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A virtual avatar tours a 3D representation of the University of Western Australia. The virtual university was shown at National Science Week.

PHOTO: CHRIS THORNE, UWA.

Virtual world shown at science week

A computer science student from the University of Western Australia (UWA) has demonstrated a virtual three-dimensional representation of the university at National Science Week which began this month.

Chris Thorne, who is completing a PhD in software engineering at the university, led a team of programmers and modellers to create the "UWA Virtual Universe". It is similar to commercial products such as Second Life or World of Warcraft but is intended as a free social networking event.

"This virtual world will be freely accessible to the public. It is based on Web 3D international standards and, where possible, non-proprietary technology such as Seamless 3D, Flux Studio, Rez and Gimp

have been used," Thorne said. In the spirit of the event, a science avatar was featured which ran a quiz for virtual visitors. The world was hosted by four servers, one at UWA, one in Finland and two in the US.

The virtual world was created by a team of 16 people working on the project in their spare time. It includes a combination of models and 360 degree panoramas to capture the feel of the university campus, in some cases reproducing the peacocks which dot the university lawns. The basic physics model governing the world allows visitors to explore locations by walking. Thorne also showcased the world at the Siggraph 2007 conference in the US this year.

Thorne, who has worked on international 3D web standards within the Web 3D Consortium, came up with the idea as part of his ongoing efforts to make virtual worlds free and open to the public. It was a coincidence that Jay Jay Jegathesan, the school manager for the School of Computer Science and Software Engineering at UWA, was thinking the same thing.

"For the past two years I had been asking the university to provide server resources for a project which would create a realistic 3D representation of the university campus.," Jegathesan said.

He asked a private company for a quote on creating a detailed model of the university, right down to the bricks and trees,

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Computer science student Chris Thorne (l) and Jay Jay Jegathesan, school manager for the University of Western Australia, building their virtual model of the university.

which amounted to half a million dollars. He also asked a group of PhD students who offered a reduced fee of \$180,000.

“But this amount was still too much. But then Chris came to me with his virtual world idea so we decided to work together.”

While Thorne wanted to create a virtual world, he did not have a setting in mind. So Jegathesan suggested modelling the university. Together, they successfully applied for a National Science Week grant of \$1000 to help bring the project into reality.

For 13 days, Chris Thorne and four people from the US worked on recreating the grounds from original building plans and photographs. The efforts of the team, whose work included data gathering and programming the server code and multiuser protocol, resulted in 15% of the university grounds being mapped. This included walkways and the university's tallest building – the iconic Winthrop Tower. “The grant was too little to get anything substantial done,” said Thorne. “But it was a start.”

Short of money, Jegathesan requested donations from the heads of staff from the university's schools. In return, he would include their buildings in the project. Through this, an additional \$22,000 was raised from 12 schools including engineering, arts, law, business and geography.

The funding allowed contributors from Australia and overseas to continue their work on the project. This mostly consisted of programming and modelling the structures using Google's Sketchup modelling program. Some people roamed the univer-

sity grounds with digital cameras and took photographs of building walls and bricks. These images were used to create textures for the virtual structures.

According to Thorne, the most difficult part of the university to model was Hackett Hall. “This was because of changes from the original plans due to renovations and complexity with the walkways. The sunken garden was also challenging with its contrasting light conditions which caused difficulties in photography and imaging post-processing for the 360 degree panorama,” he said. It was also challenging to transfer sufficient specialist knowledge in different areas such as 3D graphics, networking programming, photography and modelling to people from disparate backgrounds.

Thorne hopes the project will become the nucleus for a more detailed model which could be used by prospective students and people overseas to learn about the university.

The virtual model would supplement written information about the grounds. “I believe there will always be practical applications of representing real world information in different ways,” Thorne said. He is considering other social networking events called “Geo avatar gatherings” where users would choose a time and place and be able to visit it virtually and learn about its events, people and culture. “Antarctica would be a good first choice as there is a lot of data from the Mawson expeditions and because people would not get a chance to go there.”

Funding boost for emergency broadband

The federal minister for communications, information technology and the arts Helen Coonan has announced funding of \$5 million to provide high-capacity broadband services to support health care and emergency services to communities in remote North Queensland.

The project builds on the Northern.net@qld initiative, funded through the federal government's Coordinated Communications Infrastructure Fund.

As part of the federal government's Clever Networks Program, Queensland Health will be provided with funding to establish the Cooenet@qld project, developed in partnership with the Department of Emergency Services and the e-Health Research Centre.

The project targets 15 remote communities which have been identified as having an immediate need for improved intervention in the early treatment of emergency patients.

These towns are Bamaga, Bowen, Charters Towers, Clermont, Cloncurry, Collinsville, Cooktown, Dysart, Hughenden, Ingham, Julia Creek, Normanton, Richmond, Thursday Island and Weipa.

"This project will help provide timely intervention in the care of patients unable to travel long distances easily and who are often in a distressed state," Coonan said.

"Cooenet will assist patients in these communities by providing online access to specialist health services, such as paediatrics and ophthalmology, which may be

hundreds of kilometres away."

The new healthcare services provided will be based on digital technology for vital sign monitoring and videoconferencing, as well as providing radiology image capture, storage and transmission, and breast screening.

"Clever Networks is a \$113 million Australian Government program that will see improved delivery of services in regional, rural and remote Australia through innovative broadband projects," Coonan said.

Successful projects to receive first round funding through the program will include virtual healthcare, remotely accessible interactive education services, and delivery of integrated state-wide emergency services.

Marketing company fined \$149,600 for spamming

The Australian Communications and Media Authority (ACMA) has fined DC Marketing Europe \$149,600 for extensive breaches of the Spam Act 2003. The fine was issued for missed call marketing conducted through mobile phones.

The penalty is the largest issued by ACMA since the act's penalty provisions came into force in 2004.

Missed call marketing involves sending calls of short duration to mobile phones, with the intention of leaving a missed call message in the phone's call register. In this case, when mobile phone owners returned the missed call, they received marketing information from DC Marketing.

The messages sent out by the company were unsolicited, did not identify the sender and did not contain an unsubscribe facility, each of which is a breach of the Spam Act.

The company was found to have 102 contraventions relating to missed call marketing activities in July and August 2006.

The mobile phone users who received the missed calls on their phones would not know who they were from. By returning the missed calls, they became unwilling participants in the marketing scheme, effectively paying to receive unsolicited advertising.

Missed call marketing messages are covered by the act, which regulates unsolicited commercial electronic messaging in Australia, because there is no voice component and they display an electronic message on the recipient's phone. The act also covers emails, SMS messages, MMS messages and instant messaging messages. It does not include voice calls and faxes.

"Consumers need to feel confident that

when they use their mobile phone they are not going to be deceived into receiving unwanted marketing messages," said ACMA chair Chris Chapman.

With repeat offenders facing potential penalties of up to \$1.1 million per day,

Logo competition for Australia Day

Google Australia has launched a competition called "Doodle 4 Google my Australia", which offers Australian school students the chance to design a customised logo for the company that celebrates the spirit of Australia. The winning design will be shown on the Google Australia home page on Australia Day next year.

The competition is open to Australian students from years one to 10. A panel including Australian author Michael Grose and Mambo Surfwear cofounder Dare Jennings, will pick finalists from each state

and territory. Chapman warned that "noncompliance with the act would prove to be a costly exercise."

More information about spam can be found at ACMA's website www.spam.acma.gov.au.

and territory.

The top 32 designs will then be displayed online where the public will be allowed to vote for their favourites.

The overall winner will receive \$10,000 of technology-related equipment for their school. Finalists will receive prizes for themselves and their schools, including an interactive whiteboard for the national winners in each year group.

For more information, visit google-au.blogspot.com/2007/07/get-doodling-australia.html.

Company acquires photo site

News Corporation has acquired media-sharing site Photobucket for about \$362 million. The multinational news company said the acquisition, made through Fox Interactive Media (FIM), meant that users of FIM's other user-generated content property MySpace could access Photobucket's photo and video technologies. Photobucket would continue to operate as a standalone company within FIM.

With ownership of MySpace and Photobucket, the company now controls two of the largest, social networking and user content sites in the world.

MySpace has about 200 million users, while Photobucket has attracted more than 44 million.

Fox Interactive president Peter Levinsohn said Photobucket also would be able to incorporate advanced slideshow generators and other editing tools.

The company also acquired Flektor, a site which allows users to share photographs and video clips. The slideshow generators and other editing tools on this site will be made available to Photobucket users.

Multimedia platform demonstrated

Sydney-based Fluffy Spider Technologies (FST) and Japan company Nissin Systems have worked together to provide support for the FancyPants multimedia software platform on the Motorola/Freescale i.MX21 development board.

FancyPants is the platform developed by FST for embedded application development.

It allows original equipment manufacturers to develop feature-rich devices with advanced graphical user interface capabilities and multimedia.

The feature was demonstrated by Nissin Systems at the 10th ESEC Embedded Systems Expo in Tokyo.

At the exhibition, the FancyPants platform was able to present full motion video, with a mobile phone application, video browser, image browser and embedded slideshow, without requiring any hardware acceleration on the i.MX21 development board, which has a colour display, 266MHz processor, 64MB memory, touch screen and keypad.



An application demonstrating the graphical capabilities of the platform running on a development board.

Asset management system installed

Australian Insurance Holdings (AIH) has implemented an asset management system to track software licenses and manage auditing requirements across 300 workstations.

Faced with a burgeoning software suite deployed across 300 of its workstations, the company required greater licensing visibility to extract maximum value from its program suite, and to identify licenses that were not being utilised.

After evaluating a number of solutions deployed on thirty workstations throughout its IT department, AIH selected Centennial Software's asset management system, Discovery.

AIH technical services manager, David Armstrong, said the system is now providing the organisation with greater visibility across the network and can tell how many

random access memory (RAM) slots are available on certain PCs.

"The information the system provides has enabled us to extract greater value for our licensing arrangements, with idle licenses able to be either consolidated or re-assigned to another active user," he said.

"Previously, purchased software would be manually logged on a software service report via a spreadsheet, and assigned to a workstation and tracked from there.

"Now, all this information can be turned around into reports in a matter of minutes, not weeks, at the click of a button."

Smartpath, a Centennial Software part-

ner, was on-hand during the initial implementation to provide introductory training and ensure a smooth integration.

The service also includes a post implementation review, to ensure maximum value is being derived from the roll-out.

Part of the Budget Insurance group of companies and trading locally as Budget Direct, Australian Insurance Holdings (AIH) issues over 5000 motor vehicle insurance policies to Australian motorists every week.

Internationally, the group administers over 2.5 million policies.

SOURCE: COMPUTERWORLD AUSTRALIA

The system can tell how many random access memory (RAM) slots are available on certain PCs.

Australian researchers progress in wireless court case

The US federal court in Texas has granted an application from the CSIRO for an injunction to prevent infringement of its wireless local area network (WLAN) patent by the Buffalo group of companies in the US. The injunction prevents the sales of all products until a licence to CSIRO technology is negotiated.

CSIRO was granted a US patent for the technology in 1996.

With the market for WLAN growing with most laptops being built with wireless technology, CSIRO argues that some manufacturers are using its technology without permission or licence.

In a summary judgment last year in the Buffalo case, the Texas court upheld CSIRO's position on issues of patent validity and infringement.

The Buffalo case is ahead of other

cases relating to CSIRO's WLAN US patent. The other pending cases involve Microsoft, Intel, Dell, Hewlett-Packard, Netgear, Toshiba, Fujitsu, ASUS, D-Link, Belkin, Accton, SMC Networks, 3Com, Nintendo and Marvell.

CSIRO is represented in the Buffalo case by US law firm Townsend and Townsend and Crew.

SOURCE: AAP NEWSWIRE

Brisbane console servers in US

US defence company Raytheon has deployed console servers from Brisbane company Opendgear as part of its AutoTrac III air traffic management system.

This system will shortly be deployed in the United Arab Emirates to control air traffic at Dubai Airport.

The Brisbane company's CM4116 and CM4148 units will be used for remote administration of development environments, jumpstarting its lab servers and providing console access to all of its servers from a central location.

The console servers allow system administrators to have total remote access to a network, which allows them to preempt all major issues from a simple tower automation application to a fully integrated national multicentre system.

This reduces the response time for problem solving, and provides operational cost savings, as well as higher network availability.

"We were looking for a solution to manage our Sun servers and workstations all of which were running some version of Solaris," said Joseph Castellino of Raytheon. "We prefer to use a command line interface for configuration because we don't always have graphics capabilities in place depending on individual configuration."

"For managing high-end networking



One of the Brisbane company's CM4116 console servers, which are to be used in an air traffic system at Dubai Airport.

and telecom gear, and for managing headless multiplatform servers a plain-old serial port is generally what is needed," said Bob Waldie, CEO of Opendgear. "This is exemplified by the engineering decision at Raythe-

on, where they're remotely managing Sun servers in an extremely GUI environment. But for simplicity and reliability they chose to use serial console access to meet their critical remote management needs."

Fixed wireless hits Sydney and Melbourne

Sydney broadband wireless network company BigAir has become one of the first operators of commercial fixed WiMAX networks in Sydney and Melbourne with the rollout of technology from Airspan Networks.

The company has deployed its Airspan base stations operating in the class-licensed 5.8GHz band. According to Airspan its technology was chosen after a six month technical trial of both proprietary wireless and WiMAX technologies in the 5.8GHz band.

The company plans to introduce the technology in Brisbane and will expand the WiMAX network to other areas across Australia.

Company CEO Jason Ashton said: "WiMAX will allow us to offer symmetric, business-grade broadband at speeds of up to 30Mb/s. In future we will offer even higher speeds as WiMAX technology evolves." In Queensland another wireless operator, Allegro Networks, is planning a fixed WiMAX network using technology from Alvarion and licensed spectrum for which it has paid \$1 million.

The company's joint managing director, David Waldie, said "Wireless in [class licensed] spectrum is perfectly adequate for a range of services and a range of users but what we want to do is offer higher end services to the medium enterprise market so we need to be able to confidently sit behind guaranteed service levels."

Ashton, however refuted the need for

licensed spectrum. BigAir has been using class licensed spectrum to serve business users since its inception, and Ashton said the technology was well able to avoid potential interference problems and deliver business grade services because of the very large amount of spectrum available (300MHz) in the 5.8GHz band.

SOURCE: ITWIRE

Contract extended for IT company

Sydney-based EDS has strengthened its relationship with the Commonwealth Bank of Australia (CBA) after revamping a \$363 million service-based contract to deliver desktop and other end-user computing services for the next five years.

The new contract covers all end-user computing services, including desktop, service desk, ATM services, managed output, email, messaging, Outlook web access and mobile information protection.

Under the new end-user computing services contract, EDS will be responsible for supporting the bank's 44,000 desktop devices, 3300 ATMs, 4000 printers and

1000 facsimile machines.

The deal follows last year's \$409 million signing of a new master IT&T agreement involving enterprise processing services for mainframe, midrange and data storage until 2012.

Chris Mitchell, EDS vice-president for Australia and New Zealand, said "When we signed the EPS agreement last year we also agreed to a joint charter as a foundation for further enhancing our ongoing business relationship," he said.

The partnership between EDS and the CBA began in 1997 with a 10-year agreement for IT services.

Developments in wind turbines

by David Brumby

Wind power was the focus of the lecture at the Tasmanian Branch of the Institution of Engineering and Technology in June which was part of the Hobart Joint Electrical Program.

Paul Fulton, principal engineer of Tasmanian wind energy company Roaring 40s, began his presentation on renewable energy with an overview of climate change.

Using a graph from the Intergovernmental Panel on Climate Change, he showed the global temperature rising over the past 150 years with an increasing rate of temperature rise. He noted the correlation between the rapid increase in atmospheric CO₂ since the industrial revolution and the shrinking polar ice caps.

Turning to global growth of wind energy generation capacity, he said from 1995 to 2006, global wind capacity had grown from 4800MW to 74,223MW. Last year, approximately 15,000MW of wind turbines were installed around the world. Roughly speaking this is one third of Australia's installed capacity of generators on the National Electricity Market.

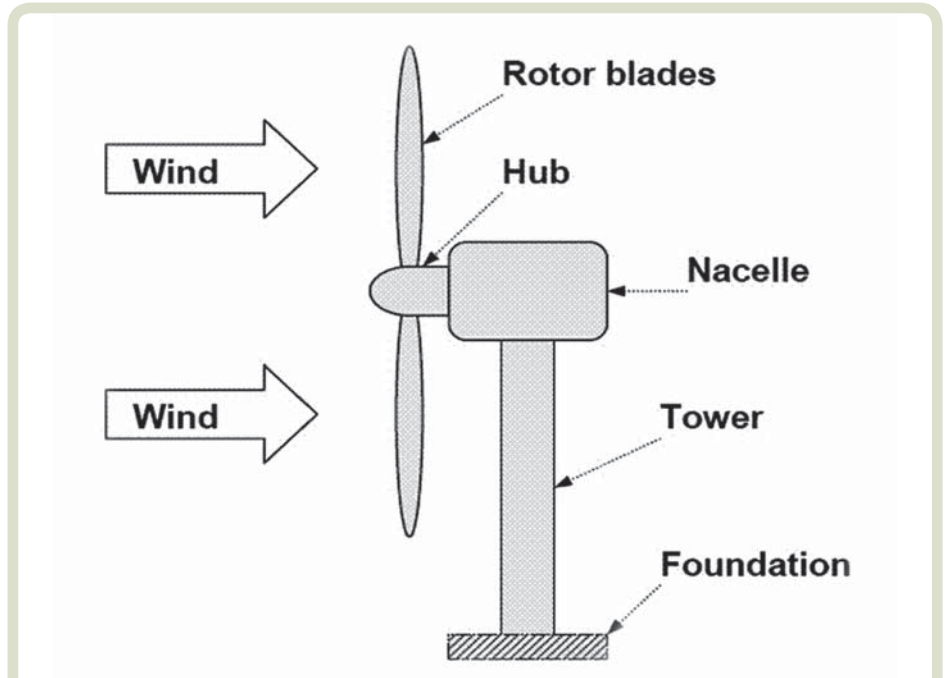
Another comparison is that Tasmania has approximately 2500MW of installed generation. There is growth in manufacturing capability for wind turbines coming online and a world wide shortage of wind turbines.

He predicted 2007 and 2008 would experience similar growth. Germany has 27% of the global capacity followed by the US and Spain with 16% each. India has 8%, Denmark and China 4% each, Italy and the UK 3% each, Portugal and France 2% and the rest of the world held 15%.

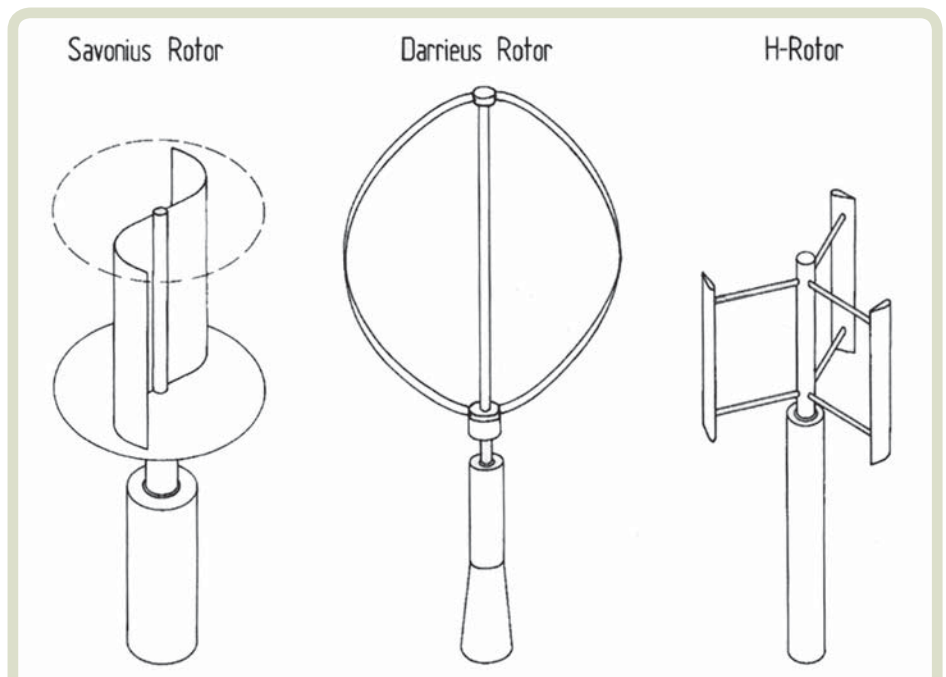
Fulton discussed the development of wind power technology over the past 25 years by describing the various blade and hub technologies, blade construction methods and drive train configurations. Technology among manufacturers has converged on three-blade, upwind turbines with active yaw control, pitch regulation and variable speed rotors.

This design allows the wind to strike the blades before it strikes the tower and the swept area, which is the area within the rotating blades. He said other wind turbine designs such as the Savonius rotor, Darrieus rotor and H-rotor have been tried many times before but would be more suitable for non-utility applications such as on top of buildings.

Technology that has not completely converged includes the generator type, whether there is a gearbox or a direct drive



An upwind turbine. In this design, the wind strikes the blades before it strikes the tower and the swept area is that area within the rotating blades.



Wind turbine designs (l-r) – the Savonius rotor, Darrieus rotor and H-rotor.

configuration, the structure of the wind turbine and the type of tower utilised.

There are now 5MW machines being produced. These machines have reached the limits for crane and transport.

In summary he said the outcomes of the better technology include lower envi-

ronmental impact on all fronts, lower noise and lower blade RPM, safer operation and maintenance, more aesthetically pleasing wind farms due to lower numbers of wind turbines spaced further apart, higher energy output at a lower cost and requiring less maintenance.

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

Electrical Engineering

Conference: 1st annual RFID Eurasia conference and exhibitions (3 days) Istanbul, Turkey 5 Sep. *Inquiries:* web www.rfideurasia.com

Symposium: Electromagnetic Society of Australia annual symposium (3 days) Melbourne 11 Sep. *Inquiries:* email enquiries@emcsa.org.au, web www.emcsa.org.au

Conference: IDTechEx RFID Europe 2007 (2 days) Cambridge, UK 18 Sep. *Inquiries:* email c.jennings@idtechex.com, web rfid.idtechex.com/rfideurope07/en/index.asp

Seminar: High voltage plant & equipment (1 days) Melbourne 18 Oct. *Inquiries:* Noël Dos Santos, Electric Energy Society of Australia 03 9326 7266, fax 03 9326 7272, email eesa@materialsaustralia.com.au, web www.eesa.asn.au

Conference: Electric Energy Society of Australia NSW chapter state conference (3 days) Sydney 12 Sep. *Inquiries:* Helen Mackenzie, Electric Energy Society of Australia 02 9810 7322, fax , email meetings@tmm.com.au

Engineering Education Australia

Courses: Electrical engineering practice – module 2 power systems design principles (2 days) Sydney 23 Aug; **Electrical engineering practice – module 3 power systems, motor starters and power quality** (2 days) Sydney 27 Sep; **Electrical engineering practice – module 4 earthing systems** (2 days) Sydney 25 Oct; **Electrical engineering practice – module 5 inspection, testing, commissioning and contract management** (2 days) Sydney 29 Nov;

Information & Communications Technology

Conference: Broadband Australia 2007 (2 days) Sydney 20 Aug. *Inquiries:* 02 9080 4307, fax 9290 3844, email registration@informa.com.au, web www.informa.com.au/broadbandaustralia

Conference: AusWireless 2007 – 2nd Australian conference on wireless broadband and ultra wideband communications (4 days) Sydney 27 Aug. *Inquiries:* 02 9514 2495, fax 02 9514 2435, email agbinya@eng.uts.edu.au, web auswireless.eng.uts.edu.au

Conference: European conference on circuit theory and design (5 days) Seville, Spain 26 Aug. *Inquiries:* ecctd07.imse.cnm.es

Conference: Venture capital connect 2007 (1 day) Adelaide 30 Aug. *Inquiries:* web www.slatteryit.com.au/vcconnect2007

Conference: National conference on information technology: Present practices and challenges (2 days) New Delhi, India 31 Aug. *Inquiries:* email ncit@asiapacific.edu, web www.asiapacific.edu

Preparing for HV audit or inspection (2 days) Brisbane 6 Sep, Melbourne Perth 8 Nov; **Project management** (2 days) Brisbane 23 Aug, 15 Nov, Perth 30 Aug, 22 Nov, Adelaide 13 Sep, Canberra 11 Dec, Darwin 18 Oct, Hobart 27 Nov, Melbourne 1 Nov, Sydney 6 Nov; **Power piping design and fabrication** (5 days) Sydney 27 Aug. *Inquiries:* Frank Martinelli, general manager, Engineering Education Australia 03 9326 9777, fax 03 9326 9888, email frankm@eeaustralia.com.au, web www.eeaaust.com.au

Conference: 18th IEEE international symposium on personal, indoor and mobile radio communications (5 days) Athens, Greece 3 Sep. *Inquiries:* web www.pimrc2007.org

Conference: ITA07: 2nd annual conference on internet technologies & applications (4 days) Wrexham, Wales 4 Sep. *Inquiries:* Vic Grout, email v.grout@newi.ac.uk, web www.ita07.org

Conference: International broadcasting convention (6 days) Amsterdam, The Netherlands 6 Sep. *Inquiries:* web www.abc.org

Conference: Wallingford Software international user conference (3 days) 11 Sep Oxforeshire, UK. *Inquiries:* 02 9006 1603, fax 02 9006 1010, email sales@wallingfordsoftware.com, web wallingfordsoftware.com/iuc07

Conference: 20th international conference on parallel & distributed computing systems (3 days) Las Vegas, US 24 Sep. *Inquiries:* email isca@ipass.net, web www.isca-hq.org/iscaconf.html

Conference: 20th international conference on parallel & distributed computing systems (3 days) Las Vegas, US 24 Sep. *Inquiries:* email isca@ipass.net, web www.isca-hq.org/iscaconf.html

Conference: 66th IEEE vehicular technology conference (4 days) Baltimore, US 30 Sep. *Inquiries:* web www.ieeevtc.org

Conference: European microwave conference (4 days) Munich, Germany 9 Oct. *Inquiries:* web www.eumweek.com

Conference: Government technology world 2007 (3 days) Canberra 15 Oct. *Inquiries:* 02 9021 8808, fax 02 9281 5517, email vanessa.riley@terrapinn.com, web www.intelligentgovernmentworld.com/2007/gtw%5Fau

Conference: ISCIT 2007: 7th international symposium

on communications and information technologies (4 days) Sydney 16 Oct. *Inquiries:* web www.elec.uow.edu.au/ISCIT2007

Conference: M2NM 2007: First ambient networks workshop on mobility, multiaccess, and network management (4 days) Sydney 16 Oct. *Inquiries:* web www.nicta.com.au/research/projects/ambient_networks/m2nm-2007

Conference: Systems 2007 (4 days) Munich, Germany 23 Oct. *Inquiries:* web www.SYSTEMS-world.de

Conference: International workshop on hyperspectral remote sensing (1 day) Kuala Lumpur, Malaysia, 17 Nov. *Inquiries:* www.usq.edu.au/users/apana/hypers2007

Conference: Siggraph 2008 – the 35th international conference on computer graphics and interactive techniques (5 days) Los Angeles, US 11 Aug, 2008. *Inquiries:* www.siggraph.org/events/s2008

Miscellaneous

Conference: 3rd annual skilling Australia summit (2 days) Melbourne 27 Aug. *Inquiries:* 02 9080 4307, fax 02 9290 3844, email registration@informa.com.au, web www.informa.com.au/skillingaustralia

Conference: 12th international conference on the commercialisation of micro and nano technologies (5 days) Melbourne 2 Sep. *Inquiries:* www.mancef-coms2007.org

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

Systems Engineering

Conference: Systems engineering/test & evaluation conference (4 days) Sydney 24 Sep. *Inquiries:* web www.sapmea.asn.au/conventions/sete2007

Large format printer

Epson has released the 64-inch Stylus Pro 11880 large format printer with eight colour pigment ink with vivid magenta and vivid light magenta.

It can be used for colour critical printing applications such as retail point-of-sale displays, contract and imposition proofing, photography, limited edition fine art print making and detailed colour maps.

It is the first printer from the company to have a thin film piezo print head with 360 nozzles per inch for each of its nine active 700ml ink cartridges. It supports active photo and matte black inks and has professional media handling capabilities from A4 to 64 inch wide rolls, automatic nozzle check technology, and improved image processing algorithms. It can also print many sizes on media from 8 x 10 inch through to 54 inch wide.

By using high density pigments, the printer improves the short and long term colour stability of prints and reduces meta-meric effects.

The printer has an ink repelling coating for the printhead and automatic nozzle check to reduce down time by minimising and detecting nozzle clogging before it becomes serious. This also reduces paper waste during the cleaning process.

It uses a sensor near the print head that counts the electrical charges on the ink droplets as they are fired. A lower than expected electrical charge means insufficient ink was fired, so the print head cleaning process automatically starts.

Because both photo and matte black inks are mounted and active, the printer can automatically switch between the two black ink modes as required.

It has a built in automatic media cutting system and an automatic take-up reel system as standard. It can print a barcode and text on partially used paper rolls to record how much paper is left and what type of



The printer uses an image processing technology half toning algorithm that improves print speed.

media it is, allowing users to confidently switch between paper types and rolls for different jobs.

The printer uses an image processing technology half toning algorithm that improves print speed and produces more stable half tones and an even better print quality in both high and low resolution print modes.

Clearer half tones are readily visible in the details of higher color saturation patches. It reduces colour twist, which brings out greater detail in shadows and supports stable shadow gradation across all tones.

It comes with USB2.0 and gigabit Ethernet as standard interfaces.

More information – Qikreply 27

Wireless mesh networking

Honeywell has released its OneWireless universal industrial wireless mesh network device.

The unit helps improve plant safety, reliability and efficiency with a scalable wireless infrastructure that supports wireless-enabled devices in strategic locations throughout a facility. The universal network supports multiple industrial protocols and applications simultaneously, providing a single wireless network that is simple to manage and efficient to operate.

Scalable to 30,000 devices, it supports the company's existing XYR 5000

wireless transmitters and also the newer 6000 transmitters, which includes corrosion, gauge pressure, differential pressure, high-level analog input and temperature transmitters.

It also supports wired transmitters, mobile worker devices, and standard Wi-Fi and Ethernet clients. The open, standards-based infrastructure allows manufacturers to take advantage of new applications as they become available.

The units have been deployed at Nucor Steel Tuscaloosa in Alabama, US where the network is configured with wireless tem-

perature and pressure sensors to improve the efficiency of several steel-manufacturing processes.

The pressure sensors, for example, enable operators to measure air filtration system performance and schedule maintenance only as needed.

Nucor also uses the technology in its bag house, a building which filters air from the steel-making process to eliminate potentially harmful substances. The differential pressure transmitters monitor the bags to determine when they need cleaning.

More information – Qikreply 29

Substation communication multiplexer

The CM-100 hardened substation communication multiplexer available from Dewar electronics collects asynchronous or synchronous data electrically or over fibre optic per C37.94 from intelligent electronic devices inside a distribution or transmission electrical power substation.

It also collects voice, analogue and discrete data.

The unit has 12 digital signal 0 channels, synchronous communications and bit error correction.

The single transceiver module is available in either a C37.94 optical, or a C37.94/T1/E1 combination optical/electrical interface.

The use of standard communications

protocols allows the unit to interface with larger multiplexers. It is equipped with a choice of power supplies and fibre optic heads.

Programming is performed on-board utilizing the front panel keypad and display.

The unit enclosure is a 19" wide, one unit-high, rack-mountable chassis.

The unit comes with diagnostics, bit error correction and bit error detection tools.

The communication multiplexer is supplied with five alarm relays. When the bit error correction is activated, interfaced intelligent electronic devices receive bit error communications.

There are 12 different interface modules available of which the unit -100 can carry 6 in addition to the standard C37.94 transceiver, and power supply.

Interface modules available include C37.94 optical, electrical G.703, RS-422, RS-232, RS-485, low-speed Ethernet, either two-wire or four-wire voice, eight discrete inputs and eight discrete outputs, one 8 analogue input module and an 8 analogue output module and a redundant power supply.

Applications include protective relaying, intra and inter substation communications, multi point communications and bit error correction/detection.

More information – Qikreply 26

Program for database design

FileMaker has released its FileMaker Pro 9 desktop database for Windows and Mac OS.

The new product includes FileMaker Pro 9, FileMaker Pro 9 Advanced, FileMaker Server 9 and FileMaker Server 9 Advanced.

The program, which allows users to

create, automate, share and report from databases, has a new Quick Start screen for new users. It has conditional formatting, which highlights data based on parameters the user sets and the ability to email a link to other FileMaker users, which they can click to access your database. It enable workgroups to share databases over the

network and the web.

Users and workgroups in the database can connect to company and web data in external SQL data sources such as MySQL, Oracle SQL and Microsoft SQL Server. It has a new admin console and features such as the debugger and data viewer and conditional formatting and script group functions.



The lock measures 9cm x 4.5cm x 3cm.

Protect against mouse/keyboard theft

Targus has released a keyboard/mouse lock attachment for cable locks.

The lock measures 9cm x 4.5cm x 3cm.

The three-slot design of the lock brings

cables together, helping keep the workspace clear and uncluttered.

Intended as a corporate product, the lock is sold in packs of five.

More information – Qikreply 23

The append to PDF function allows users to consolidate multiple data reports into a single PDF file.

Mac users of the new FileMaker products can connect to SQL sources with the Actual ODBC Pack version 2.7.

The quick start screen remembers favorites and allows access to the new videos in the learning centre.

Send link database sharing is a one-click feature that sends an email with a hyperlink so users can share a database with other FileMaker Pro users.

The append to PDF function allows users to consolidate multiple data reports into a single PDF file.

Database design features include script grouping and editing tools, conditional formatting, auto-resize, enhanced layout objects, enhanced tab control and an improved web viewer.

Other major new features include PHP Custom Web Publishing for creating dynamic data-driven websites, shared access to live data from external SQL sources, and a web-delivered server console.

More information – Qikreply 28

Monitoring system

Rittal has released its RimatriX5 computer multicontrol top concept (CMC-TC) in Australia, a monitoring system for physically securing data centre environments, preventing unnecessary downtime and excluding unauthorised access.

The unit has been designed to provide IT and facility managers with a centrally controlled point of information to manage physical racks and room security.

Up to four sensors can be connected to each processing unit

It has a modular architecture with access authorisation and can monitor ambient conditions. Temperature, smoke and vibration sensors, together with sophisticated access control solutions and tested enclosure extinguisher systems, provide for reliable rack protection against external influences and tampering.

In its basic version, CMC-TC comprises distributed function modules in the form of processing units and sensors. Up to four sensors can be connected to each processing unit, where they are able to monitor one or more functions, as appropriate to the application in hand. The processing unit incorporates an Ethernet port as an interface to the outside world.

Where managers require a large number of IT racks to be monitored simultaneously, CMC-TC can integrate a master unit which acts as a central platform for the administration of up to 10 processing units and two USB cameras. The master unit provides visualisation of the overall system via all typical graphics-capable Web browsers and guarantees a fast overview of all important and security-relevant functions.

🔗 *More information – Qikreply 22*



The unit has been designed to provide IT and facility managers with a centrally controlled point of information to manage physical racks and room security.

CAD software for machining

CAD company VX Corporation has developed a new machining feature for its upcoming CAD/CAM 13 software.

Called Offset3D feature aware machining, it produces accurate tool paths and helps mold-makers produce smooth surfaced molds with crisp, fine highlights.

Mold-makers can be required to machine complex core/cavity shapes derived from sources that include non-native CAD models, standard template library repre-

sentations and point cloud data.

A challenge is ensuring that product features with crisp highlights are maintained and preserved in the finished mold.

The new machining feature lets mold-makers target highlight areas, and then the software automatically adjusts tool path motion to preserve fine, sharp-edge detail and maximise tool cutting efficiency.

🔗 *More information – Qikreply 30*

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.