

April 2011

FACT SHEET NATIONAL INFOCOMM COMPETITION

The National Infocomm Competition (NIC) is a year-long infocomm competition held annually that allows students to hone their skills and showcase their talent in infocomm. The NIC is a key part of IDA's infocomm talent seeding and attraction effort to inculcate interest in infocomm among students and nurture our talent at an early age.

Into its sixth year in 2011, students from secondary schools, junior colleges, Polytechnics and ITE will compete over 15 challenges. As with previous NICs, the students will compete in three circuits: (a) Secondary School, (b) Junior College (JC) and (c) Polytechnic / ITE. Points will be awarded to the top winners in each challenge. The school with the highest accumulated points will be the circuit champion. The NIC 2011 challenges are:

| Challenge | Circuit | Organiser | Date |
|---|-------------------|--|-------------|
| 14 th National Olympiad in Informatics | Sec, JC | National University of Singapore | 12 Mar 11 |
| Innovate IT'11 | JC, Poly/ITE | Singapore Management University | 23 Apr 11 |
| Imagine Cup 2011: Software Design | Poly/ITE | Nanyang Technological University | 10 May 11 |
| Network and Security Investigation | Sec | Republic Polytechnic | 22 Jun 11 |
| [i.code] | Sec | Nanyang Polytechnic | 24 Jun 11 |
| X-Site | Sec, JC, Poly/ITE | Singapore Science Centre | 30 Jul 11 |
| code::XtremeApps:: 2011 | Poly/ITE | Information Technology Standards Committee | 1 Aug 11 |
| Mobile Animation Challenge | Sec | Institute of Technical Education | 26 Aug 11 |
| Splash Awards 2011 | Sec, JC, Poly/ITE | Singapore Computer Society | 29 Aug 11 |
| 27 th National Software Competition | Sec | Singapore Polytechnic | 3 Sep 11 |
| Singapore Games Creation Competition | Sec | Nanyang Polytechnic | 9 Sep 11 |
| Digital Media & Entertainment Challenge | Sec | Temasek Polytechnic | 21 Sep 11 |
| Netriders 2011 | Poly/ITE | Institute of Technical Education | 22 Sept 11 |

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|-------------------------------------|---------|-----------------------|-----------|
| National StrI TwiSe® Challenge 2011 | Sec | Ngee Ann Polytechnic | 12 Nov 11 |
| Schools Digital Media Awards | Sec, JC | Ministry of Education | 18 Nov 11 |

The winners of the National Olympiad in Informatics and Imagine Cup 2011: Software Design, will represent Singapore in July 2011, at the 23rd IOI in Pattaya City, Thailand, and the Imagine Cup 2011 at New York City, USA, respectively.

The NIC is brought to you by IDA, with the support of the Ministry of Education (MOE), and is organised by Nanyang Technological University, National University of Singapore, Singapore Management University, Ngee Ann Polytechnic, Nanyang Polytechnic, Republic Polytechnic, Singapore Polytechnic, Temasek Polytechnic, Institute of Technical Education, Information Technology Standards Committee, Singapore Computer Society and Science Centre Singapore. The industry partners include Adobe, Microsoft, Cisco Systems and Apple.

The NIC is an initiative to generate curiosity, interest and passion amongst students. This Roadmap is one of the foundational pillars of the iN2015 masterplan to drive Singapore's efforts to develop an infocomm-savvy workforce and globally competitive infocomm manpower to drive national economic competitiveness.

For more information, please visit infocommtalent.sg/nic and www.ida.gov.sg.

FOR MORE INFORMATION

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Winners of the National Infocomm Competition 2010

In addition to infocomm-related prizes, cash and a trophy, the winners of each circuit will be provided a one-week knowledge acquisition trip to Silicon Valley, USA.

Secondary School Circuit

- | | | |
|-----------------|---|--------------------------|
| 1 st | - | Hwa Chong Institution |
| 2 nd | - | Raffles Institution |
| 3 rd | - | Crescent Girls' School |
| 4 th | - | Nan Hua High School |
| 5 th | - | Junyuan Secondary School |

JC Circuit

- | | | |
|-----------------|---|-------------------------|
| 1 st | - | Hwa Chong Institution |
| 2 nd | - | Raffles Institution |
| 3 rd | - | National Junior College |

Poly/ITE Circuit

- | | | |
|-----------------|---|--|
| 1 st | - | Nanyang Polytechnic - School of Information Technology |
| 2 nd | - | Temasek Polytechnic - School of Informatics & IT |
| 3 rd | - | Republic Polytechnic - School of Information & Communications Technology |

Infocomm-related prizes are sponsored by M1, Nikon, Adobe and Microsoft.

Examples of Winning Entries in the National Infocomm Competition 2010

[i.code] 2010

Winning Team – Homework (Hwa Chong Institution)

The winning team “Homework”, from Hwa Chong Institution, had created an iPhone application to aid the elderly. The application included tools to assist the elderly in tasks such as finding directions and amenities, speed dials and even tools to prevent dementia. The team’s elderly friendly user interface also bagged them the “Best UI/Design” award in the competition. The team has plan to further enhance their application, and they look forward to deploying their application in the near future

Imagine Cup Singapore 2010

Winning Team – Team MamaBear (Temasek Polytechnic)

For The Imagine Cup Singapore 2010 Competition, teams were assigned to develop software solution set to the theme of “*Imagine a world where technology helps solve the toughest problems.*” Students had to try and propose a solution to solve one or more of the Millennium Development Goals.

The winning team for this competition was Team MamaBear from Temasek Polytechnic, comprising of final year students, Satrugan Kumar Singh, Lim Li Ping Debbie, Lim Kang Long, and Kwan Wei Hao.

Their solution, “The Teachers’ ThinkTank” was designed to cater towards achieving universal primary education. “The Teachers’ ThinkTank” is a network support system for teachers around the world. It uses SMS technology to provide a communication channel on the internet, in particular for teachers in marginalised communities. Through “The Teachers’ ThinkTank”, teachers can share questions pertaining to language learning worldwide via SMS and request for teaching resources.

After winning the Imagine Cup Singapore 2010, Team MamaBear went on to represent Singapore in the worldwide finals held in Poland. They emerged as the top 6 teams for the “Software Design” category during the Worldwide Finals in Poland, Warsaw.

Synopsis of Challenges in the National Infocomm Competition 2011

14th National Olympiad in Informatics

Theme: Programming

The National Olympiad in Informatics (NOI) is an annual competition organised by the School of Computing (SoC), National University of Singapore, since 1998. It is modeled after the International Olympiad in Informatics. NOI emphasises creativity in problem solving on the one hand and programming skill and expertise on the other.

NOI consists of a four-and-a-half-hour session in which each contestant is required to individually solve and program a solution to each of the programming tasks. Top winners at the NOI undergo training by NUS to participate in IOI. This year, the 23rd IOI will be held in Pattaya City, Thailand, on 22-29 July 2011.

In January 1997, Mr Lee Yock Suan, then Minister for Education, announced that any student that wins a medal in the IOI will automatically be offered direct entry into science, computing and engineering courses in Singapore universities.

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InnovateIT'11

Theme: Business IT Presentation

InnovateIT'11 is a business IT competition organised by Singapore Management University, School of Information Systems. Running since 2006, it aims to promote

the use of IT to improve business value in a fun and engaging manner. The motivation is to inspire students to come up with innovative ideas and in the process build interest in IT. The theme for this year is “Propelling social development and well being with IT”.

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Imagine Cup 2011: Software Design

Theme: Software Design

The Imagine Cup 2011: Software Design competition challenges students to explore their own creativity using technology to solve what they consider to be the toughest problems facing society. Using Microsoft tools and technology, competitors can unleash their ideas, curiosities, and talents towards creating usable software applications. Initial round consists of a proposal document and following rounds require teams to present working prototypes of their solutions. The winner goes on to compete at the Worldwide Finals in New York City, USA from 8-13 July 11.

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Network and Security Investigation

Theme: Infocomm Security

The Network and Security Investigation (NSI) is an IT security challenge in which students from secondary and international schools in Singapore pit their wits and guile to investigate IT crime and secure wireless systems.

The NSI comprises of two challenges. For the first challenge, “Digital Forensics Investigation”, competitors are placed in a scenario where a computer crime has been committed. They are then required to apply forensically sound techniques to secure the crime scene to ensure that no evidence is disturbed or contaminated. They are also required to gather digital evidence from the hard disk drives.

The second challenge, “Wireless Defence”, requires competitors to weed out rogue Access Points (APs). Competitors are judged based on the range of their antenna and the speed which they locate the rogue APs.

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[i.code]

Theme: Application Development (for smart devices)

[i.code] provides an exciting platform for secondary school students to develop applications on connected smart devices such as the iPhone, iPod Touch or iPad. Students will learn human interface design principles and application development techniques through training workshops. Training workshops will be conducted in the last week of May to prepare students for the competition.

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X-Site

Theme: Digital Media

X-site is an educational design competition. In the preliminary round, students make use of their creativity and imagination to conceptualise and create a digital poster. In the final round, teams participate in an “Amazing Race” type of competition, with missions such as debugging or answering questions related to the information. The aim of this competition is to offer students the opportunity to showcase their latent in infocomm and cultivate an interest in infocomm among students.

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code::XtremeApps::2011

Theme: Programming

code::XtremeApps::2011 aims to promote greater awareness on the use and value of standards in programming, and to cultivate programming talent in Singapore. It consists of an Open Category, to develop and test applications built over a 24-hour period, and a Junior Category, with programs to ignite interest in programming amongst children aged 12 years and below.

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Mobile Animation Challenge

Theme: Digital Media

The Mobile Animation Challenge 2011 challenges participants to assemble original and relevant media contests to create a promotion clip that runs on the mobile platform (e.g. Handphones and Tablets). The theme for this year is “Green Sustainability”. Participants have to create a video clip that highlights “green” and sustainable practices that can make our environment more livable.

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Splash Awards 2011

Theme: Mobile Application Development

The Splash Awards 2011 is an annual national IT competition for students, organised by the Singapore Computer Society (SCS) Student Chapter. This year, with the support of the National Heritage Board, and in line with the development of the mobile landscape, the theme of the competition is “Mobile Heritage”.

The Splash Awards 2011 competition will focus on the development of mobile applications (mainly iPhone, iPad and Android applications) based on two broad categories. The first category comprises of mobile applications that serve as learning/guiding aids for students based on NHB’s heritage trails, national museums and national monuments. The second category looks how mobile applications can contribute towards making lessons about Singapore’s history more fun and enjoyable based on current school curriculum.

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27th National Software Competition

Theme: Programming

The 27th National Software Competition – IT Quiz, Algorithm Team Event and Logo Challenge. These aim to promote an IT culture in schools, challenge student’s skills in solving problems on a computer and to test students’ knowledge on IT.

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Singapore Games Creation Competition

Theme: Game Design

The Singapore Games Creation competition aims to provide school students the opportunity to learn game creation through workshops that are conducted by experienced staff from Nanyang Polytechnic. Opportunities are then given to these students to share and showcase their games. Participants of the competition are expected to give a live demonstration and presentation of their games to a panel of industry professionals who will evaluate the games based on the criteria of originality, aesthetic and design, graphical user interface and game play.

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Digital Media & Entertainment Challenge

Theme: Game Design

The Digital Media & Entertainment Challenge allows student participants to exercise their creative talents to develop a 3D game using the Unity 3D game engine/game development tool.

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Netriders 2011

Theme: Networking Skills

Netriders Singapore is a competition to provide exposure to Cisco Networking Academy students and to increase interactions among their peers. It is also an opportunity for students to showcase their technical skills and knowledge in the networking field and serves as a platform for trainers and instructors to gauge their student's competencies level.

The competition comprises two parts, a 100 question online exam and a skills exam where teams have to solve scenario based questions using the Packet Tracer network simulation tool.

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National StrITwise Challenge 2011

Theme: Digital Media

StrITwise is a broad-based infocomm and interactive digital media competition, with the objective of developing awareness and interest in IT amongst the youth in a fun and engaging way. StrITwise provides a conducive platform for our youth to acquire basic infocomm and digital media skills through a series of training workshops. The students are then encouraged to apply their acquired skills to compete in three components of the competition.

- **StrITcombat (RoboCode 2.0)** (simple programming to create a virtual robot to battle online)
- **StrITdesign (RoboDesign)** (design of a virtual robot)
- **StrITsmart** (general activities on common infocomm & digital media knowledge)

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Schools Digital Media Awards

Theme: Digital Media

The School Digital Media (SDMA) 2012 comprises of two categories, video and animation. It strives to enhance the participants' understanding of the use of various

media to create, engage and innovate. For example, students interested to produce a video category can choose between producing an advertisement, a documentary or a drama.

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