iDA
SINGAPORE

Annex B

March 2011

FACT SHEET
ACHIEVEMENTS OF THE FIRST INFOCOMM MANPOWER DEVELOPMENT ROADMAP

Background

In 2005 IDA launched its first Infocomm Manpower Roadmap to boost Singapore's infocomm landscape. A joint effort between the government and industry, this five-year Roadmap aimed to develop an innovative, entrepreneurial, globally competitive and infocomm-savvy workforce to meet the demands of a vibrant infocomm industry which will in turn fuel the growth of other economic activities.

Programme Description and Achievements

The first infocomm manpower development roadmap focused on four key strategies with corresponding programmes to address the challenges of talent attraction in the infocomm industry.

(A)   Strategy One: Talent Seeding in Schools

A.1   Infocomm Clubs

A MOE-endorsed Co-Curricular Activity (CCA), Infocomm Clubs aim to cultivate interest among infocomm students aged between nine to 18 years through experiential learning. Offered as a CCA in Primary, Secondary and Junior College, Infocomm Club students have been exposed to structured infocomm training where lessons incorporated lectures, hands-on activities and project work to allow students to develop and apply infocomm skills in schools.

Achievements

i.   268 Infocomm Clubs have been set up since 2005;
ii.   It has 15,000 members and has reached out to over 160,000 students via the infocomm enrichment classes organised by Infocomm Clubs; and
iii.   75% of clubs members have developed an interest in infocomm while 80% expressed interest to pursue infocomm studies at the polytechnic or university level. It was also interesting to note that 25% of Integrated Infocomm Scholars were former Infocomm Club members.

A.2   National Infocomm Competition

To further excite students about infocomm, a series of infocomm competitions were organised under the banner of the National Infocomm Competition (NIC), where young infocomm talent from secondary schools, junior colleges, polytechnics/ITEs hone their infocomm skills competing in the various challenges e.g. Splash Awards, Imagine Cup, National Software Competition, i.code, NetRiders etc and gain recognition for their achievements at the national level. All these initiatives raised exposure and helped to create buzz around infocomm amongst the youth in schools.

Achievements

i.   Since 2006, over 10,000 students have participated in NIC. Through the NIC, participants learnt important infocomm skills such games, software/application development and flash animation. Networking skills as well as soft skills like creativity, presentation, teamwork and entrepreneurship were also imparted during the event; and
ii. In challenges like JavaJive and Imagine Cup, the winners gained invaluable experience and exposure in competing at the regional and international level respectively.

(B)   Strategy Two: Talent Attraction to Infocomm

B.1   National Infocomm Scholarship (NIS)

The NIS programme was launched in 2004 to attract and develop industry leaders and to groom the next-generation of infocomm professionals. Jointly offered by IDA and 30 industry partners, NIS scholars have the unique opportunity to be nurtured by leading MNCs, local companies and government agencies during and after their studies and will serve their bond with them.

Achievements:

i.   Awarded 208 scholarships from 2004 to 2010;
ii.   Developed high calibre scholars – of the 86 scholars who have graduated, almost 50% attained first class honours;
iii. Of the 44 scholars who have completed their bond, 70% remained in employment with their sponsoring organisation. This is testament to the good training, nurturing and career path that our NIS partners have been able to offer our infocomm bright students; and
iv.   Collaborated with 30 industry partners to nurture top talents.

B.2   Integrated Infocomm Scholarship (IIS)

The IIS programme was introduced in 2009 to support outstanding 'O' level students for polytechnic studies and infocomm related courses, with a requirement for scholars to pursue infocomm studies at university thereafter.

Achievements:

Awarded 52 scholarships from 2009-2010.

(C)   Strategy Three: Talent Development in Institutions

C.1   Differentiated Infocomm Programme at Institutes of Higher Learning

The objective of this programme is to bring about high calibre infocomm education at tertiary levels, preparing infocomm graduates to be industry-ready upon graduation.

Achievements at University Level

    i.   New degree programmes introduced 2009-2010:
- NUS – Bachelor of Engineering (Computer Engineering);
- NTU – Bachelor of Engineering (Computer Engineering) and Bachelor of Business (IT);

    ii.   Curricula revamp implemented by NUS (School of Computing) and NTU (School of Computer Engineering); and

    iii.   7 new twinning / fast track masters programmes [1] with renowned overseas universities introduced.

Achievement at Polytechnic Level

New diploma courses (e.g., NYP's Diploma in Digital Visual Effects, Diploma in Infocomm Security and Diploma in Financial Informatics and TP's Diploma in Digital Forensics) have been introduced to better meet industry's needs.

C.2   Enhanced Learning in Infocomm Technology (ELITe)

ELITe is a talent development programme launched in 2008 to provide infocomm undergraduates opportunities to acquire industry exposure and skills development through industry attachments, mentorship, projects and courses/ certifications.

Achievements

    i.   Groomed 260 industry-ready graduates through mentorship and industry attachments; and

    ii.   Collaborated with 42 industry partners to identify talents for their organisations. Partners found the programme useful as a source to groom and recruit talent.

(D)   Strategy Four: Talent Upgrading in Industry

D.1   Critical Infocomm Technology Resource Programme (CITREP)

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[1] SMU-CMU Fast Track Masters in Information Systems (IS), NUS-CMU Fast Track Masters in Entertainment Technology, NUS-Brown in Computer Science & Computational Biology, NUS-Cambridge in IS & Management, NTU-Georgia Technology in CS/CEng and EEE.

CITREP has been in place since 1996 to encourage upgrading in critical and emerging infocomm skills. This was to ensure that professionals had the right skills and capabilities to meet Singapore's infocomm manpower needs.

CITREP is also continuously reviewed in response to ever changing industry needs. In January 2009, Enhanced CITREP was introduced to ensure that companies and professionals were incentivised to upgrade their skills and to embrace capability building during the economic downturn. Funding for course fees were increased to 80 per cent, capped at $3,000, while funding for exam fees increased to 80 per cent, and capped at $500.

In addition, The "Absentee Payroll" was introduced to defray the opportunity cost of organisations which send their employees for training during working hours. Such organisations enjoyed the Absentee Payroll support at $50 per day.

Achievements

i.   Approximately, 42,000 professionals have benefited from CITREP since 2005;
ii.   Enhanced CITREP saw a surge in the total number of trainees; and
iii. 60% of the participants were employer-sponsored, thus indicating that employers saw value in tapping onto Enhanced CITREP to upgrade the capabilities of their staff during the downturn. More than 90% of employers opined that:
- Their staff who had undergone the training were able to apply the learning to their specific work requirements;
- The knowledge and competencies gained were applicable to their work; and
- Trainees were able to achieve a higher level of performance.

D.2   National Infocomm Competency Framework (NICF)

Jointly developed by IDA, the Singapore Workforce Development Agency (WDA) and the industry in 2008, the NICF serves as a national infocomm competency roadmap for all infocomm professionals, their employers and training providers of infocomm related courses. The framework articulates the competency requirements of key infocomm professionals, allowing all stakeholders to use the NICF to determine the type of skills and competencies required for various infocomm jobs and to develop training strategies for professionals to acquire these skills through accredited training providers.

The third version of the NICF was launched in April 2010 with 250 job roles and over
550 competency standards. Moving forward, the NICF content will also be updated to cover new and emerging areas such as cloud computing, business analytics, green computing, next generation networking and service engineering.

Achievements
i. Over 450 courses mapped to NICF were endorsed under CITREP for professional training and certification;
ii. IDA and WDA have jointly established four Continual Education Training Centres (CET) to develop and launch NICF accredited courses. Over 4,500 professionals have been trained through these Centres; and
iii. Over 70 organisations have subscribed as corporate members of NICF portal (www.nicf.sg) to use NICF for course ware development, skills gap analysis and developing training roadmap.

D.3   Infocomm Leadership and Development Programme (iLEAD)

In 2009, IDA launched a pilot programme, iLEAD, to build a pipeline of infocomm experts in high-end, strategic growth areas. Such capability building is being done via the local and overseas work attachments and specialised professional courses.

Achievements
To date, a total of 30 professionals from over 10 companies have been supported.

FOR MORE INFORMATION
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