS)--Hong Kong Section (www.bcs.org.hk)		
3 classes of membership in Professional grades (exclude other grades)		
Use points-based system: *Total overall points (A+B)* A. Academic & vocational qualifications (max. 50 points) -Academic points (max. 50) -Vocational points (max. 20) B. Training and experience -Relevant experience (10 points per year) -Accredited training (max. 20 points or *CPD* and membership for year immediately preceding the application =10 points)		
1. Fellow	-Should have been a MBCS for at least 1 year -At least 30 years of age -Min. of 8 years of practical experience	FBCS and Chartered Information Systems Practitioner
2. Member	-At least 24 years of age -100 points -Min. of 4 years of experience	MBCS and Chartered Information Systems Practitioner
3. Associate	-At least 22 years of age -70 points -Min. of 1 year of experience	AMBCS
Hong Kong Association of Computer Education (HKACE) (www.hkace.org.hk)		
4 classes of membership (exclude School and Affiliate members)		
Use credits-based system: *Category A to D* *Category A: Academic qualification (v*ary from 1 to 8 credits) *Category B: Professional development (v*ary from 1 to 12 credits) *Category C: Working experience (v*ary from 1 to 2 credits, if staff responsible for promoting IT in education will gain one additional credit per academic year) *Category D: Recognized contribution* (vary from 1 to 3 credits per school year/ event)		
1. Fellow	-Should be a SMACE for at least 2 years -Should obtain at least 30 additional credits for *Category D* after being a SMACE	FACE
2. Senior Professional	-Should be a Professional member for at least 1 year -Obtained at least 60 total credits of *Category A to D*	SMACE
3. Professional	-Should be a Associate member -Obtained at least 60 total credits of *Category A to D*	MACE
4. Associate	-Currently practicing full-time teachers or equivalent	

Classes of membership	Requirements	Accreditation awarded
Hong Kong Computer Society (HKCS) (www.hkcs.org.hk)		
3 classes of membership		
a) Professional class		
1. Fellow	-A full member who has been recognized by the Council as having made an outstanding contribution to the Society	FHKCS
2. Full	i) 4 years of relevant computing experience -Recognized degree in a computing discipline; *or* -British Computer Society (BCS) Exam (Parts 1 & 2)	MHKCS
	ii) 6 years of relevant computing experience -Recognized degree with significant computing contents; *or* -Higher Diploma or associate degree in computing from a university or technical college; *or* -BCS Exam (Part 1)	
	iii) 8 years of relevant computing experience -Recognized non-computing degree	
	iv) 15 years of relevant computing experience -An interview by the Membership Committee will normally be required	
3. Associate	i) 2 years of relevant computing experience -Recognized degree in computing discipline; *or* -BCS Exam (Parts 1 & 2)	AHKCS
	ii) 4 years of relevant computing experience -Recognized degree with significant computing contents; *or* -Higher Diploma or associate degree in computing from a university or technical college; *or* -BCS Exam (Part 1)	
	iii) 6 years of relevant computing experience -Recognized non-computing degree	
b) Technician class		
1. Practitioner	-1 year of relevant computing experience -Recognized ordinary diploma/ certificate in computing	PHKCS
c) General class		
1. Corporate	-Any entity actively engages in the IT field *or* is providing education/ training in computing industry	
2. Graduate	-Meets the academic qualifications requirements for the Professional Class	
3. Student	-Full-time student who is over 16 years of age and is studying in one or more subjects related to the objectives of the Society	
4. Affiliate	-Interested in furthering any of the objectives of the Society	
5. Honorary	-Elected by the Council in recognition of his contribution to the Society	

Classes of membership	Requirements	Accreditation awarded
Hong Kong Institution of Engineers (HKIE)--Information Discipline (www.hkie.org.hk)		
Major classes of membership		
1. Fellow	-Meet all the requirements to be a Member of the HKIE -Have obtained 8 years significant responsibility -Have reached the level of chief engineer grade in the Government	FHKIE
2. Member	i) Structured Training Route -Have obtained an accredited/recognised engineering degree by the HKIE -A min. of 4 years experience including a min. of 2 years structured training -45 hours CPD per year before taking professional assessment -Pass a Professional Assessment including an interview and writing an essay of 1,600 words	MHKIE
	ii) General Experience Route -Have obtained an accredited/recognised engineering degree by the HKIE -A min. of 6 years experience including a min. of 1 year responsible experience -45 hours CPD per year before taking professional assessment -Pass a Professional Assessment including an interview and writing an essay of 1,600 words	
	ii) Mature Route -Those who have non-recognised academic qualification can apply if they are 35 years of age or above and have had 15 years progressive experience in a relevant field -CPD record with a min. average of 45 hours per year for the 3 years immediately prior to the time of application for Professional Assessment -Pass a Professional Assessment including an interview based upon a submission of 5,000 to 10,000 words	
3. Associate	i) Normal Route -Have obtained an accredited or recognised Higher Diploma or Associate Degree by the HKIE, with a min. of 3 years experience in a relevant field, or -Have obtained a recognised Higher Certificate by the HKIE, with a min. of 4 years experience in a relevant field -Pass an Assessment Interview	AMHKIE
	ii) Mature Route -Those who have non-recognised academic qualification can apply if they are 35 years of age or above and have had 15 years progressive experience in a relevant field -Pass an Assessment Interview based upon a training and experience report of 1,600 to 2,400 words	
4. Graduate	-Have obtained an accredited/ recognized degree by the HKIE	
5. Student	-Undertaking or have completed a programme accredited/recognised by the HKIE; this may be a Degree or Higher Certificate or Higher Diploma or Associate Degree	

Classes of membership	Requirements	Accreditation awarded
Hong Kong Society of Medical Informatics (HKSMI)		
1 class of membership related to IT		
1. Full (IT)	i) Recognized degree in computing or related (e.g. Math, Statistics, Engineering) with a minimum of 4 years of IT experience	
	ii) Other recognized non-computing degree with a minimum of 6 years of IT experience	
	iii) Recognized higher diploma in computing or related (e.g. Math, Statistics, Engineering) with a minimum of 6 years of IT experience	
	iv) Recognized diploma in computing or related (e.g. Math, Statistics, Engineering) with a minimum of 8 years of IT experience	
	v) Qualification other than above must have a minimum of 15 years of IT experience	
Hong Kong Telemedicine Association (HKTMA) (ruby.med.cuhk.edu.hk/~hktma)		
3 classes of membership (exclude Corporate member)		
1. Honorary	-Persons distinguished for eminent services to medicine and especially to the cause of telemedicine in Hong Kong or the Association	
2. Ordinary	-Persons who have either a qualification in medicine or an appropriate IT qualification with 5 years working experience	
3. Associate	-Persons who have either a qualification in medicine or an appropriate IT qualification who are interested in telemedicine	
4. Student	-Full-time students who are pursuing a course in medicine or an appropriate course in IT who are interested in telemedicine	
IEEE Hong Kong Section (www.ieee.org.hk) **1) Computer Chapter** (www.computer.org.hk) **2) Circuits and Systems/ Communications Joint Chapters (CAS/COM)** (www.comsoc.org / www.ieee-cas.org)		
6 grades of membership		
1. Honorary	-Members who have rendered meritorious service to mankind in IEEE's designated field of interest and are elected by the IEEE Board of Directors	
2. Fellow	-Shall be a Senior member who recognizes unusual distinction in the profession and shall be conferred only by invitation of the Board of Directors	
3. Senior	-Shall have been in professional practice for at least 10 years and shall have shown significant performance over a period of at lest 5 of those years	
4. Member	i) An individual engaged in IEEE-designated fields -a baccalaureate degree or its equivalent in the fields from a list of designated programs; *or* -at least 3 years of experience in a position requiring the qualification listed under the designated programs	
	ii) A teacher of a subject in an IEEE-designated field -a baccalaureate degree or its equivalent in the fields from a list of designated program; *or* -at least 3 years of professional teaching experience	
	iii) A person regularly employed in IEEE-designated fields for at lest 6 years	
	iv) An executive who, for at least 6 years, has had under his direction important technical, engineering, or research work in IEEE-designated fields	
5. Associate	-Designed for technical and non technical applicants who do not presently meet the qualifications for "Member" grade	
6. Student	-Enrolled in at least 50% of a normal full-time academic program as a registered undergraduate of graduate student in a course of study in IEEE designated fields	

Classes of membership	Requirements	Accreditation awarded
Institution of Electrical Engineers Hong Kong (IEE HK) (www.iee.org.hk)		
5 classes of membership		
1. Honorary Fellow	-Distinguished people whom the IEE desires to honor	Hon FIEE
2. Fellow	-Have met the requirements for the class of member -Have carried superior responsibility for at least 5 years -Engaged in or associated with engineering	FIEE
3. Member	i) Applicant shall meet the following requirements: a) Educational requirements (see below) b) Professional development requirements: A period of formative professional development (expected to take at least 4 years), to acquire the competence and commitment appropriate to a Chartered Engineer (see below) c) Professional review: A minimum of 2 years' responsible experience d) Age requirement: At least 25 years old e) Engaged in or associated with engineering	MIEE/ Chartered Electrical Engineer (CEng)
	a) Educational requirements - An IEE-accredited 4 year MEng, *or* a BEng 2nd (Hons) plus at least 1 further year of learning; *or* - Follows the educational routes to become member, e.g. pass the examinations administered by the Engineering Council, etc.	
	b) Professional development requirements (available routes): - A company scheme accredited by the IEE - A self-managed, individual program - A retrospective assessment of evidence - A combination of the above may also be acceptable	
	ii) Mature candidate route: It is an Academic Test to identify that the candidate has gained the fundamental knowledge expected of an engineer of similar age who had satisfied the educational requirement in the normal manner. The entry requirements are: - At least 35 years old; - Had experience in posts of increasing responsibility in electrical or manufacturing engineering over a period of at least 15 years; *and* - Satisfied the Institution's requirements for responsible experience	
4. Associate Member	-A second class honors degree or above from an IEE accredited course, or its equivalent; *or* -Hold the award of a minimum of a pass degree from a UK honors course, or its equivalent, *and* be working in an activity relevant to the interests of the Institution	AMIEE
5. Student	-Undergoing a regular course of appropriate higher education -Intend to satisfy the requirements for admission to the class of Associate Member	
CPD	-A member should follow one of the Professional Development routes as mentioned above	

Classes of membership	Requirements	Accreditation awarded
Internet Professionals Association (iProA) (www.iproa.org)		
5 classes of membership (exclude Affiliate member)		
1. Honorary	-Persons of distinction or who, in the opinion of the Council, have rendered some outstanding service to the Association	
2. Fellow	-Persons who are executives of distinction in industry, commerce, academic circles, government departments and public organizations with at least 5 years of experience in the IT-related fields or persons who by special contribution have furthered the objects of the Association	
3. Full	-Persons who hold a relevant degree or professional qualifications with at least 2 years of experience in the IT-related field	
4. Associate	-Persons who hold a relevant diploma or certificate with at least 1 year of experience in the IT-related fields	
5. Junior	-Persons who are undertaking recognized award bearing programs, e.g. relevant degree, diploma, certificate or professional courses	
Information Security and Forensics Society (ISFS) (www.isfs.org.hk)		
3 classes of membership (exclude Corporate member)		
1. Honorary	-A person whom has made significant contribution in whatever terms beneficial to the achievement of the objects of the Society	
2. Fellow	-Should be a Founding member; *or* have been a Full member for at least 2 consecutive years; *and* -Have a min. of 4 years of practical experience in a position of substantial responsibility; *and* -Should be sponsored by at least 2 Fellows of the Society; *and* -Should be approved by the Council	FISFS
3. Full	-Have completed academic training accredited by or acceptable to the Society with at least 1 year of practical experience; and -Pass 2 examinations i) Written examination: Examination on the basic principles of computer security and forensics. It can be waived if the applicant has taken and passed an accredited program on computer security and forensics within the past 3 years. ii) Laboratory-based examination: Candidate is asked to solve an "almost real" case of hacking activities. It cannot be waived and is meant to test "field knowledge" in computer forensics.	MISFS
3. Affiliate	-Manifest the interest and determination in the acquisition of information security and forensics skills to the satisfaction of the Council	
Information Systems Audit and Control Association (ISACA) Hong Kong Chapter (www.isaca.org.hk)		
Certified Information Systems Auditor	-Successful completion of the CISA exam; *and* -Min. of 5 years professional Information System (IS) auditing, control, or security work experience. Substitutions and waivers of such experience may be obtained as follows: i) Max. of 1 year of IS experience *or* 1 year of financial or operational auditing experience can be substituted for 1 year of IS auditing, control, or security experience ii) 60 to 120 completed college semester credit hours can be substituted for 1 or 2 years of IS auditing, control, or security experience iii) 2 years as a full time university instructor in a related field can be substituted for 1 year of IS auditing, control or security experience	CISA
CPD	-Annual min. of 20 continuing education hours; *and* -Min. of 120 continuing education hours for a 3-year reporting period	

Classes of membership	Requirements	Accreditation awarded
Professional Information Security Association (PISA) (www.pisa.org.hk)		
3 classes of membership		
1. Full	-Recognized degree in a computing discipline -3 years Info-Sec working experience	
2. Associate	-Tertiary education -Info-Sec related experience	
3. Affiliate	-Interested in furthering any of the objects of the Society	
Project Management Institute Hong Kong Chapter (PMI-HK) (www.pmi.org.hk)		
1. Member	-Persons who are interested in project management	
Project Management Professional (PMP) Certification	i) Successful completion of PMP Certification Exam -Baccalaureate or equivalent university degree -Min. 4,500 hours of project management experience, i.e. at least 3 years of project management experience within 6-year period prior to the application -Min. 35 hours of project management related education/ training	PMP
	ii) Successful completion of PMP Certification Exam -High school diploma or equivalent secondary school credential -Min. 7,500 hours of project management experience, i.e. at least 5 years of project management experience within 8-year period prior to the application -Min. 35 hours of project management related education/ training	
CPD	-Min. of 60 Professional Development Units (PDUs) every 3 years	

Appendix C

A summary of overseas practice in introducing IT professional registration System

General practice

- Establishing professionalism in IT sector is the worldwide trend. As IT is an embryonic profession, a well-established professional registration system is lacking. Many advanced nations like the United States and the United Kingdom have been developing measures to introduce an accreditation mechanism to IT industry. To better understand the issues in the process of professionalization, we have studied different IT certifications or accreditation system in other countries.

- The accreditation systems in other countries are usually initiated by three parties, namely, international IT professional bodies (refers to those who have set up their chapters, sections or divisions in the regions other than their originated countries), local IT professional bodies (refers to those who concentrate their services in their own countries and have linkages with other international IT professional bodies), and the government (refers to the Administration who control the power of a state or country).

- For the IT professional qualifications, we identify that nearly all of the accreditation systems are examination-based. Apart from the examination, the membership of those reputable IT professional bodies is also widely recognized as a professional qualification in the IT industry. Formal education and practical working experience in the IT-related discipline are the basic requirements in assessing professional qualifications. But some professional bodies may even require their members to attain assigned Continuing Professional Development (CPD) hours for membership renewal.

- Having studied the overseas practice of developing professionalism in IT industry, we identify that the professional qualifications are administered by –
  - IT professional body itself;
  - Collaboration between the government and IT professional body;
  - The Government.

Accreditation mechanism solely managed by the professional bodies

IEEE Computer Society *www.computer.org*

- Founded in 1946, the IEEE Computer Society is the largest of the 36 societies of the Institute of Electrical and Electronics Engineers (IEEE). It is the world's leading organization of computer professionals with over 100,000 members. The IEEE Computer Society has spent three years to develop the *software professional development certification program*. The beta test was completed in 2001 and the first testing window will be opened in 2002. The title of Certified Software Development Professional (CSDP) will be awarded to the candidate who pass the examination and meet the qualification requirements.

- Education and experience requirements[1] of this program are -
  - At the time of application the candidate holds a baccalaureate experience or equivalent university degree;
  - At the time of application the candidate has a minimum of 9,000 hours of software engineering experience within at least 6 of the 11 prescribed knowledge areas
  - Candidates should have at least 2 years of software engineering experience within the 4 year period to the application

- Proof of professionalism
  - Candidates are required to subscribe to the code of professional behavior;
  - Candidates are required to demonstrate the membership of designated associations or recommendation by 2 members of the IEEE Computer Society or registration as a professional engineer as a proof of professionalism.

British Computer Society (BCS) www.bcs.org

- With over 38,000 members worldwide, BCS is the only Chartered Engineering Institution for Information Systems Engineering in the UK. BCS has developed two accreditation systems to award the qualified candidates with credentials, namely BCS Professional Examination, and Information Systems Examinations Board.

- *BCS Professional Examination* - offers 3 levels of qualification:
  - *Certificate:* it is equivalent to the first year of a Higher National Diploma in UK. It consists of a two-hour written paper on three compulsory modules as information systems, software development and technology.
  - *Diploma*: it will be examined at an academic level equivalent to a Higher National Diploma. Candidates are required to take the examination on one compulsory core module plus 3 modules chosen from 11 specialties.
  - *Professional Graduate Diploma:* it will be examined to the academic level of an UK university honors degree. Candidates are required to take the examination on four modules chosen from 12 specialties or can take the Professional Graduate Diploma by submission of a dissertation.

- *Information Systems Examinations Board (ISEB)* - offers examinations to candidates who are interested in obtaining qualifications in the field of Information Systems. Qualifications of ISEB cover all major areas of Information System including management, development, service delivery and quality. Over 60,000 ISEB qualifications have been awarded. Qualifications areas include -
  - Business & Management Skills
  - Business Systems Development
  - Data Protection
  - Dynamic Systems Development Method (DSDM)
  - Information Communication Technology
  - Information Security
  - Information System Consultancy Practice
  - Program and Project Support Office
  - Project Management (introduced in 1989)
  - Software Testing

Institute for Certification of Computing Professionals (ICCP) www.iccp.org

- Founded in 1973, ICCP has 7 constituent societies and 18 affiliate societies. Nearly 55,000 computing professionals have earned the recognition and rewards from passing ICCP examinations, namely Certified Computing Professional and Associate Computing Professional.

- *Certified Computing Professional (CCP)* – is conferred upon anyone who-
  - Passes the examinations with a minimum passing score of 70% or higher;
  - Meets the experience requirement which requires 48 months of full-time professional level work in computer-based information systems excluding clerical, data entry and classroom work. Up to 24 months of credit is given for Bachelor degrees in related fields.
  - Agrees to comply with the ICCP Codes of Ethics, Conduct and Good Practice.

- *Associate Computing Professional (ACP)* – was developed to validate an individual's knowledge of the general computing industry and specific programming language or specialty area knowledge and skills. Requirements for qualification are -
  - No experience required;
  - Successfully complete 2 examinations;
  - Must follow the ICCP Code of Ethics and Good Conduct.

Canadian Information Processing Society (CIPS) www.cips.ca

- CIPS is a Canadian based society, former named as Computing and Data Processing Society of Canada. In 1968, the society changed its name to the current Canadian Information Processing Society.

- *Information Systems Professional (ISP) Certification* – was introduced in 1989 by the CIPS. Now, it has more than 1,700 holders across Canada. It is an examination free certification. Credential will be awarded to the applicant who is able to meet or exceed the established criteria for academic qualifications and relevant experience. There are 5 routes to attain the ISP designation. Eligibility requirements are –
-

Figure 1: Qualification requirements for ISP

Education	Professional Level Experience
Route 1: CIPS Accredited University Programs (based on Canadian universities programs in Computer Science, Information Systems or Software Engineering)	
◆ 4 year university degree	2 years
◆ 3 year university degree	3 years
Route 2: Non-accredited University Programs	
◆ 4 year university degree (C. SC., M.I.S., or Software Engineering)	4 years
◆ 3 year university degree (C. Sc., M.I.S., or Software Engineering)	5 years
Route 3: Accredited College or Technical Institute Programs (computing program or technical program)	
◆ 3 year computing program	4 years
◆ 2 year computing program	5 years
◆ 1 year post-diploma IT program	7 years
Route 4: Non-accredited College Program (computing program)	
◆ 3 year computing program	6 years
◆ 2 year computing program	5 years
Route 5: Others	
◆ Passed the examination offered by the Institute for Certification of Computer Professionals (ICCP) leading to the CCP or equivalent	5 years
◆ Passed the Diploma Level examination offered by the British Computer Society (BCS)	
◆ Passed the Professional Graduate Level examination offered by the BCS	4 years
◆ Professional experience only	A minimum of 12 professional experience level experience and having entered the field prior to 1976

Source: Canadian Information Processing Society

Information Systems Audit and Control Association (ISACA) www.isaca.org

- Founded in 1969, with more than 23,000 members in over 100 countries include Hong Kong, ISACA develops globally applicable information systems auditing and control standards.

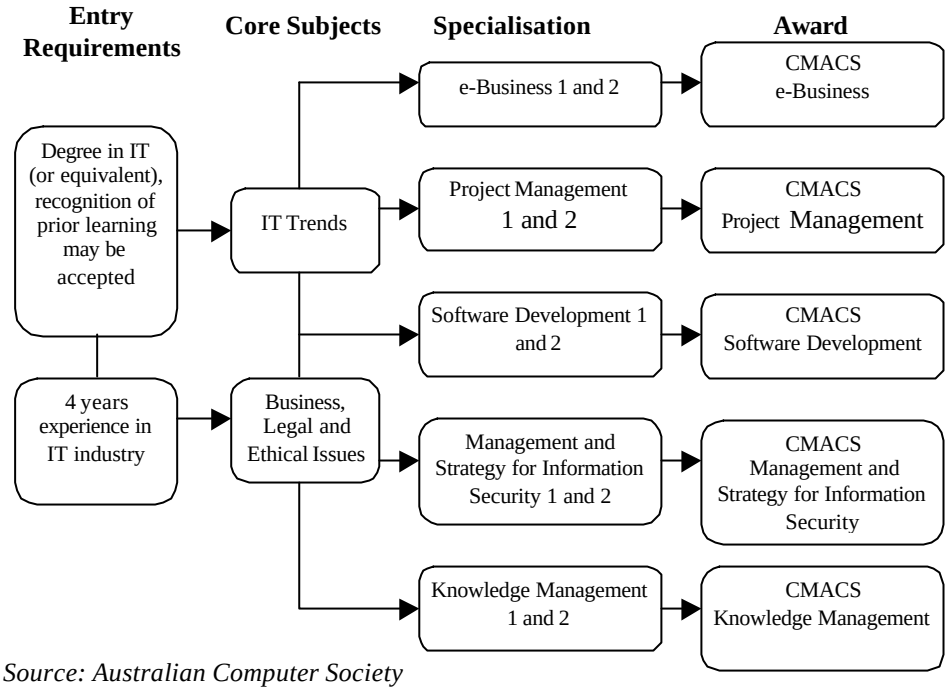
- *Certified Information Systems Auditor (CISA)* - More than 26,000 professionals worldwide were awarded the professional title as a CISA. The CISA program has been the globally accepted standard of achievement among information systems audit, control and security professionals since 1978. CISA designation is awarded to the candidates who have met and continued to meet the 5 requirement criteria as prescribed by the ISACA. They are:
  1. Successful completion of the CISA examination
  2. Experience as an Information Systems Auditor
  - A minimum of 5 years professional Information Systems auditing, control, or security work experience is required. Options are offered as the substitutions and waivers of experience.
  - Experience must have been gained within the 10-year period preceding the application date or within 5 years from the date of initially passing the examination.
  3. Subscribe to Code of Professional Ethics
  4. Continuing education policy
  - An annual minimum of 20 continuing education hours is required. In addition, a minimum of 120 is required for a 3-year reporting period.
  5. Agree to adhere to the Information Systems Auditing Standards as adopted by ISACA

Australian Computer Society (ACS) www.acs.org.au

- ACS has over 16,000 members and on a per capita basis is one of the largest computer societies in the world. In 1993, it has established an ACS Certification Program and provided a post-graduate program to IT professionals in Australia, New Zealand and other Asia-Pacific countries.

- *Certified Member of the Australian Computer Society (CMACS)* - is an industry based, master's level course of study. The entry requirements for the program are degree in IT with 4 years experience in the IT industry. To complete the program, member should study 2 core subjects plus 2 subjects in a specialist area. After passing the examinations, members will receive an award in their specialist knowledge. The CMACS structure is as follows:

Figure 2: Structure of the Australian Computer Society Certification Program



Source: Australian Computer Society

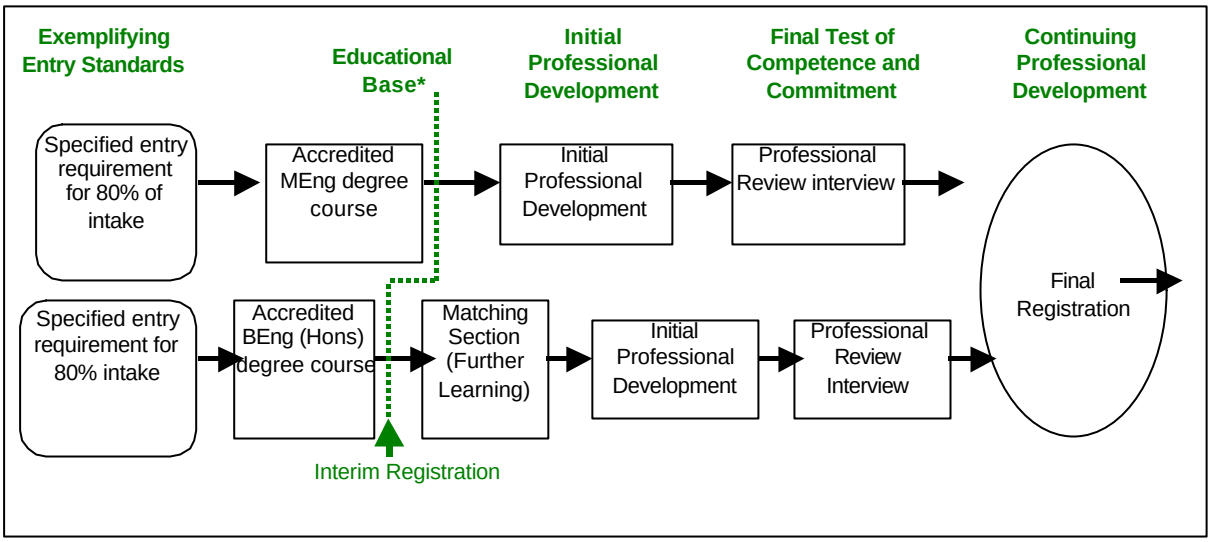
<u>Accreditation mechanism collaboratively managed by the government and IT professional body</u>

The United Kingdom

- Engineering Council (UK)[2] - Established in March 2002, the Engineering Council (UK) EC(UK) is a direct successor of the chartered institution of the Engineering Council to promote and regulate the engineering profession in the UK. It also undertakes the responsibility for the Register of Chartered Engineers and the Engineers Registration Board.

- The EC(UK) maintains qualifications and registration of Chartered Engineer (CEng), Incorporated Engineer (IEng), and Engineering Technician (EngTech). To become a Chartered Engineer, candidates need to be a member of a Nominated Body. The Nominated Body is the Institution nominated by the EC(UK) as fitted to certify the attainment by individuals seeking registration at any stage in any section of the EC(UK)'s Register. There are totally 36 Nominated Bodies; the British Computer Society (BCS) and Institution of Electrical Engineers (IEE) are two of them.

Figure 3: Benchmark routes for chartered engineer



*The normally expected full-time equivalent course lengths are 4 years for MEng & 3 years for BEng (Hons)
Source: Engineering Council (UK)

- Engineering Council Examination - is an alternate route to the above academic standard for Chartered Engineer. Candidate can follow the examination route to register as Chartered Engineer. The examination is divided into 3 levels, namely, the Engineering Council Certificate, the Engineering Council Graduate Diploma and the Engineering Council Postgraduate Diploma.

The United States

- National Skill Standards Board[3] (NSSB) – was set up and sponsored by the US Government to establish a voluntary national standard system to provide assessments and certification for the professionals of different industries. The standard system is a voluntary and industry-led coalitions which are consisted of employers, employees, unions, educators, community based organizations and civil rights organizations. Information Communications and Technology Voluntary Partnership (ICTVP) is among the various coalitions that is officially recognized by the NSSB. The members of ICTVP include representatives from the leading companies and professional bodies in IT and telecommunication industry. The main purpose of the ICTVP is to develop broad-based technician-level skill standards and certifications in the IT and telecommunications field.

- Information Communications Technology Voluntary Partnership - While the NSSB has been conducting research in different industries, only 5 coalitions have been officially recognized as VPs. Information Communications Technology Voluntary Partnership (ICT VP) is one of them. Recognized by the NSSB in March 2002, the ICT VP includes representation from the leading companies in IT and telecommunication industry. The purpose of the ICT VP is to develop broad-based technician-level skill standards and certifications in the IT and telecommunications field.

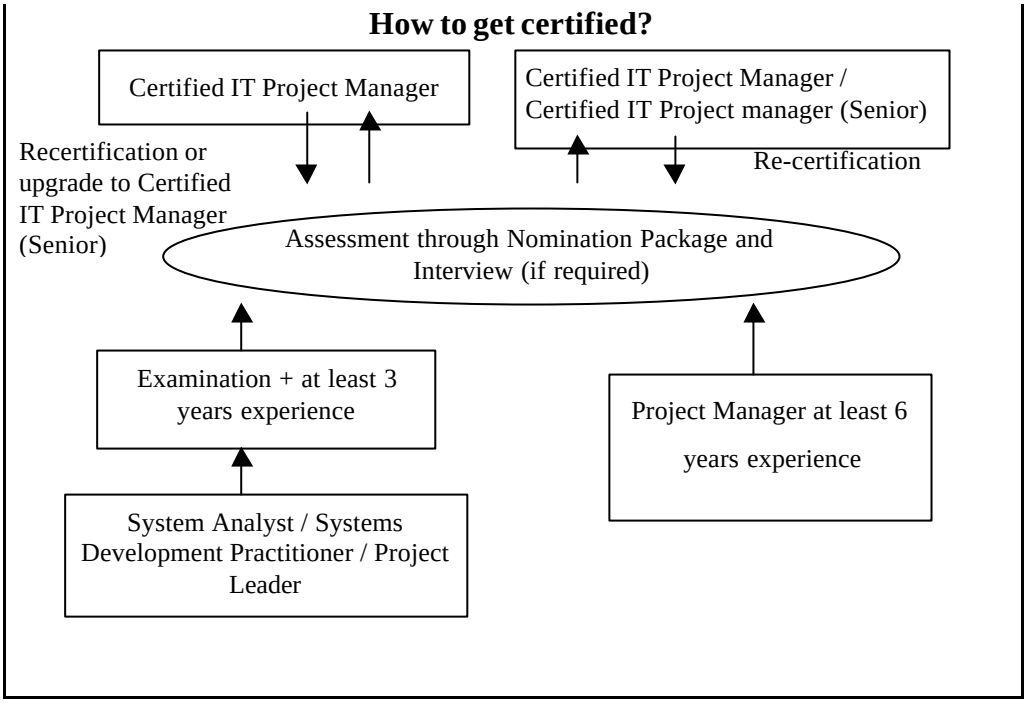
Singapore

- National IT Skills Certification Program[4] - was launched in 1998. The first certificate to be issued under this Program is the "IT Project Management Certification Program" which aims to raise the level of professionalism in the management of IT projects. This entire program is run by the Singapore Computer Society (SCS) but under the close supervision of the National Skills Certification Board of the Singaporean Government.

- The certification program assesses candidate's competency on 13 skills sets. Candidates who are qualified will be awarded the title of Certified IT Project Manager (CITPM).

Until June 2001, the SCS has conferred 248 Certified IT Project Managers. Moreover, Continuing Professional Certification (CPC) program is also introduced to all CITPMs for the purpose of re-certification. A CITPM needs to accumulate at least 100 Continuing Professional Certification CPC credits every five years. The diagram below illustrates how to a candidate attains professional recognition of CITPM.

Figure 4: IT Project Management Certification Program in Singapore



Source: Singapore Computer Society

- National ICT Skills Certification and Recognition Framework – is a new initiative of the Singaporean Government to recognize the professional status of IT professionals. A National Information and Communication Technology (ICT) Skills Certification and Recognition Steering Committee was established and a framework regarding to the ICT skills certification and recognition was endorsed. Some initiatives under this framework were started to roll out in 2001.

<u>Accreditation mechanism controlled by the Government</u>

China

- National Computer Grade Examinations[5]- was introduced in 1994. It is a four-grade examination system, which is managed by the National Education Examinations Authority. Candidate who passes the examination within a grade will be awarded a certificate. By the end of June 2000, there were 3.42 million candidates have applied for the examinations, and 1.37 million of them received the qualifications.

- Types of Certificate
  - *Grade I:* Basic knowledge and skills on DOS or Windows Environment
  - *Grade II:* Hardware and software knowledge, and programming skills in one high level programming language
  - *Grade III A:* System development skills in computer hardware
  - *Grade III B:* System development skills in computer software
  - *Grade IV:* System design and analysis competence in computer applications and projects

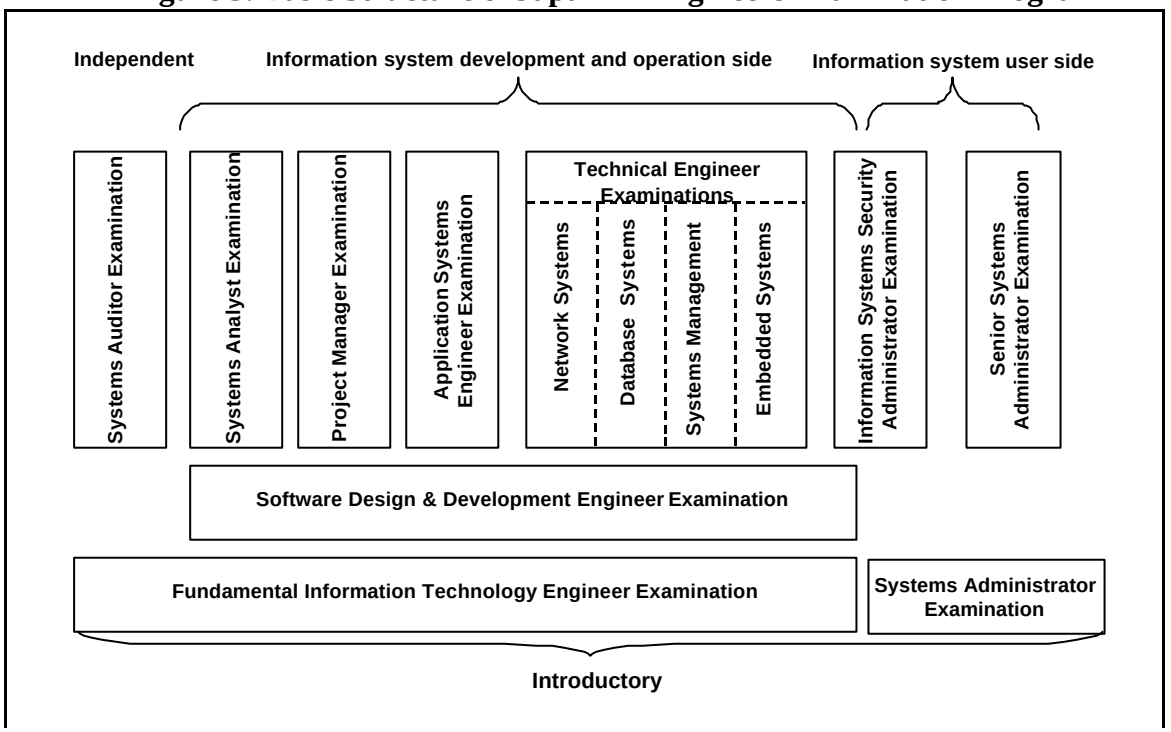
Japan

- Information Technology Engineers Examination Program[6] - was a comprehensive examination which was established by the Japanese government in 1969. The examination was legally recognized under the Japan Information Processing Development Centre (JIPDEC) Act 1970. The Minister of Economy, Trade and Industry (METI) was the responsible government department to overlook the matters relating to this examination.

- In 1984, Japan Information Technology Engineers Examination Centre (JITEC) was established to provide a new certification examination program for the IT engineer. The examination is executed twice year and there are around 800 thousand annually. The basic structure of JITEC is shown at figure 5. The classifications of certificates are -

  - Class II IT Engineer Certificate for standard level engineer
  - Class I IT Engineer Certificate for senior level engineer
  - Advanced Expert Certificates for system auditor, system users, system developers and operators

Figure 5: Basic Structure of Japan IT Engineers Examination Program



Source: Information Technology Engineers Examination in Japan, JITEC, March 2001

USA

License Software Engineers by the Texas Board of Professional Engineers

www.tbpe.state.ex.us

- *The Texas Board of Professional Engineers* - recognized Software Engineering as a distinct discipline of engineering. In August 1998, it began accepting applications from practitioners who wish to become licensed software engineers. Applicants to apply as Software Engineer should have at least 12 years of experience with an accredited degree or 16 years with a non-accredited degree. Those approved will be the first in Texas and the rest of the United States to legally offer services as software engineers.

- Many overseas governments have committed to mutually recognize other countries' professional standards. Singapore and the Philippines, for example, signed a memoranda of understanding (MOU) to introduce the CITPM program to the Philippines last year.

Moreover, the National Infocomm Competency Centre (NICC) of Singapore and the Singapore Computer Society also concluded a MOU with the Central Academy of Information Technology (CAIT) of Japan and the JITEC in August 2001. This MOU put cross recognition of the two countries' project management into effect.

International organizations and others

- International organizations are the non-profit making oragnizations which recruit professional bodies from a specific regions, areas or worldwide. They work as a catalyst in promoting the professionalism of IT among their member societies or regions. Every extra member they recruit would enhance the influential power of the organizations; once their members have reached agreement on the new initiative, this will help them to carry out or push ahead their program in an easier way.

South East Asia Regional Computer Confederation (SEARCC) www.searcc.org

- SEARCC is a confederation of national IT professional societies. The Charter and Constitution of SEARCC was signed in Singapore in 1978. Hong Kong Computer Society was one of the founding signatories. Today, SEARCC has embraced 14 national societies from the regions include Australia, Canada, Hong Kong, India, Japan, Singapore, Taiwan, etc.

- With the establishment of the SEARCC Regional Interest Groups (SRIG), it provides a process of bonding for IT practitioners, researchers and developers in the region. Certification is one of the focused streams of SRIG. Its objective is to increase the professional recognition of the IT profession through certification. Some of the main activities include:
  - Promoting certification, and accreditation of certification in SEARCC member organizations;
  - Assisting wherever possible, the pursuit of recognition with governments and other relevant authorities and institutions;
  - Developing a framework for allowing existing certification schemes in member organizations to be made available for adoption in other member organizations or countries.

- *SEARCC Certification Endorsement Program*[7] - In order to encourage member organizations to develop or maintain certification schemes, at the second meeting of SRIG in 1999, it was proposed that member countries might submit their certification schemes for SEARCC endorsement if the schemes are of sufficient quality. The endorsement will be valid for a maximum period of 5 years with re-endorsement required thereafter. SEARCC endorsement would mean that a certification scheme is recognized as meeting the requirements of a SEARCC Certification Program and this recognition can be stated on certificates issued under the scheme.

International Information Systems Security Certification Consortium (ISC)²
www.isc2.org

- (ISC)² was established in 1989. It is an international organization dedicated to the certification of information systems security professionals and practitioners. Thousands of information systems professionals in over 35 countries worldwide have attained certification in one of the two designations administered by (ISC)² as follow.

- *Certified Information Systems Security Professional (CISSP)* - CISSP designation is granted to information systems security professionals who passed the CISSP examination and are able to provide supporting documentation that they have at least 3 years of cumulative experience in a particular security specialty. CISSP is ranked as one of the top 10 hottest certifications for 2002 in a survey conducted by CertCities.com.[8]

- *System Security Certified Practitioner (SSCP)* - SSCP designation is granted to information systems security and network administrators who passed the SSCP examination and are able to provide supporting documentation that they have at least 1 year of cumulative experience in a particular security specialty.

- Continuing Professional Education (CPE) - A CISSP or SSCP must earn CPE credits every 3 years and subscribe to the (ISC)² Code of Ethics. CPE credits are earned by performing activities largely related to the information systems security profession. If members fail to meet the requirements of CPE, they need to retake their certification examinations.

National Workforce Center for Emerging Technologies (NWCET) www.nwcet.org

- NWCET is an organization devoted to IT education in the US. It formerly named as NorthWest Centre for Emerging Technologies and was supported by the National Science Foundation (NSF)'s Advanced Technology Education program. NSF is an independent United States government agency responsible for promoting science and engineering through funding programs in research and education. [9]

- NWCET's great contribution in IT profession was its landmark publication, *Building a Foundation for Tomorrow: Skill Standards for Information Technology*. It describes what IT professionals do in 8 career clusters and has developed a set of IT skill standards. This provides a market-based IT job classifications for the government, educators and businessmen for use in job development, job definition, and certification.

- NWCET's skill standards continue to have broad national and international impact. In 1999, a large consortium of Japanese IT and computer firms purchased rights to translate NWCET skill standards into Japanese.[10] And NWCET is now working on the third version of the IT skill standards and will release it soon to the public.

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Appendix D

List of websites and IT accreditation systems of other countries

Countries	IT Accreditation Programs	Websites
Australia	Australia Computer Society ▪ Certified member of the Australian Computer Society	www.acs.org.au
Canada	Canadian Information Processing Society ▪ Information Systems Professional Certification	www.cips.ca
China	National Education Examinations Authority ▪ National Computer Grade Examinations	www.neea.edu.cn
Japan	Japan Information Technology Engineers Examination Centre ▪ Information Technology Engineers Examination Program	www.jitec.jipdec.or.jp
Singapore	Singapore Computer Society ▪ IT Project Management Certification Program	www.scs.org.sg
UK	Engineering Council (UK) ▪ Chartered Engineers	www.engc.org.uk
USA	National Skill Standards Board ▪ Information Communications Technology Voluntary Partnership	www.nssb.org
International or regional organizations	Institute for Certification of Computing Professionals ▪ Certified Computing Professional ▪ Associate Computing Professional	www.iccp.org
	IEEE Computer Society ▪ Certified Software Development Professional	www.computer.org
	British Computer Society ▪ British Computer Society Professional Examination ▪ Information Systems Examination Board	www.bcs.org
	Information Systems Audit and Control Association ▪ Certified Information Systems Auditor	www.isaca.org
	South East Asia Regional Computer Confederation ▪ South East Asia Regional Computer Confederation	www.searcc.org

Appendix E

Professional accreditation system of other professions in Hong Kong

Professions required Practicing Certificate						
	Profession	**Ordinance**	**Date of Enactment**	**Professional Qualifications**	**Licensing Board/Council**	**Professional bodies**
1.	Accountant	Professional Accountants Ordinance (Cap. 50)	*January 1, 1973*	- Attained the age of 21 - Fit and proper person - Practical experience - Passed examinations - Member of an accountancy body accepted by the Council	Council of the Hong Kong Society of Accountant	Hong Kong Society of Accountant www.hksa.org.hk
2.	Chinese medicine practitioner	Chinese Medicine Ordinance (Cap. 549)	*August 16, 2000*	- Passed the Licensing Examination - Has been practicing Chinese medicine in Hong Kong for a continuous period of not less than 10 years immediately before January 3, 2000. - Has been practicing Chinese medicine in Hong Kong for a continuous period of not less than 10 years immediately before January 3, 2000; and has obtained a qualification in Chinese medicine practice acceptable to the Practitioners Board; and shall be required to pass a registration assessment.	Chinese Medicine Practitioners Board under the Chinese Medicine Council of Hong Kong www.cmchk.org.hk	-N/A-
3.	Chiropractor	Chiropractors Registration Ordinance (Cap. 428)	*August 1, 1993*	- Passed examination and received training and experience accepted by the Council - Fit and proper person	Chiropractors Council	Chiropractic Doctors' Association of Hong Kong www.cda.org.hk
4.	Dentist	Dentists Registration Ordinance (Cap. 156)	*October 1, 1959*	- Passed Licensing Examination - Completed or passed an education program, course of study or examination	Dental Council of Hong Kong www.dchk.org.hk	Hong Kong Dental Association www.hkda.org

5.	Legal practitioner	Legal Practitioners Ordinance (Cap. 159)	*August 1, 1964*	- Fit and proper person
				- Has complied with requirements prescribed by the Council with respect to employment as a trainee solicitor, the passing of examinations and the completion of courses; or in case of a person who seeks admission on the basis of qualifications acquired outside Hong Kong qualifies for admission under requirements prescribed by the Council
				- Residence requirements:
				  - Has resided in Hong Kong for at least 3 months immediately before his admission
				  - Intends to reside in Hong Kong for at least 3 months immediately after his admission
				  - Has been ordinarily resident in Hong Kong for at least 7 years; or has been present in Hong Kong for at least 180 days of each of at least 7 years
					Council of the Hong Kong Bar Association
					
					Council of the Law Society of Hong Kong
						Hong Kong Bar Association www.hkba.org
						
						Law Society of Hong Kong www.hklawsoc.org.hk

6.	Medical practitioner	Medical Registration Ordinance (Cap. 161)	*June 1, 1957*	General Register - Awarded a degree of medicine and surgery by a university in Hong Kong - Obtained a certificate of experience - Passed the Licensing Examination and completed the period of assessment Specialist Register - Should be a registered medical practitioner - Awarded a Fellowship of the Hong Kong Academy of Medicine - Certified by the Hong Kong Academy of Medicine that he or she has completed the postgraduate medical training and has satisfied the continuing medical education requirements for the relevant specialty	Medical Council of Hong Kong www.mchk.org.hk	Hong Kong Medical Association www.hkma.com.hk Hong Kong Doctors Union www.eda.org.hk

7.	Medical Laboratory Technologist	Supplementary Medical Professions Ordinance (Cap. 359)	*October 1, 1980*	- Degree, diploma or other document and experience prescribed by the board - Degree, diploma or other document and experience recognized by the Council - Practicing that profession and by reason of education, training, professional experience and skill satisfies the Council	Medical Laboratory Technologists Board of the Supplementary Medical Professions Council	-N/A-
8.	Radiographer				Radiographers Board of the Supplementary Medical Professions Council	-N/A-
9.	Physiotherapist				Physiotherapists Board of the Supplementary Medical Professions Council	-N/A-
10.	Occupational Therapist				Occupational Therapists Board of the Supplementary Medical Professions Council	Hong Kong Occupational Therapy Association www.fmshk.com.hk/hkota/home.htm
11.	Optometrist				Optometrists Board of the Supplementary Medical Professions Council	-N/A-
12.	Midwife	Midwives Registration Ordinance (Cap. 162)	*December 9, 1960*	- Good character - Passed examinations and completed training prescribed by the Council - Possess a certificate issued by certifying body recognized by the Council	Midwives Council of Hong Kong www.mwchk.org.hk	
13.	Pharmacist	Pharmacy and Poisons Ordinance (Cap. 138)	*January 1, 1970*	- Holds a diploma in pharmacy of the University of Hong Kong - Registered as a pharmaceutical chemist or chemist and druggist with the Pharmaceutical Society of Great Britain - Holds a certificate of a Commonwealth	Pharmacy and Poisons Board	Pharmaceutical Society of Hong Kong www.medicine.org.hk/pshk

				pharmaceutical institution which has entered into an agreement for reciprocity of registration with the Pharmaceutical Society of Great Britain - Completed a course of training and study and passed any examinations prescribed by the Board - Holds any diploma or certificate and satisfied the Board by examination - Satisfied the Board that he has the skill and experience in pharmacy		Society of Hospital Pharmacists of Hong Kong www.shphk.org.hk
14.	Nurse	Nurses Registration Ordinance (Cap. 164)	*July 7, 1961*	- Attained the age of 21 - Good character - Completed training and passed examinations prescribed by the Council - Valid certificate issued by certifying body recognized by the Council	Nursing Council of Hong Kong www.nchk.org.hk	Association of Hong Kong Nursing Staff www.nurse.org.hk
15.	Veterinary surgeon	Veterinary Surgeons Registration Ordinance (Cap. 529)	*July 14, 1997*	- Passed examinations and received training and experience accepted by the Board - Fit and proper person	Veterinary Surgeons Board	-N/A-
Professions NOT required Practicing Certificate but restricted the use of title						
	Profession	**Ordinance**	**Date of Enactment**	**Professional Qualifications**	**Registration Board**	**Professional bodies**
16.	Architect	Architects Registration Ordinance (Cap. 408)	*May 4, 1990*	- Member of Hong Kong Institute of Architects - Member of an architectural body accepted by the Board - Passed examinations - 1 year relevant professional experience in Hong Kong - Resident in Hong Kong - Fit and proper person	Architects Registration Board	Hong Kong Institute of Architects www.hkia.net

17.	Engineer	Engineers Registration Ordinance (Cap. 409)	*May 4, 1990*	- Member of the Hong Kong Institution of Engineers within a discipline - Member of an engineering body accepted by the Board - Passed examinations - 1 year relevant professional experience in Hong Kong - Resident in Hong Kong - Fit and proper person	Engineers Registration Board	Hong Kong Institution of Engineers www.hkie.org.hk
18.	Landscape architect	Landscape Architects Registration Ordinance (Cap. 516)	*June 6, 1997*	- Member of the Hong Kong Institute of Landscape Architects - Member of a landscape architectural body accepted by the Board - 1 year relevant professional experience in Hong Kong - Resident in Hong Kong - Fit and proper person	Landscape Architects Registration Board	Hong Kong Institute of Landscape Architects www.hkilaonline.org
19.	Planner	Planners Registration Ordinance (Cap. 418)	*July 19, 1991*	- Member of the Hong Kong Institute of Planners - Member of a planning body accepted by the Board - Passed examinations and received training and experience accepted by the Board - 1 year relevant professional experience in Hong Kong - Resident in Hong Kong	Planners Registration Board	Hong Kong Institute of Planner s www.hkip.org.hk
20.	Housing manager	Housing Managers Registration Ordinance (Cap. 550)	*November 26, 1999*	- Member of the Hong Kong Institute of Housing - Member of a housing management body accepted by the Board - Passed examination and received training and experience accepted by the Board - 1 year relevant professional experience in Hong Kong	Housing Managers Registration Board	Hong Kong Institute of Housing www.housing.org.hk

				- Resident in Hong Kong - Fit and proper person		
21.	Social worker	Social Workers Registration Ordinance (Cap. 505)	*June 6, 1997*	Category 1 - Degree or diploma recognized by the Board - Occupied a post not later than March 31, 1982 - Occupied a post or posts for not less than 10 years - Resident in Hong Kong - Fit and proper person Category 2 - Occupies a post or accepted for a post - Proposes to obtain a recognized degree or diploma within a reasonable period - Resident in Hong Kong - Fit and proper person	Social Workers Registration Board www.swrb.org.hk	
22.	Surveyor	Surveyors Registration Ordinance (Cap. 417)	*July 19, 1991*	- Member of the Hong Kong Institute of Surveyors - Member of a surveying body accepted the Board - Passed examination and received training and experience accepted by the Board - 1 year relevant professional experience in Hong Kong - Resident in Hong Kong	Surveyors Registration Board	Hong Kong Institute of Surveyors www.hkis.org.hk

Appendix F

Framework of Information Technology Professional Registration Bill

	Title of Sections	Description of Contents
	Long title	▪ Long title of the Bill
1.	Short title	▪ Short title of the Bill
2.	Interpretation	▪ The interpretation of particular titles and names this Bill may refer to
3.	Constitution of the Board	▪ The compositions of the Registration Board
4.	Tenure of office	▪ The appointment conditions for members of the General Council and the Registration Board
5.	Chairman	▪ The appointment of Chairman and Vice-chairman of the Registration Board
6.	Proceedings	▪ This section provides the proceedings of meeting of the Registration Board
7.	Functions of the Board	▪ This section provides the functions of the Registration Board. For examples, the Registration Board shall: - establish and maintain a register of registered IT professionals - set, review and publish the qualification standards for registration - advise the Government on registration matters - examine and verify the qualifications of persons who apply for registration - receive, examine, accept or reject applications for registration and renewal of registration - deal with disciplinary offences
8.	Powers of the Board	▪ This section provides the powers of the Registration Board. For examples, the Registration Board may: - establish committees to advise the Registration Board on the carrying out of the powers and duties of the Registration Board - employ persons to assist with the carrying out of its functions - from time to time engage such professional advisers as it may consider necessary or expedient - set and publish the fees payable to it - issue and publish a code of professional conduct or practice for registered IT professionals
9.	No fees payable to Board members	▪ No fees shall be paid to any member of the Registration Board for his or her services as a member
10.	Appointment and duties of Register	▪ The Registration Board shall have power to appoint a person to be Registrar. The Registrar shall: - be responsible for the custody of the register - serve as secretary to the Registration Board
11.	Form of register	▪ The Registrar shall keep the register in which he or she shall enter in respect of every registered IT professionals
12.	Qualifications for registration	▪ The section provides the qualifications for registration. For examples: - the membership of an Institute that the Registration Board may accept as the qualification for registration - the passing of examination, the training and experience that the Registration Board may accept as the qualification for registration - the year(s) of relevant professional experience in Hong Kong as a requirement for registration - the residency requirement for registration
13.	Application for registration	▪ The Registration Board shall have power to set the procedures of registration
14.	Acceptance or rejection of registration	▪ This section provides the power to the Registration Board that it may accept or reject an application for registration or renewal of registration
15.	Expiry of registration and renewal	▪ The expiry of registration and renewal of registration
16.	Registration committee	▪ The Registration Board shall have power to appoint a registration committee to examine the qualifications of applicants
17.	Certificate of registration	▪ The Registrar may issue to the registered IT professionals a certificate of registration or a certificate of renewal of registration
18.	Notice to the Board on leaving Hong	▪ A registered IT professional shall notify the Registration Board if he or she is likely to be absent from Hong Kong for a continuous

	Kong	period of more than 6 months
19.	Removal of name from the register	▪ The Registrar shall have power to remove the name of a registered IT professional from the register. The Registrar shall remove a name from the register if he or she receives an order of the Court of Appeal or an inquiry committee directing that the name be removed from the register. The Registrar shall also remove a name from the register if the registered IT professional has: - died - applied to discontinue his or her registration - in the opinion of the Registration Board, ceased to be ordinarily resident in Hong Kong - failed to renew his registration - ceased to hold a qualification by virtue of which he or she was registered - failed to notify a change of particulars required by the Registration Board
20.	Disciplinary offences	▪ This section provides the disciplinary proceedings for the Registration Board to deal with a registered IT professional who commits a disciplinary offence. For examples, a registered IT professional commits a disciplinary offence if he or she: - commits misconduct or neglect in any professional respect - has been convicted of an offence under this Bill - has obtained registration under this Bill by fraud or misrepresentation - was not at the time of his or her registration under this Bill entitled to be registered - without reasonable excuse, fails to attend before an inquiry committee when summoned either as a witness or as a person in respect of whom the inquiry committee is meeting - has been convicted in Hong Kong or elsewhere of any offence which may bring the profession into disrepute and sentenced to imprisonment, whether suspended or not
21.	Inquiry committee and rules of conduct	▪ The Registration Board may refer any complaint concerning a disciplinary offence to an inquiry committee for decision and make rules providing for the conduct of its inquiries by an inquiry committee and for other matters relating to the investigation of an alleged disciplinary offence
22.	Legal adviser	▪ The Registration Board may appoint a legal practitioner to advise an inquiry committee and a review committee on any points of law and procedure that arise before, during or after the inquiry
23.	Disciplinary order of inquiry committee	▪ The inquiry committee shall have power to order the Registrar to remove the name of the registered IT professional from the register.
24.	Powers in regard to obtaining of evidence and conduct at inquiry	▪ An inquiry committee shall have power to hear, receive and examine evidence on oath; to summon any person to attend the inquiry; and shall have powers in regard to obtaining of evidence and conduct at inquiry
25.	Review of disciplinary orders	▪ The Registration Board shall have power to appoint members to sit with the Chairman as a review committee to review the decision of the inquiry committee
26.	Service of orders of inquiry committee	▪ This section provides the service of orders of the inquiry committee. For example, the Registrar shall serve a copy of any order made by the inquiry committee, together with a copy of the inquiry committee's reasons, upon the registered IT professional who was the subject of the complaint, either personally or by registered post addressed to his or her registered address immediately when the Registrar receives the order from the inquiry committee
27.	Publication of disciplinary orders	▪ This section provides that the Registration Board shall publish a copy of the order in at least one Chinese and one English language newspaper circulating daily in Hong Kong
28.	Appeal to Court of Appeal	▪ Any person who is aggrieved by any decision or order made in respect of him or her may appeal to the Court of Appeal. The Court of Appeal may affirm, reverse or vary the decision appealed against
29.	Use of title	▪ This section provides the use of title of a registered IT professional
30.	Offences and penalties	▪ Any person who commits an offence of this Bill is liable to a fine and to imprisonment
31.	Certificate as evidence	▪ A certificate issued to the registered IT professional is an evidence of facts

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