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An Oracle Learning System workshop for teachers held at Hamilton Senior High School in Western Australia.

Online learning embraced by Western Australian schools

The Western Australian Department of Education and Training (WADET) is rolling out an interactive learning system which will connect students across the state and provide a single resource point for information on students as they progress through school.

Called the Learning 360 system from Oracle, it will serve 450 primary schools and 350 secondary schools across an area of 2.5 million square kilometres. Funding for the project was provided from state and federal governments, though a figure cannot be disclosed for confidentiality reasons.

The project has completed its first phase with a roll out to 50 schools. This

followed a trial in 2006 where 17 schools received the system. Apart from connecting the state's schools, the system will provide automated learning by allowing students to access computer-based resources like video clips, images, instant messaging tools and webcams.

The online learning functions allow students from different schools in remote areas to learn from the same lesson. There will be, on average, one computer for every seven students with Windows and Apple based machines.

According to Bevan Doyle, WADET's chief information officer, the online learning system originated from a proposal to the government as a general strategy to

connect the state's government schools. The department had already begun an ICT strategy aimed at online learning in 2001/02 which involved establishing a telecommunications network to 800 state schools. Over three quarters of the schools now have 10Mb/s connections. The state government also funded a notebooks for a teachers program which allows teachers to have cheap access to notebook computers, to help them increase their skills, play with the technology and become familiar with it.

"We then put a proposition to government about the future of technology and learning," Doyle said.

The department looked at what was

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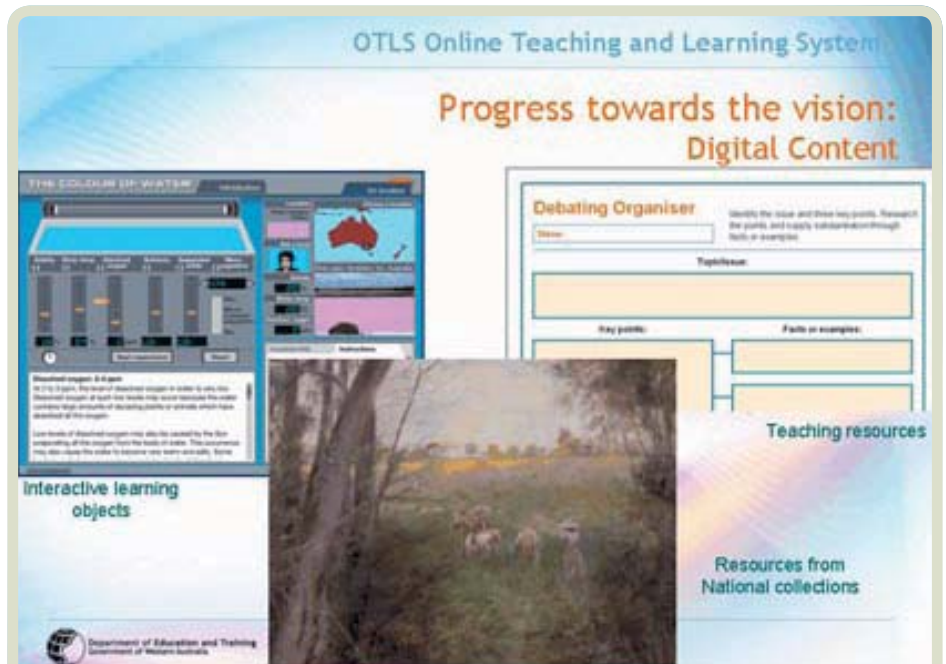
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A screenshot from the Western Australian Department of Education and Training's online learning system which will be used by the state's government schools.

possible with current products in the online learning market and developed a tender for a customised system for school students. "There are a lot of learning systems for adults and corporate training but we didn't see a system that was appropriate for the age range from kindergarten to year 12," Doyle said.

Bids were considered from about five companies which cannot be disclosed due to the state's procurement laws. Oracle won the main tender to custom build the system based on the company's existing software. Sun Microsystems provided security and access management, Peoplesoft (now part of Oracle), provided the employee provisioning and payroll system and Dell was chosen for server hardware.

The department then invited schools to submit expressions of interest. Schools were assessed for their technical readiness – the maturity of their information systems and infrastructure, how proficient they were with their schools information system, the computer literacy of their staff, whether teachers had been using their web-mail and calendar requirements and how their networks, LANs, were established. Schools that did receive the system in the trial responded enthusiastically and then requested that the system be extended.

According to Doyle, the system enhances learning by meeting the changing needs of students. "So we have to engage them in a way that is more relevant than the sit down and shut up way of studying.

"Kids are now moving into the Web

2.0 world of social networking. They have moved well past technology such as email...one thing that sticks in my mind is when we were asking a kid why he didn't use email he said it was because it's a bit like using smoke signals. Realtime messaging is more common now."

He emphasised the system's role in the education system as a supplementary tool that enhances rather than replaces traditional learning. Textbooks are still used. Students in younger years such as kindergarten are more engaged in traditional methods where the computer ratios are about 10:1.

The system's single point delivers curriculum resources to teachers and allows them to monitor and evaluate students. For example, when a child enrolls in the school system, a history of information is built around that child. When the student moves between schools, teachers can access the collected information.

"Before then, it would take six to eight weeks for that information to move with the child to that school," Doyle said. Twice a year, the schools conduct a census where the system is used to centralise the data capture.

Lessons have been learned from the trials: "These types of systems require a standard, stable technical environment and providing professional development for teachers to support them in learning the system. Leadership of the school is important," Doyle said.

Another challenge according to Doyle is

training the 40,000 teachers who will use the system as computer literacy varies from staff who have confidence to those who are computer illiterate.

Using the system, a teacher might create a task which has resources attached – like a video clip or a word document and there will be tasks assigned to that. Students would log onto an online forum and communicate through typing and discuss issues. Teachers could monitor and review those comments and assess how the students collaborate and share ideas.

For example, in a recent assignment on

climate change for a subject called society and the environment, questions were posed about the subject. Kids discussed the questions in an online forum. Teachers monitored the discussion and advised students on where they could find other sources of information on climate change.

The system also allows students to go home and complete work online. “We found, anecdotally, that a few students during the trial submitted work after hours and were reportedly very enthusiastic with their homework,” he said.

Doyle disagrees with criticisms that

the system is expensive, faddish and that the money could be better spent on library books or employing additional teachers.

“Our experience is that attracting teachers with more pay doesn’t work. Our challenge is that we teach in remote places. We don’t have a shortage of actual teachers, apart from a few specialist areas, the shortage is having teachers in places we need them to be, places like inland, remote places, such as the land schools in the northeast of Kalgoorlie or the remote community schools of Wananami or Oombulgurri in the Kimberley.”

Digital prototyping helps racing cars go faster

Brisbane-based Triple Eight Race Engineering Australia was named as the Autodesk Inventor of the Month in January for its use of digital prototyping to improve the design of its racing cars.

The Inventor of the Month program recognises the most innovative design and engineering achievements made by companies using Autodesk Inventor software.

Triple Eight Australia competes as Team Vodafone in Australia’s V8 Supercars race competition. In a race lasting one minute and 30 seconds, where one-hundredths of a second counts, advanced automotive technology plays a huge part in determining the winner. To tweak the performance of the car, the company’s designers used Autodesk Inventor software.

One of the methods available in the Professional version of the software is digital prototyping. This allows the company to produce 3D models of its racing cars to validate the form, fit and function of a design before it is built. These models enable the company to simulate how a design would perform under race conditions without manufacturing a physical prototype.

Using the digital prototype, the com-



Using the digital prototype, the company optimised the design of every V8 racing car part, from the pedals to the pistons.

pany can optimise the design of every racing car part, from the pedals to the pistons. Specific areas of performance can be detected and targeted for improvement.

The company’s racing cars have enjoyed second place finishes in the V8 Supercars championship in each of the last three years.

Control system for Western Australian plant

Honeywell has won a contract to provide the integrated control system for Woodside’s new Pluto liquefied natural gas (LNG) project in Western Australia. The company will also specify, procure, engineer and integrate the emergency shutdown and fire and gas systems, and provide consulting services and applications to assist operators sort and prioritise system, alarms to prevent potential incidents and unexpected downtime.

The control system project is scheduled for completion in 2009 and production is expected to commence in late 2010. The

project is expected to produce 4.3Mt/a of LNG.

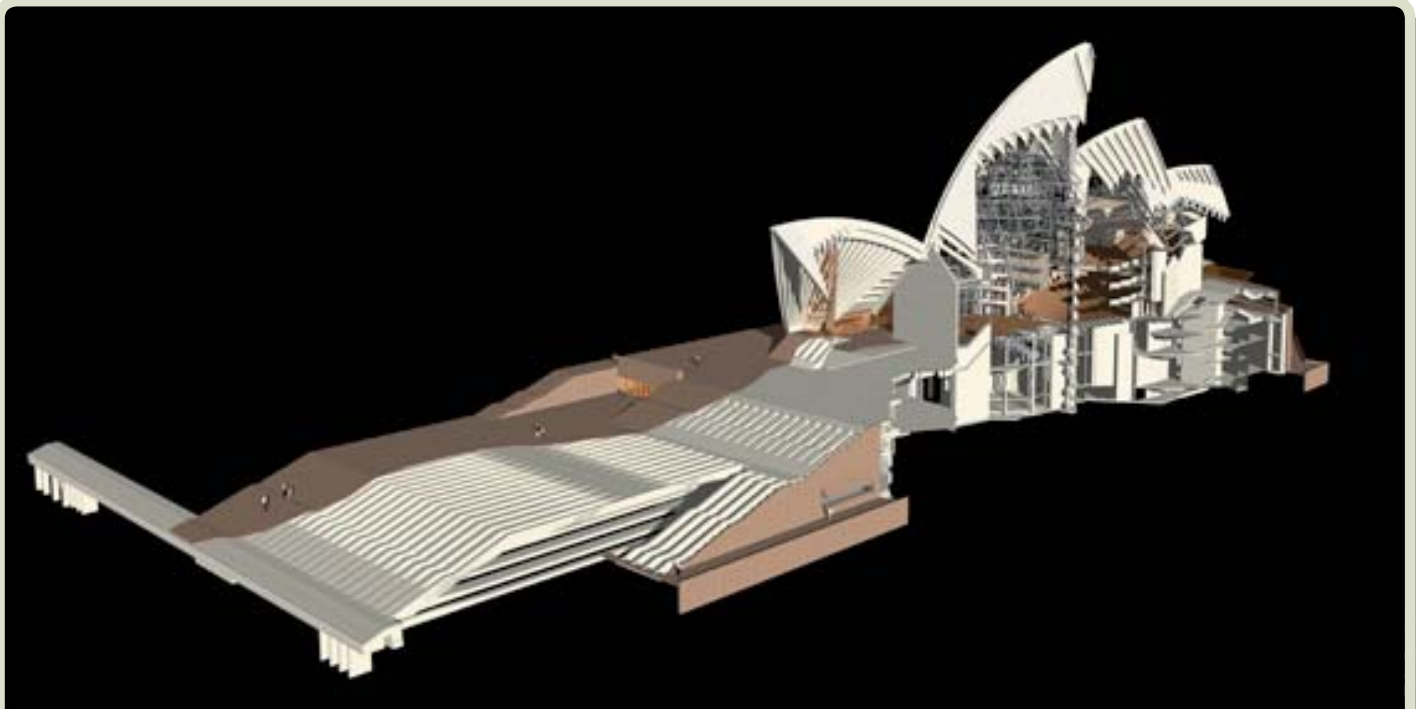
The project includes subsea wells, an offshore unmanned wellhead platform, a 180km trunk line, an onshore LNG plant and associated infrastructure near Karatha.

Honeywell will provide its Experion Process Knowledge System R300 and process control and operator training systems. The R300 will control all process operations and provide data from subsystems throughout the facility to aid operator decision making. It will help mitigate safety

risks, improve operational efficiency and integrate the control system including the field device manager and asset manager applications to help operators monitor and diagnose field devices. It includes a data historian function for data analysis.

Honeywell’s UniSim Operator Training Simulator will be implemented to provide a lifecycle simulation solution.

UniSim allows process design verification and operator training to commence prior to start-up, enabling faster time to first LNG shipments while improving safety.



The award-winning building information model of the Sydney Opera House has been used as a reference point for audits of fire walls and the shell cladding condition.
 PHOTO: (C) Sydney Opera House

Virtual opera house crowned project of the year

A digital 3D interactive model of the Sydney Opera House was declared the Project of the Year at the 2007 Association of Consulting Engineers Australia (ACEA) Awards for Excellence in Melbourne.

The building information model (BIM), which acts as an integrated management tool for the building, was developed by consulting engineering firm Arup and the CRC for Construction Innovation. Also contributing to the project were Utzon Architects, Johnson Pilton Walker and Wayne Dickerson Associate JPW. The project also won the Gold Award of Special Merit in the Information and Communication Technology Projects category.

The BIM technology is a facility management tool and provides a visual representation of the building and all its elements including seven theatres, 37 plant rooms, 12 lifts and over 1000 rooms.

Since being built, the model has been used to document audits of the fire walls within the substructure and the conditions of the shell cladding. During refurbishment works in the western foyers, the model's 3D images assisted discussions about the construction sequence with project team members.

An internal web based document system has been built onto the model with a BIM CAD standards manual. The system will allow anybody within the Opera House

to find and query building information and coordinate all incoming documents from external contractors and consultants.

The model is made from about 200 3D files called reference files which are linked together to create the single 3D model. The model is viewed on a computer screen and navigated similar to a videogame.

The model contains all of the 2D drawings used to construct the building, and embedded information on material types such steel, concrete and glass, material quantities and links to other database systems.

The model shows the larger airconditioning ducts and geometrically complex areas such as the stage loft. The model development began in 2003 with a review and study of the Opera Theatre interior as part of the strategic building plan.

While the model was created for the study, it did not fill a specific need for a detailed virtual model. The aim was to create a retrospective "as constructed" model to allow multiple internal scenarios to be investigated by all the parties involved in the project. The detailed building information model that stands today evolved over the past three years as more information and intelligent links were added.

Although the cost of the model creation cannot be disclosed, it took a structural modeller and two architectural 3D mod-

ellers six months to complete, including research time.

To build the model, the team used historical documents held by the Sydney Opera House Trusts, national and state archives and Arup, one of the building's original designers. For areas that could not be confirmed by documentation drawing, surveys were carried out by Hard & Forester building surveyors for inaccessible areas such as the acoustic paneling throughout the ceiling.

According to Stuart Bull, BIM coordinator for Arup, the project was a deviation of the company's usual process of creating 3D models for new works. "We had to research the original construction documents up to 1973, when the building opened, and upgrade work which have happened almost continuously since the official opening," he said.

The unique shape of the building was a challenge to model. "This was particularly so in recreating the roof shell ribs and arches which support the tile lids, and the long, sculptural concourse beams supporting the precast steps," Bull said.

Some internal areas caused problems for the software which involved remodelling using different techniques, but with introduction of improved software over the last few years many of these initial problems have been solved.

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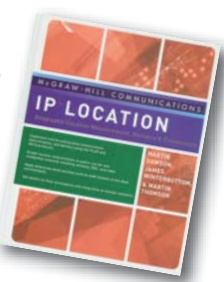
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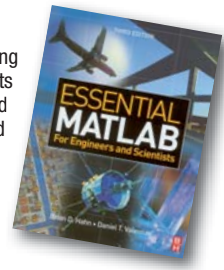
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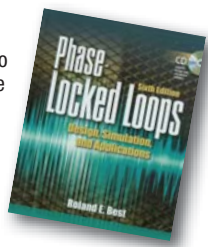
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Satellites will detect natural disasters from earth's orbit

Australian scientists have contributed to the development of a network of observation satellites which will detect natural disasters in the Asia-Pacific region from space.

Called Sentinel Asia, the satellites will provide online information through a network of webGIS services. One of these is the Australian Sentinel Hotspots system which was developed in 2002 by CSIRO, Geoscience Australia and the Australian Defence Imagery and Geospatial Organisation for detecting bushfires.

Initially supported by the Japanese government through the Japan Aerospace Exploration Agency, Sentinel Asia aims to show the value of Earth observation data for disaster management in the region. The system has been activated 10 times by seven countries including Australia in the last 12 months, mostly in response to earthquakes and floods.

The system largely uses free-to-air satellite imagery produced by Earth-observing satellites operated by the US, Europe, Japan, India and, in the future, other countries in Australasia which are planning satellite launches.

It will deliver information on wildfires, flooding, drought, and landslides. This will assist authorities in a recovery response.

"When efficiently combined with modern information-distribution methods, this data can be sent rapidly to affected communities and local emergency agencies in



Dr Alex Held, who leads CSIRO's Office of Space Science and Applications.

some cases as early warning before the disaster occurs, or as postdisaster maps, to assist in recovery operations," said the coordinator of Australia's input, senior CSIRO Marine and Atmospheric Research scientist Dr Alex Held.

Planned improvements include further nodes in other countries, use of high bandwidth communications satellites to provide information more quickly, and access to a wider range of Earth observation satellites.

Braking system for trains could save lives

Siemens has reached a major milestone in the trial of European Train Control System (ETCS) Automatic Train Protection (ATP) technology, as part of a wider trial being undertaken by RailCorp in New South Wales.

The technology was tested over a section of rail infrastructure in the Blue Mountains. The remaining trial runs are now taking place on three separate sections of the Blue Mountains Line between Penrith and Mt Victoria.

ATP technology overrides a train's controls to apply the brakes in the event a train is about to pass a danger point or exceed speed limits.

Under the trial, RailCorp awarded contracts worth \$13 million to Siemens and two other ETCS manufacturer consortiums in May last year. The trials were designed to prove that all the suppliers' train systems were compatible with their trackside systems.

As the first supplier to conduct the trial,

Siemens has achieved a project milestone after installing its ETCS technology called Trainguard in a train and also on trackside. This resulted in the first ETCS-equipped train to travel over an ETCS trackside in Australia.

In an ATP system, an onboard computer will analyse the speed and braking pattern of a train and intervene if it anticipates a

train is in danger. For example, if a driver fails to slow down sufficiently when approaching a red signal, a lower speed limit zone or a worksite, the train's brakes will automatically be applied. ETCS further enhances the benefits of ATP by providing standardisation that ensures all suppliers of ETCS track and train systems are interoperable with each other.

Call for monitoring of mobile network

Australian telecommunications company Telstra will monitor the call quality of its mobile phone customers as it irons out problems with the Next G network.

A mobile health check program will be used to detect and tally dropouts during calls on Next G handsets.

The company plans to contact customers experiencing an unusually high number of dropouts to pinpoint and resolve the issue.

Telstra countrywide group managing director Geoff Booth said most Next G customer problems were caused by handset issues, not the network.

"There can be any number of reasons for a customer experiencing these issues, including using an inappropriate handset for their location, the wrong SIM card, having their handset set to the wrong network or not using the right accessories, such as a car kit or external antenna."

Strategic plan is vital for Australian telecommunications

Almost a third of Australia's fixed telecommunications infrastructure is inadequate, according to Engineers Australia's 2007 Telecommunications Infrastructure Report Card.

The report card assessed Australia's fixed and mobile telecommunications infrastructure in 57 statistical divisions. Preparation of the report card was managed by Leanne Hardwicke, Engineers Australia's director of policy with support from Engineers Australia's College of Information, Telecommunications and Electronics Engineering (ITEE) and the ITEE College Board Steering Committee comprising the board's chair Alan McPhail, Peter Hitchiner, David Edwards and Amal Hanna.

Remote areas such as the Pilbara and Kimberley regions of Western Australia and Mallee in Victoria were among those that received the rating F – inadequate for their fixed telecommunications infrastructure. Capital cities fared better with Sydney, Melbourne and Brisbane receiving ratings of B – good, and Perth and Canberra receiving C – adequate ratings. However, Greater Hobart and Darwin were both rated D – poor.

National mobile infrastructure fared better with 12% of the divisions scoring Fs but 63% of the divisions received a rating of E – very poor. No divisions in fixed or mobile infrastructure received a rating of A – very good.

The report card examined the quantity of fixed infrastructure for telecommunications transmission, whether there is an adequate level of access to that fixed infrastructure by customers, and the availability of infrastructure for mobile communications.

It assigned rankings to each statistical division in all states and territories ranging from A to F based on the fixed access infrastructure on a household density basis and mobile infrastructure on a land density basis.

The rankings presented in this document do not take into account comparisons between Australia and other countries due to the unavailability of suitable benchmarks. The report card does not comment on affordability or terms of access to that infrastructure.

"Despite being reasonably well-served by its telecommunications infrastructure, Australia needs an ongoing, regularly reviewed and updated strategic plan for telecommunications infrastructure development," the report card said.

"We also need a strategy that encourages the uptake of newer technologies sooner," said Peter Taylor, chief executive

of Engineers Australia.

The report card also recommended that governments ensure that regulations and subsidies are regularly reviewed and adapted as needed. It said unnecessary duplication of infrastructure should be avoided, particularly where government subsidies are given. Where there are no government subsidies, policies should encourage carriers to avoid duplications through appropriate access regimes. Lastly, it insisted on a requirement to support inter-carrier roaming on any mobile infrastructure funded by government.

Unsurprisingly, the report card has found Australia's telecommunications infrastructure is heavily concentrated in eastern Australia, particularly in and between capital cities. This leads to a reasonable level of access in these areas, but this diminishes for rural and regional Australia.

Melbourne, Sydney and Brisbane are interconnected by high capacity links and these provide infrastructure benefits for centres such as Bendigo and the Gold Coast that are adjacent to those links. For other locations, including some state capital cities such as Hobart and Darwin, infrastructure provision is generally poor.

Fixed and mobile infrastructure is readily available in some areas, but in other areas is not provided due to lack of profitability for infrastructure providers. The areas that received a score of F for instance, have low population density where, if the infrastructure was provided, the charges may be unattractive for users. Governments have variously implemented subsidy programs, one off or ongoing, to improve access to infrastructure in areas such as these.

Despite the federal government's market-based strategy of selective intervention to improve telecommunications access,

there is no comprehensive strategic plan or longterm vision at a national level for telecommunications infrastructure.

The development of such a plan or vision could encourage infrastructure providers to be more proactive in identifying and appraising future infrastructure projects. This is relevant for areas that are poorly served.

In general, the market for telecommunications services in rural and remote parts of Australia cannot commercially support duplication of (or in some cases, any) infrastructure.

Providing the benefits of competition (or any service in some cases) requires a government funding contribution. In this instance, government funding can be justified on the basis of benefits to the economy and community that are derived from the availability of telecommunications.

The report suggested a principle where full or partial government funding is provided to a carrier in the circumstances outlined above is that other carriers should be allowed access on reasonable terms to the infrastructure. This would encourage competition and provide a degree of neutrality between those carriers receiving and those not receiving government funds. The host carrier should be able to derive the benefits of hosting other carriers through additional revenue.

In the case of mobile infrastructure, access on reasonable terms can be facilitated by commercial roaming arrangements. This requires customer handsets to have the ability to operate on multiple networks. Although this is not universally possible, any government funding for mobile infrastructure should, to the extent practicable, be focused on investment that enables handsets to operate on multiple networks.

Perth conference to discuss ICT challenges

The 19th Australian Software Engineering Conference will be held in Technology Park, Curtin University in Perth, Western Australia on 26-28 March. It is jointly sponsored by the IEEE Computer Society, Engineers Australia, the Australian Computer Society and the Department of Industry Resources. Established in 1986, this is the first time the conference will be held in Western Australia.

The conference will present peer-reviewed research and papers on industry developments and best practice in software engineering and ICT in Australia.

Software engineering is facing the new challenges such as emerging development arising from new classes of systems such as web-based applications and web services.

These issues will be discussed in papers presented by industry professionals including chair and CEO of OMG Dr Richard Soley, Max Noble from Thales Australia and Simon Carlsen and Stig Petersen from StatoilHydro Stehydro.

For more information, visit www.aswec2008.curtin.edu.au or email ASWEC2008@curtin.edu.au.

For a more comprehensive list of engineering events, visit Engineers Australia's online events calendar at www.engineersaustralia.org.au/events

Electrical Engineering

Conference: Turbo expo 2008 (5 days) Berlin, Germany 9 June. *Inquiries:* +1 404 847 0072, fax +1 404 847 0151, email igti@asme.org, web asmeconferences.org/te08

Energy

Conference: Globalcon 2008: Energy, power and facility management strategies and technologies (2 days) Texas, US 19 Mar. *Inquiries:* web www.globalconevent.com

Conference: World bioenergy (3 days) Jönköping, Sweden 27 May. *Inquiries:* +46 361 52000, fax +46 361 64692, email bioenergy@elmia.se, web www.elmia.se/worldbioenergy

Conference: 3rd annual LNG world 2008 (2 days) Tokyo, Japan 15 Jul. *Inquiries:* Tan Peng Pheng +603 2723 6614, fax +603 2723 6699, email tanp@marcusevanskl.com, web www.marcusevans.com/html/eventdetail.asp?eventID=13569&SectorID=3&divisionID=

Electronics Engineering

Seminar: High voltage lab – practical demonstration (1 day) Sydney 27 Mar. *Inquiries:* John Englefield 9816 5807, mobile 0407 165 807

Conference: Printed electronics Europe 08 (2 days) Dresden, Germany 8 Apr. *Inquiries:* Chris Clare + 44 1223 813703, fax +44 1223 812400, email c.clare@idtechex.com, web printedelectronics.idtechex.com/printedelectronics europe08

Seminar: Biohazard controls for engineers – organic semiconductors, implants and statutory rules (1 day) Sydney 10 Apr. *Inquiries:* David Burger, email k3hz@ieee.org

Conference: 17th international conference on photochemical conversion and storage of solar energy (6 days) Sydney 27 Jul. *Inquiries:* 02 9290 3366, fax 02 9290 2444, email ips17@icms.com.au, web www.ips17.com

Conference: International conference on electronic materials (5 days) Sydney 28 Jul. *Inquiries:* Helen Woodall 03 9326

7266, fax 03 9326 7272, email helen@materialsaustralia.com.au, web www.aumrs.com.au/ICEM-08

Conference: 13th IEEE international conference on harmonics and quality of power (4 days) Wollongong 28 Sep. *Inquiries:* Prof Sarath Perera 02 4221 3405, email ichqp08@elec.uow.edu.au, web www.ichqp2008.org.au

Information & Communications Technology

Conference: Australian communications industry conference 2008 – broadband and beyond (2 days) Sydney 3 Mar. *Inquiries:* 02 9518 7722, fax 02 9518 7222, email info@broadbandandbeyond2008.com, web broadbandandbeyond2008.com

Conference: WA information technology and telecommunications awards (1 day) Perth 14 Mar. *Inquiries:* Sue McLennan 08 9409 7649, 08 9409 6278, email sue.mclennan@starevents.com.au, web www.waitta.asn.au

Conference: International multicongress of engineers and computer scientists 2008 (3 days) Hong Kong 19 Mar. *Inquiries:* email imecs@iaeng.org, web www.iaeng.org/IMECS2008

Conference: 19th Australian software engineering conference (3 days) Perth 26 March. *Inquiries:* Dr Pornpit Wongthongtham, Curtin University of Technology 08 9266 1835, fax 08 9266 7548, email aswec2008@curtin.edu.au, web www.ccebi.curtin.edu.au/ASWEC2008

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2008 (2 days) Sydney 2 Apr. *Inquiries:* 02 8908 8555, fax 02 8908 8556, email chris@acevents.com.au, web www.wirelessworld2008.com

Conference: 11th international conference on business information systems (3 days) Innsbruck, Austria 5 May. *Inquiries:* email w.rutkowski@kie.ae.poznan.pl, web bis.kie.ae.poznan.pl

Conference: I-SPAN 2008: The international symposium on parallel architectures, algorithms and networks (3 days) Sydney 7 May. *Inquiries:* Albert Zomaya, email zomaya@it.usyd.edu.au, web www.cs.usyd.edu.au/~ispan08

Conference: 3rd annual web services security conference and expo (3 days) Maryland, US 12 May. *Inquiries:* +1 301 583 4629, fax +1 301 772 8540, email wssc@unatek.com, web unatekconference.com

Conference: AusCERT 2008 – security, privacy and the internet citizen (6 days) Gold Coast 18 May. *Inquiries:* Martin Lack 07 3378 5499, fax 07 3378 9513, email auscert2008@mlaa.com.au, web conference.auscert.org.au/conf2008

Conference: 2008 iAwards (1 day) Melbourne 28 May. *Inquiries:* web www.aiia.com.au/i-cms.isp?page=2465

Conference: 20th international conference on advanced information systems engineering (5 days) Montpellier, France 16 Jun. *Inquiries:* email bella@lirmm.fr, web www.lirmm.fr/caise08

Conference: ICITA 2008: 5th international conference on information technology and applications (4 days) Cairns 23 Jun. *Inquiries:* email icita@ieee.org, web www.icita.org

Conference: 5th international conference on information technology and applications (4 days) Cairns 23 Jun. *Inquiries:* email icita@ieee.org, web www.icita.org

Conference: ACISP 2008: 13th Australasian conference on information security and privacy (3 days) Wollongong 7 Jul. *Inquiries:* web www.uow.edu.au/conferences/acisp%202008/index.html

Miscellaneous

Seminar: Building your own smart transport – self-balancing scooter aka Segway (1 day) Sydney 13 Mar. *Inquiries:* David Burger, email k3hz@ieee.org

Conference: Angel connect 08 (1 day) Sydney 15 Apr, Melbourne 17 Apr. *Inquiries:* www.slatteryit.com.au/AngelConnect2008

Conference: CRCA08: Cooperative research centres association annual conference 2008 (3 days) Sydney 21 May. *Inquiries:* Caroline Jones 02 8850 6796, fax 02 9680 8422, email caroline.jones@optusnet.com.au, web www.crca.asn.au/conference

Conference: International Commission for Optics congress 2008 (5 days) Sydney 7 Jul. *Inquiries:* 02 9368 1200, fax 02 9368 1500, email info@iceaustralia.com, web www.iceaustralia.com

Conference: OECC/ACOFT conference incorporating the Australian conference on optical fibre technology, and the opto-electronics and communications conference (3 days) Sydney 8 Jul. *Inquiries:* email: oecc_acoft2008@iceaustralia.com, web www.iceaustralia.com/oecc_acoft2008

CALL FOR PAPERS

Electrical Engineering

Conference: Electricity 2008 – 84th National EESA conference and exhibition (3 days) Brisbane 20 Aug. *Inquiries:* Anthony Bordignon 07 3834 3333, fax 07 3839 2409, email anthony@iamevents.com.au, web www.eesa.iamevents.com.au

Abstracts due: 29 Feb

Information & Communications Technology

Conference: 2008 international conference of signal and image engineering (3 days) London, UK 2 Jul. *Inquiries:* email wce@iaeng.org, web www.iaeng.org/WCE2008/ICSIE2008.html

Abstracts due: 6 Mar

Conference: World congress on engineering and computer science 2008 (3 days) San Francisco, US 22 Oct. *Inquiries:* email wcecs@iaeng.org, web www.iaeng.org/WCECS2008

Abstracts due: 2 Jul

Data projector with digital keystone correction

Mitsubishi Electric's latest data projector has a widescreen 16:9 display. The WL639U portable wide XGA projector has a viewing area 1.3 wider than conventional projectors, removing the need to scroll left to right. Depending on the applications, users can screen two windows at once.

The widescreen resolution also gives this projector the ability to play DVDs at full screen without the need for compression. With a high brightness of 3500 ANSI lumens, the projector can be used in dimly-lit rooms for conferences, meetings and lecture. The projector is designed to be quiet with a fan noise of 29dBA and can connect to a computer network.

This makes it easier to start a presentation using remote management from a laptop or PC.

The projector's colour wall correction allows a presenter to maintain correct colours even when projecting on coloured walls. By selecting the colour of the wall in the setup menu, the projector will adjust its colour tone accordingly.

Colours are captured using the latest 3LCD technology by matching hue variations in the colour spectrum. The colour is consistent across the screen due to its valuable colour enhancer and 3D colour uniformity features.

The projector has digital keystone correction for relocating and setting up. It has



The projector's colour wall correction allows a presenter to maintain correct colours even when projecting on coloured walls.

enhanced security settings with an anti-theft anchor and a user-selectable password which locks out menu functions.

According to the company, the lamp lasts up to 4000 hours.

The projector's maximum resolution is 1920 x 1080 and the maximum viewable size measures 7.62m across the diagonal.

It is compatible with PCs and Macs.

Other features include computer monitor loop-out, RS-232 communication support, a 3W mono audio speaker and USB mouse support.

The unit weighs 4.7kg and measures 33cm x 11cm x 27cm.

☞ *More information – Qikreply 16*

Telephony service receives new features

Adelaide-based internet provider Internode has added on-demand access to extra telephone channels to its NodePhone telephony service.

NodePhone is a voice-over-broadband service that provides calls with the quality of a traditional telephone service. The calls are carried on the company's first tier, redundant private national network. The company guarantees consistent call quality rather than best effort services available from internet-dependent voice over internet protocol services.

A standard NodePhone service comes with two voice channels. Using the online toolbox, customers can order additional voice channels for \$10 per channel per month. There is also a \$20 change request charge.

Internode's product manager for NodePhone Jim Kellett said the phone could be used as a corporate-grade IP telephony service.

"For example, a rapidly growing business that requires 10 more voice channels

for their phone system can now place their order online and have the extra channels up and running within a few minutes. If they only need this extra capacity for a limited period, they can just as easily relinquish any surplus channels when the demand is over.

"As a comparison, a traditional integrated services digital network (ISDN) phone service can take up to four weeks to provision, can cost more than \$800 in upgrade fees and generally incurs nearly three

times the cost per channel. Extra channels for ISDN primary rate services must also be ordered in groups of 10."

The MultiLine facility delivers extra call capacity by providing additional channels when NodePhone is connected to an internet protocol-based private branch exchange system. Customers can order any number of extra channels rather than just multiples of 10 as occurs with traditional ISDN primary rate services.

☞ *More information – Qikreply 24*

Throughput switch with scalability

Radware has released its OnDemand Switch, a new hardware platform for application delivery controllers. It is a sustainable throughput switch with on-demand scalability allowing end-users to increase throughput levels without the need to swap-out existing IT hardware infrastructures.

Instead, higher throughput is enabled

through a license update which bypasses disruptive downtime. This gives more flexibility to address all IP application requirements from on-going operations, maintenance and business growth demands to network layers 4-7.

Other features included a hardware architecture with carrier-grade reliability.

☞ *More information – Qikreply 20*

Switches designed with high noise immunity

CrispTech has released the PowerTrans series of switches from Moxa which can be used in power substation automation systems, traffic control systems and railway applications. The first of these models in the series are the PT-7324 and PT7728.

The products are compliant with the relevant industry standards such as power substation automation systems (IEC 61850-3, IEEE1613), traffic control systems (NEMA TS2) and railway applications (EN50121-4).

Designed to be 19" rack mountable, these switches have Turbo Ring technology with faster network fault recovery as well as rapid spanning tree protocols.

Additional features include fanless operation at a wide temperature range of -40°C to 85°C, dual redundant and integrated power supplies for high availability and high electromagnetic interference (EMI) noise immunity. These features allow these products to withstand extreme conditions and electromagnetic interference commonly found in power substation automation and rail systems.

Flexibility is achieved by modular design with high fiber optic and gigabit port density, along with optional rear or front wiring.

A major obstacle in developing substation automation systems involves in-

teroperability. Often, devices from different manufacturers cannot communicate with each other due to different communication protocols. IEC 61850, an open communication standard in substation automation, is being applied to standardise all aspects of communication protocols between newer devices and legacy devices. The network operation is essential for protection against electrical surge and EMI, extreme temperature variations and other environmental threats. IEC 61850-3 specifically defines environmental and electromagnetic interference (EMI) immunity for communication networks and substations systems.

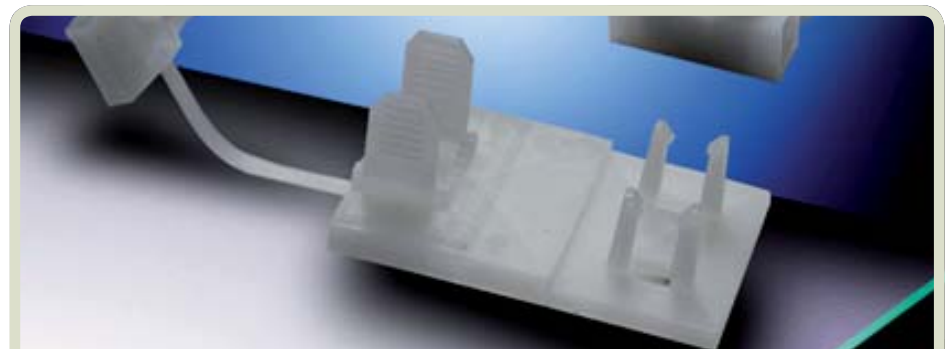
🔗 *More information – Qikreply 22*

Drive arrays reduce footprint

At SNW Europe in Frankfurt, Infortrend released its small form factor (SFF) RAID subsystems – the EonStor B12S-R/G1030 serial attached SCSI (SAS)-to-SAS and the B12F-R/G1430 fibre channel-to-SAS arrays. The drives are available in Australia through NSW-based Digistor.

The benefits of SFF design are reduced size, high density, lower power consumption, and improved acoustics. The 2.5-inch SFF drives are 70% smaller than conventional 3.5-inch drives giving them a comparable amount of power in a smaller footprint. Because the drives use less power and run cooler, airflow requirements are reduced and less pollution is generated. Both the B12F and B12S come with a SAS expansion port.

🔗 *More information – Qikreply 21*



The new CSRTB series consists of three-pole terminal strips which are available in three sizes rated for 6A, 10A and 16A loads.

Terminal strips with strain reliefs

Camden Electronics has launched a new range of terminal strips that features snap-in strain reliefs to protect wires from twisting, fraying or pull-out due to stresses and strains when mounted.

The strain relief measures are slid over the integral posts to secure the cables.

Moulded from PA6 to UL94V2, the terminal strips also feature wire protectors.

🔗 *More information – Qikreply 18*

Integrated electronics design

Altium has launched the Altium Innovation Station which combines its unified electronics design software with its extended NanoBoard range of reconfigurable hardware platforms.

The station has an electronics design environment where designers can design in the soft domain, without having to pre-determine the hardware platform on which the product will be delivered.

Its unified environment allows designers to test, analyse and debug the design using the Desktop NanoBoard reconfigurable hardware development platform which is integrated with the Designer tool.

The reconfigurable station allows designers to compare the performance benefits and trade-offs of different field

programmable gate arrays without changing their design.

Designers can then use the NanoBoards to deploy their designs as physical hardware without the need to manufacture any custom hardware. This allows them to consider any number of execution possibilities for their design, with or without design intelligence, with or without physical hardware.

The station can protect their intellectual property and retain their source documents. The design intellectual property (IP) is programmed into the system, rather than manufactured on the board. Therefore, the IP is easier to protect as the source code is not shipped with the product.

Soft design can happen before and after the hardware platform is designed and after

the hardware is manufactured and deployed to the customer.

🔗 *More information – Qikreply 19*

For more information on any of these products, send an email to kharrison@engineersmedia.com.au with the subject headline "Monitor Qikreply". Your contact details and the Qikreply number of the product should be included in the body of the email.