CALENDAR OF EVENTS
June to July 2005

13 - 17 June 2005

Infocomm Media Business Exchange 2005 (imbX 2005), incorporating CommunicAsia 2005, BroadcastAsia 2005, Enterprise IT 2005 and iX2005

Venue: Singapore Expo (CommunicAsia exhibition)
Raffles City Convention Centre (Conferences)
Time: 10:30am - 6:00pm daily
(CommunicAsia exhibition)
9:00am - 5:30pm (Conferences)

imbX is Asia's largest infocomm & media business platform that brings together business leaders, industry players and thought leaders from the global Infocomm arena. Jointly hosted by IDA & MDA, imbX provides an avenue for showcasing the latest Infocomm innovations, exploring new markets, discussion forums and networking sessions. The inaugural imbX Ministerial Forum on ICT, Asia-Pacific Telecommunity (APT) and Digital Exchange Day will be held alongside imbX.

URL: www.visit-imbx.com

26 June - 1 July 2005

17th Annual Forum of Incident Response and Security Teams (FIRST) Computer Security Conference

Venue: Shangri-la Hotel

The annual FIRST Conference is a unique event that focuses on the field of computer security incident handling and response. In recognition of the global spread of computer networks and the common problems faced by computer owners, service providers, networking communities and companies, the conference is held in a different part of the world each year. The presentations are international in scope and include the latest in incident response and prevention, vulnerability analysis, and related aspects of computer security. Additionally, this event serves as the foundation for the improvement of computer security worldwide via the sharing of viewpoints, ideas, and information.

URL: www.first.org/conference

iDA SINGAPORE

The Infocomm Development Authority of Singapore (IDA) is committed to growing Singapore into a dynamic global infocomm hub. IDA uses an integrated approach to developing info-communications in Singapore. This involves nurturing a competitive telecoms market as well as a conducive business environment with programmes and schemes for both local and international companies.

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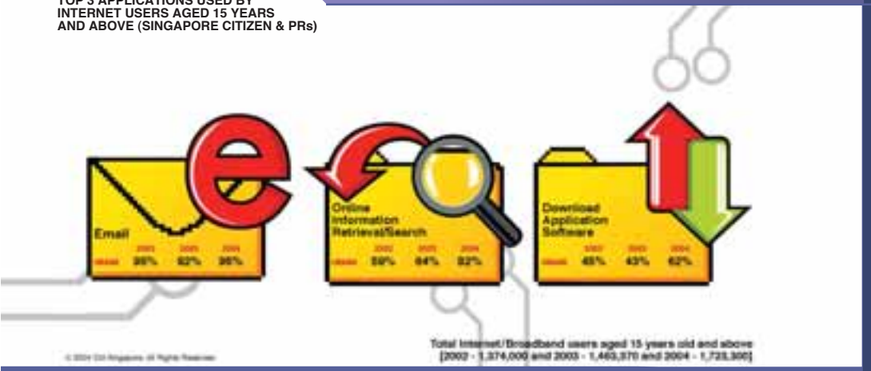
iDA SINGAPORE

TOP 3 APPLICATIONS USED BY INTERNET USERS AGED 15 YEARS AND ABOVE (SINGAPORE CITIZEN & PRs)



MORE SINGAPOREANS GOING FOR MORE SOPHISTICATED ONLINE SERVICES

MORE SINGAPOREANS ARE going online. And they are engaging in more advanced online services and applications.

Findings from IDA's recent Annual Survey on Infocomm Usage in Households 2004 revealed that Singaporeans going online increased by 6% points to 57% in 2004. In addition, they are getting involved in more sophisticated applications beyond email and Web surfing. These include:

- Searching for online information (up from 64% to 82%)
- Downloading applications (up from 43% to 62%)
- Using online e-government transactions (up from 42% to 56%)
- E-banking (up from 33% to 40%)
- Online shopping (up from 20% to 30%)
- Downloading and uploading of digital photos (up from 34% to 48%)

For online shopping, the average number of online purchases increased from 2.3 in 2003 to 2.8 in 2004. Internet users also spent more through online purchases in 2004. The average online dollar-spend by online shoppers has increased from S$336 in 2003 to S$539 in 2004. Ticketing (39%), Books/Magazines (31%) and Travel items (30%) were the top 3 products and services bought online in 2004.

Started since 1990 by IDA, the annual survey aims to gauge the level and extent of infocomm usage by households and individuals. Data for the most recent survey was done via face-to-face interviews of 2,000 households and 2,000 individuals.

Singapore wave
INFOCOMM NEWS FROM IDA

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STEERING COMMITTEE FORMED TO SPEARHEAD iN2015, SINGAPORE'S NEXT 10-YEAR IT MASTERPLAN

SINGAPORE'S 10-YEAR ICT masterplan, Intelligent Nation 2015 (iN2015) started shifting into the high gears with the formation of a new high-level steering committee by IDA.

Led by Mr Lam Chuan Leong, Chairman, IDA and assisted by Mr Chan Yeng Kit, CEO, IDA, the steering committee comprises nine key industry and public sector representatives. This committee will lead the development of iN2015 to grow the infocomm sector, use infocomm technologies to enhance the competitiveness of other key economic sectors and to build a well-connected society. The iN2015 masterplan is scheduled to be launched in 2006.

Steering committee members will chair sub-committees that will identify areas of opportunity in key economic sectors, where infocomm technologies can create new value propositions and innovative services to enhance productivity and competitiveness. These sectors include Education & Learning, Financial Services, Healthcare & Biomedical Sciences, Logistics & High-Tech Manufacturing, Digital Media & Entertainment, and Tourism, Hospitality & Retail.

Mr Lam Chuan Leong, Chairman, iN2015 Steering Committee said: "Singapore is in a competitive race with other countries. It is no longer a matter of moving first, but a matter of moving faster - ahead of others to stay relevant and competitive. It is all the more important that we take a look at the role that infocomm can play to help Singapore stay highly competitive, to look ahead into the next 10 years, and implement strategic initiatives that will keep Singapore in the fore."

NATIONAL INFOCOMM COMPETENCY FRAMEWORK

To ensure that infocomm professionals develop skills and expertise that are valuable and in tandem with iN2015, IDA also announced that a National Infocomm Competency Framework will be jointly developed by IDA and the Singapore Workforce Development Agency (WDA) in collaboration with the Singapore Computer Society (SCS).

Expected to be a valuable resource to professionals, employers, training providers, certification bodies and recruitment agencies, the framework will map the landscape of infocomm occupations, the competencies required to perform the various occupations and suggest training and certifications that will enable a professional to acquire these competencies and to move from one stage of his career to another.

An Infocomm Competency Council, chaired by Mr Lee Kwok Cheong, president of SCS, has been formed to guide the development of the framework.

Share your lifestyle wish-list in 2015. Imagine how infocomm technologies can help you live, work, learn and play. Check out www.in2015.sg

Soon, you will be able to express your lifestyle dreams and desires in a nationwide competition. As part of IDA's plans to engage everyone who has a stake in Singapore to come forth with their ideas for iN2015, the competition seeks to get the public to share their views on how infocomm technologies can further help them live, work, learn and play in the year 2015.

Called the "Express IT! iN2015" competition, it is organised by IDA, Singapore Computer Society (SCS), Singapore infocomm Technology Federation (SiTF), and supported by Ministry of Education (MOE) and Digital Life. The competition is open to everyone living in Singapore. Contestants can express their visions in various formats, including written essays, poems, drawings or illustrations, digital photographs, digital video or multimedia creations, and even songs or audio narrations. The closing date for the submission of entries is Friday, 8 July 2005.

GOVERNMENT TO CALL FOR A RECORD S$2.2 BILLION IT TENDERS THIS YEAR

THE LOCAL INFOCOMM sector is getting a huge boost this year with the Singapore government set to call for tenders worth a total S$2.2 billion in financial year 2005 (April 2005 to March 2006). This is the largest ever amount expected to be called in a year, with the bulk of the amount going to a S$1.5 billion tender to develop a standard desktop and network operating environment.

Mr Chan Yeng Kit, CEO, Infocomm Development Authority of Singapore (IDA) said: "A Standard ICT Operating Environment (SOE) will greatly enhance the operating efficiency in government. It will reduce the time needed to deploy new ICT services in government, improve our ability to respond to ICT security threats, and most importantly, make it easier to operate and maintain our desktops and networks." Mr Chan added that the SOE will be implemented in phases from 2005 to 2009 and that an open tender for the management and operation of the SOE will be called in 2005.

Ms Wu Choy Peng, Deputy Chief Executive, IDA and Government Chief Information Officer said that the SOE is expected to bring about at least 30% savings in ICT costs when fully deployed. She added that the SOE will cover desktop hardware and applications as well as network services but not servers, where individual applications often need to run on specific hardware.

Currently, ICT services and products are purchased on individual purchases and tenders as and when required by the various government agencies. This has resulted in diverse hardware and software products. The SOE, Ms Wu added, is thus targeted at standardising and consolidating the ICT requirements across the government agencies to achieve greater economies of scale. With SOE, it also heralds a move by the government away from the piecemeal procurement method to a utility based model where ICT services are on a "per user per month basis," she added.

The remainder of the S$700 million worth of tenders will include tenders for a Cyber-Watch Centre (CWC), a centrally administered desktop firewall and a central secure remote access gateway for the government. The various agencies' pre-procurement plan can be found at http://www.egov.gov.sg/Industry+Briefing+2005.htm

STRONG DEMAND, SO WIRELESS BROADBAND GOES UNDER THE HAMMER

AS A RESULT of the strong interest in bids for the wireless broadband lots under the 2.3 GHz and 2.5 GHZ spectrum, IDA announced last month that the 25 lots of bandwidth will now be allocated based on an auction process.

At the close of the application for the spectrum lots last month, 38 Initial Offers were received for the 25 lots from seven different applicants. As the demand exceeds the supply available, IDA has decided that the lots will go under the hammer. An open and market-driven auction method is adopted as it is the most transparent, fair and efficient way to allocate spectrum to those who value it most.

Mr Leong Keng Thai, IDA's Deputy Chief Executive and Director-General (Telecom) said: "IDA is pleased with the strong interest shown by the industry for spectrum to deliver wireless broadband access services to end-users. With the deployment of wireless broadband networks, we are confident that fresh competition will be injected into the local broadband market. Businesses and consumers can look forward to enjoying wider broadband offerings at more competitive prices."

All seven applicants have been qualified and have participated in the auction held on 16 May 2005. Results of the auction will be announced in the next issue of Wave.

The seven applicants are:

- Inter-touch Holdings (Singapore) Pte Ltd
- MobileOne Ltd
- Pacific Internet Corporation Pte Ltd
- Qala Singapore Pte Ltd
- Singapore Telecom Mobile Pte Ltd
- StarHub Ltd
- Zone Telecom Pte Ltd

TEMASEK POLYTECHNIC BAGS 11 AWARDS AT NATIONAL WIRELESS COMPETITION

THE SPLASH AWARDS Wireless Jam 2005 ended with a bang for Temasek Polytechnic. It swept the stage with 11 awards while ITE College (Central & West) bagged five.

The Splash Awards is a national wireless competition organised by the Singapore Computer Society and jointly supported by IDA and the Singapore infocomm Technology Federation. This year's event was the most successful ever, with support from15 industry sponsors, over 600 participants in 80 teams contributing over 370 entries. The participants came from various schools and institutes of higher education in Singapore.

There were six main award categories, namely Junior Consumer, Junior Enterprise, Institute of Higher Learning (IHL) Consumer, and IHL Enterprise, Open Consumer and Open Enterprise. The Open Category is a new addition to this year's competition to encourage working professionals and corporations to participate. These applications were judged based on criteria such as innovative idea, commercial value, user interface and technical qualities.

Participants were also trained in the latest wireless technologies including Wireless Java J2ME, Microsoft Mobile, Palm OS, Symbian and Wireless LAN.

A Student from Catholic High School demonstrating his mobile software application to the GOH (IDA CEO, Mr Chan Yeng Kit) and the VIPs

SINGAPORE SHIFTS TO OVERDRIVE WITH PHASE 2 OF THE NATIONAL GRID

SINGAPORE PUSHES AHEAD with grid computing with the launch of phase 2 of the National Grid. Announcing the new initiative earlier this month, Mr Lim Hng Kiang, Minister for Trade and Industry said that the second phase will see a further expansion of the existing national grid infrastructure. More importantly, he added, the aim was to expand the use of grid computing from the research community into the industry.

"The National Grid Office will actively engage the private sector to encourage the innovative use of grid technology. We will start by targeting sectors where grid computing offers the most potential, beginning with digital media and manufacturing sectors," said Mr Lim.

These two areas have already seen some active participation between the government agencies and the industry. For example, the Media Development Authority and the National Grid Office have already embarked on joint efforts to help local digital media SMEs make use of grid computing. Under IDA's Digital Exchange initiative, a utility-based remote rendering concept prototype has been successfully implemented. Under this "Virtual Remote Rendering" concept prototype, local and international users are able to submit 3D animation jobs for rendering from remote locations. Moving forward, trials will be conducted using grid technologies to develop new ways of managing a larger pool of shared computing resources for virtual remote rendering.

In the area of construction and manufacturing, IDA has been working with the National University of Singapore, SES Systems Pte Ltd and Sun Microsystems on the Collaborative Engineering Programme (CEP). The programme aims to develop grid-based engineering tools that will facilitate timely sharing of information and knowledge among construction and manufacturing companies.

Mr Lim Hng Kiang, Minister for Trade and Industry, at the Grid Asia exhibition

Phase 1 of the National Grid initiative was started in 2002. Over the last 2 years, there has been significant progress made. The number of computing resources connected to the national grid has doubled from 250 then to over 500 today.

"We expect this number to reach 1,000 within the year," said Mr Lim.

NATIONAL eREGISTRY HUB BEING DEVELOPED FOR EASIER STORAGE OF ELECTRONIC RECORDS

Left to Right: Mr Pek Yew Chai, CEO, SCS; Associate Professor Kwok Kian Woon, Chairman, NAB; Mr Stephen Lim, CEO/MD, SQL View and Mr Wong Heng Chew, MD, Sun Microsystems

PRIVATE INDIVIDUALS, BUSINESSES and government agencies will soon be able to make use of a sophisticated and secure online service to store and manage their electronic data and records. Called the eRegistry Hub, the S$700,000 system is now being built and is expected to be completed by October this year. Earlier this year, the National Archives of Singapore (NAS), SQL View, Singapore Computer Systems (SCS) and Sun Microsystems signed a memorandum of understanding to develop the one-stop data hosting centre.

Each of the four parties brings their own skillsets to the table. NAS offers its domain knowledge in records management, SQL View is the principal software developer, SCS is responsible for the hosting infrastructure and on-site support while Sun's hardware and servers will power the system.

The eRegistry Hub aims to address the record lifecycle needs of both the public and private sectors. It will be designed to address the end-to-end management of records from creation right through to disposal in a seamless manner, taking into account prevailing record management standards and practices. The adoption of the system by public and private organisations will ensure long-term retrievability and accessibility of records. It will also allow for greater corporate governance and accountability, as records will be kept in a centralised, secure and controlled environment using a common methodology.

"IDA is pleased with the collaboration between SQL View, SCS and Sun Microsystems, and the National Archives of Singapore. It is a good demonstration of public-private partnership at work, leveraging on the expertise and experience of Singapore-based ICT companies and Government agencies. The result is a win-win collaboration, bringing about benefits for the infocomm industry, as well as greater efficiency and cost savings for both the private and public sectors," said Mr Chan Yeng Kit, CEO, Infocomm Development Authority of Singapore (IDA).

SINGAPORE-BASED COMPANY'S TECHNOLOGY POWERS WORLD'S FIRST 3G MOBILE RADIO SERVICE

NOW YOU CAN LISTEN to live radio channels on your mobile phone. Singapore-based music-to-mobile technology company Sydus Pte Ltd has developed technology for streaming near CD-quality live music for both standard GPRS-based as well as 3G mobile phones.

In March, UK's Virgin Radio launched the world's first 3G live radio service for mobile phones platform - powered by Sydus Mobile's streaming technology. The entire back-end and front-end systems are powered by Sydus' technology.

Mr Saumil Nanavati, President of Sydus Mobile, said that the Virgin mobile radio service has been doing very well. "Within the first 30 days, we have hit tens of thousands of listeners from all six continents of the world."

Mr Nanavati added that what makes the service great is that it goes beyond the restraint of the home and office and offers near CD-quality stereo music for free. And it's really easy to use. Users only need to download a small programme file into their mobile phone from www. sydusmobile.com, with 2 clicks on the mobile phone, and they are ready to rock-and-roll. While there is no subscription payable, users need to pay for their regular mobile Internet airtime to their local mobile operators.

In addition, live radio means there is no need to store music on the mobile phone, a problem with many mobile music download services which require tons of space in storage-limited mobile phones. Music download services also cost money and can be expensive, added Mr Nanavati.

Sydus was originally founded in San Francisco but it moved over to Singapore last year and is now a locally-based company. "We wanted to move to Asia because this is where it's going to be the biggest market. And we chose Singapore because it's a great technology hub in the centre of Asia, along with solid intellectual property protection laws. Additionally, arms of government of Singapore have provided startups, such as Sydus,

incentive programmes like no other to establish great global enterprise," said Mr Nanavati.

Virgin Radio is the first customer of its kind for Sydus and the company is currently working with many other radio broadcasters to launch similar services.

SINGAPORE TO TRAIN 300 GRID COMPUTING PROFESSIONALS, INCLUDING 60 ELITES

NOW, LOCAL INFOCOMM PROFESSIONALS can receive training in Singapore to become Enterprise Grid Architects responsible for developing and managing advanced enterprise grid computing networks.

Earlier this month, IDA and Oracle launched a new manpower development programme to create a ready pool of workers and professionals to support the burgeoning grid computing industry.

Called the Enterprise-g Manpower Programme, or g-MAP in short, the programme has two main objectives. The first is to develop Singapore's Enterprise Grid manpower capabilities, and the second to support the global industry's need for the elite Enterprise Grid Architect Certification Programme.

About 300 infocomm professionals are expected to be trained under g-MAP over the next three years.

This latest collaboration between the Infocomm Development Authority (IDA) and Oracle is also part of the S$25-million (US$15.2 million) Enterprise-g@Singapore initiative inked by both parties last July.

Joining hands to celebrate the opening of Oracle's office in Singapore. (From Left to Right: Mr Stanley Chew, MD, Oracle Singapore; Mr Chan Yeng Kit, CEO, IDA; and Mr Derek Williams, Executive Vice-President, Oracle Corporation Asia Pacific)

ENTERPRISE GRID COMPUTING ARCHITECTS

At g-MAP's highest level, experienced IT professionals can be certified as Enterprise Grid Computing Architects by the Institute of Systems Sciences (ISS), a pioneering certification standard that endorses these individuals' capabilities to design and manage the creation of enterprise grid computing environments. This certification programme, which targets 60 architects over three years, is based on curriculum contributed by key technology leaders such as Oracle, Sun Microsystems and Red Hat as well as leading infocomm training institution, ISS.

Apart from the elite 60, the other grid-computing trainees will be from the students and IT professionals. At the basic level, students from Singapore's Nanyang Polytechnic will learn more about grid computing in school. More details will be announced later this year.

IT workers can also hone their skills in database administration through the Oracle 10g certification, as well as in Linux and Solaris systems administration certified by Red Hat and Sun Microsystems.

ORACLE LAUNCHES FIRST ASIA-PACIFIC GRID CENTRE OF EXCELLENCE IN SINGAPORE

Oracle also launched the Enterprise-g Center, its first centre of excellence for grid computing in the Asia-Pacific, with support from IDA, Dell and Sun Microsystems. The Enterprise-g Center will be the nerve centre for the various activities under Enterprise-g@Singapore. It will provide the infrastructure and software expertise for consultation, development and testing of new grid designs and proofs-of-concept for the industry in the Asia Pacific region. It will also drive industry pilot projects in enterprise grid and develop a reference architecture.

Mr Chan Yeng Kit, Chief Executive Officer of IDA, said: "The IDA-Oracle Enterprise-g@Singapore collaboration is progressing in tandem with Grid developments in Singapore, where the successful adoption of Grid in the R&D community is now moving into the commercial space. The launch of g-MAP and the Enterprise-g Center will bring the benefits of Grid to the industry. IDA values its partnership with leading technology MNCs, such as Oracle, to spur the adoption, innovation, capability and market development of Grid in Singapore."

SINGAPORE COMPANIES OFFER INNOVATIVE LOGISTICS INFOCOMM SOLUTIONS

SINGAPORE'S POSITION AS THE logistics hub of the region has been bolstered by the innovative infocomm solutions developed by local companies. Two of such solutions are from logistics solution provider Y3 Technologies and Singapore's port operator PSA Corporation.

Y3 TECHNOLOGIES' V-HUB HELPS MNCS DEVELOP POWERFUL SUPPLY CHAINS

Local logistics technology provider Y3 Technologies developed a virtual hub solution called V-Hub which helps global companies to manage their inventory anytime, anywhere, and to collaborate directly with their logistics providers, suppliers and customers through a more efficient and integrated supply chain. Y3 Technologies' Virtual Hub is so successful that it bagged the Merit Award at the Singapore 2004 National Infocomm Awards under the Most Innovative use of Infocomm Technology (Private Sector) category.

One such user of the V-Hub technology is Motorola. A few years ago, Motorola realised that its supply chain was not as efficient as it should be. Warehouses were sitting with idle stock and the company was having problems shipping hot products out fast enough to meet customer demand. Suppliers, 90% of them from Asia, were shipping goods to Motorola's supply chain hubs all over the world. But there was just too many to handle and co-ordination on a global level was tough.

It decided that it needed to integrate its various physical hubs into a single virtual hub, which can be managed as if they were all a single hub. It turned to YCH, a leading Singapore logistics provider and parent company of Y3 Technologies. Making use of Y3's V-Hub solution, Motorola successfully consolidated its various physical hubs into a single virtual one, got suppliers on board the new virtual hub and successfully cut its inventory levels. Motorola was able to get its suppliers to place their goods at YCH's warehouse, but these were owned by the suppliers, thus cutting Motorola's inventory costs. At the same time, Motorola managed to cut its inventory holdings costs from US$80 million to about US$10 million as a result of the new virtual hub.

PORTNET PROVIDES END-TO-END E-SERVICES THE LOGISTICS INDUSTRY

Portnet.com's flagship solution, Portnet is the world's first nationwide, B2B port and shipping e-community, providing integrated services to shipping lines, haulers, freight forwarders, shippers and local government agencies. The system provides for scalability and ensures reliability in information handling. Portnet handles all electronic container data passing through PSA corporation, operator of the world's largest transshipment hub handling a volume of over 18 million containers in Singapore annually. Running on an Internet-based computing environment, Portnet brings convenience to all of its customers' overseas offices; customers are also able to access Portnet directly, without the need to go through their Singapore offices.

TECH TALK: DIGITAL RIGHTS MANAGEMENT

NAPSTER STRUCK FEAR INTO the hearts of the music industry when it was launched several years ago. With Napster, users, often total strangers, could leverage on the ubiquitous Internet to share and swap their digital music, for absolutely no cost. The recording industry froze for a moment, then fought back with debilitating lawsuits that ultimately forced Napster to shut down. But Napster didn't die. Its physical embodiment was resurrected as an online music store for users by buy music. Its soul, however, sparked off an entire revolution of peer-to-peer music and file sharing services that continues to haunt the recording and now the movie industry till present day.

Recognising that they too needed to participate in the new digital way of selling music, recording labels and music producers also started to work with service providers to sell their music online. The most successful so far has been Apple's iTunes Music Store. Others include the new Napster, Microsoft's MSN Music Portal, and many many more. But the nature of digital files is such that they can be easily transferred by one valid purchaser to unlimited recipients of that song. The recording industry clearly needed something that can ensure that the "rights of use" in each and every song sold over the Net can be implemented and enforced. This something is Digital Rights Management (DRM) technology.

THE DEVELOPMENT OF DRM

Previously, Digital Rights Management (DRM) focused on security and encryption as a means of solving the issue of unauthorised copying, i.e. lock the content and limit its distribution to only those who pay. This was the first-generation of DRM, and it represented a substantial narrowing of the real and broader capabilities of DRM. The second-generation DRM systems, through the incorporation of Rights Expression Languages (RELs) provided the means for content providers to specify flexible usage rules that allows a wide variety of business models such as pay-per-use, monthly subscription and even peer to peer superdistrubution model.

To implement flexible, interoperable content distribution schemes, DRM systems need to embrace compliant REL standards. Today, the most prevalent standards in the REL area are MPEG REL, from the Moving Picture Experts Group, which derives from XrML (eXtensible Rights Markup Language) from ContentGuard, Inc.; and OMA DRM from the Open Mobile Alliance, which derives from ODRL (Open Digital Rights Language) from IPR Systems Ltd. Other standards bodies, including OASIS (the XML and SGML standards body) and the Open eBook Forum, are also defining RELs.

With multiple REL standards supported by the industry, it is therefore not surprising that most of today's DRM solutions are still pockets of proprietary implementation often tying the protected content format to fixed device or reader. Apple's rights management technology - Fairplay - is a case in point. iTunes downloaded from Apple's music site are protected by Fairplay technology and can only be decoded and played on affiliated iPod players. The fragmented issue which exists for fixed internet DRM is however better managed in the mobile space. The Open Mobile Alliance (OMA) which is a consortium of nearly 200 companies including the world's leading mobile operators, device and network suppliers, information technology companies and content and service providers have defined an interoperable DRM standard – OMA DRM v2, targeted for mobile devices supported by different device manufacturers.

Ultimately, the future success of any DRM solution depends on several factors. Firstly, there has to be reliable, trusted software. Secondly, laws and other legal requirements have to be established in order to enforce the functioning of DRM solutions. In addition, users must be able to consume the content on any number of devices that they own without any concern in format and DRM technology.

But more importantly, society has to re-tune their mindset – from100% free content to paying for them, once again.