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## Monitoring system for Great Barrier Reef

A \$15.7 million ocean observing system in Queensland's Great Barrier Reef built by the Australian Institute of Marine Science (AIMS) in Townsville will use floating computer sensors to investigate corrosion of the coral reef.

The project, which will run until 2011 on current funding, is led by AIMS on behalf of a consortium of agencies that includes James Cook University, Great Barrier Reef Island research stations, University of Melbourne and CSIRO. The marine tourism industry is participating in the observing system by installing sensors on some of their vessels. Funding has been provided by the federal National Coral Reef Action Strategy project, the Queensland government and AIMS.

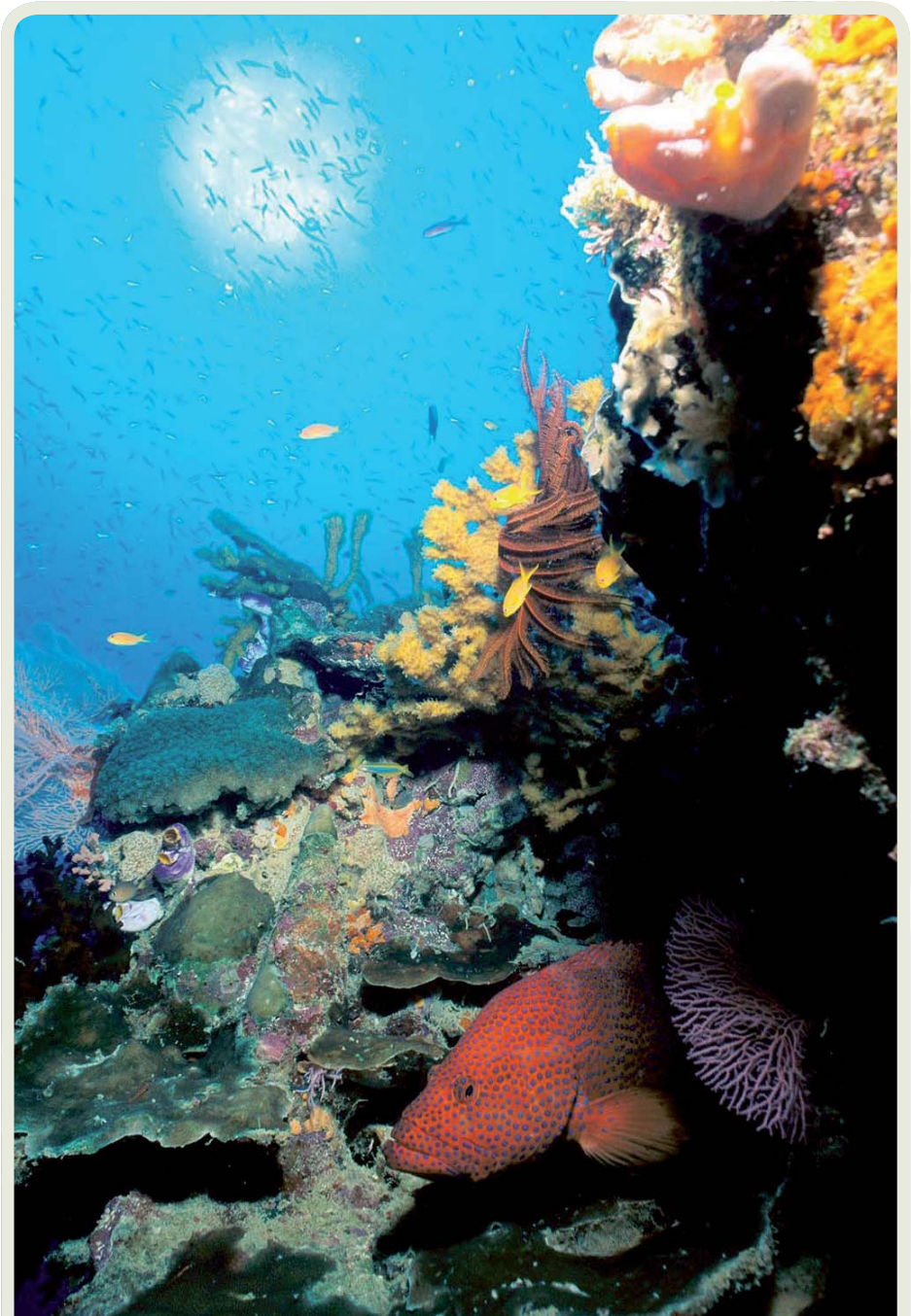
Although the modelling and IT components of the ocean observing system have been under development for several years, the data collection method is new. This is achieved by a network of floaters in the water covering the eastern Coral Sea and the reef. On each floater is a cable embedded with sensors which dangles freely into the ocean. These sensor cables, which can be 12m to 200m long, will gather data on temperature, salinity, depth, and fluorescence.

The project relies on a mix of computing facilities – a Linux Red Hat cluster, Sun systems as well as computing systems from James Cook University and Queensland Cyber Infrastructure Foundation. Some of the larger floaters have an acoustic modem which transmits data picked up by the sensors using Telstra Next G or 100MHz third spectrum radios.

There are webcams anchored underwater which take low-resolution photographs. "We'd like to move onto higher resolution but the high bandwidth is a problem," said project manager Scott Bainbridge.

It is hoped this data will be used to model the flow of warm water through the Coral Sea into the reef which is believed to cause corrosion.

The data collected will enable more accurate forecasting and improved understanding of the process sustaining the biodiversity of the reef.



*A network of underwater computer sensors will investigate coral corrosion in Queensland's Great Barrier Reef.*

PHOTO: TOURISM QUEENSLAND

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ENGINEERS AUSTRALIA

## Companies' biggest IT security threat comes from within

Findings by Galaxy Research have revealed 34% of IT managers in Australia and New Zealand consider inappropriate use of the web by employees to be the biggest threat to their security infrastructure.

Inappropriate web use was rated higher than converged threats (33%), management complacency with existing systems (13%), insufficient budget allocation to security (9%) and inappropriate use of the internet by contractors and temporary staff (7%).

Of the IT managers surveyed, 95% said their companies had corporate policies defining acceptable internet usage.

and email traffic, and then educating or taking action against employees who have accidentally or intentionally abused the ePolicies in their workplace.

"Organisations must establish clear policies using exact terminology. Then, businesses should educate or re-educate their workforce. Businesses need to enforce their policies using technology and disciplinary action.

"Organisations should be clear with employees about what is they can and cannot do," he said.

The findings also revealed 79% of organisations review their policies at least once a year. Only 25% review their policies

## Businesses need to enforce their policies using technology and disciplinary action.

However, many of these so-called ePolicies were not being enforced, despite 90% of IT managers admitting to monitoring their employees' internet use.

Employees that circulate emails or visit websites featuring pornographic content, gambling, social networking, as well as pirated software, music and videos are putting their organisations at risk, according to Andrew Antal, country manager for Australia and New Zealand at IT security company MessageLabs.

This can lead to potentially costly and time-consuming legal, regulatory, security, and productivity headaches.

Antal said a significant gap has emerged between the process of monitoring web

every six months or more.

Of the IT managers surveyed, 80% currently see employee training as playing an important role in maintaining secure networks.

"Regularly reviewing and updating email and web policies is vital for businesses to ensure their policies comply with laws governing work relations, privacy, and the internet, and address emerging technologies like instant messaging and social networking," Antal said.

MessageLabs is offering a free resource download featuring sample web and email usage policies and a best practice guide at [www.messagelabs.com.au/white\\_papers/epolicy\\_form](http://www.messagelabs.com.au/white_papers/epolicy_form).

## Car design partnership continues

Ford Performance Racing's (FPR) V8 Supercar Championship Series team has renewed a contract for design software with Product Lifecycle Management Australasia (PLMA).

The agreement will see FPR's engineers continue to design using PLMA's NX I-deas technology, which it adopted for its operations four years ago.

"We weren't using a 3D CAD package before then so any parts we designed were 2D," said design engineer Andrew Neilson.

"Complex shapes needed to go out and be redesigned in 3D for manufacture so this software has absolutely allowed us to become more independent. We have all the

conceptualising, validating, designing and manufacturing tools in-house now."

The software is used to create engineering designs, from radiator end plates to wheel hubs, which are then passed to the team's machine shop to be manufactured. It was recently used to design new FG Falcon race car

"Since using the software, we've been able to design the car from the ground up," said Neilson.

"We manufacture our parts to be accurate to within 1mm so they can be interchanged between cars. We can test each part quickly with very short lead times whilst still having confidence they will work."

## Australians to lead United Nations computer project

Griffith University in Queensland is participating in a United Nations (UN) project for managing e-waste which is discarded computer equipment such as keyboards, monitors and hard disks.

The UN's Solving the E-Waste Problem (STEP) Asia Pacific program aims to create a regional hub dedicated to reducing the 40Mt/a of e-waste produced globally.

Leading the E-Waste hub on behalf of the STEP project will be Griffith University's Dr Sunil Herat. He is currently researching the sustainable management of electronic waste in the university's E-waste Research Group. Malcolm Wolski, associate director of research computing services at Griffith University, will also be working on the project.

The program consists of five parts. These are – ReDesign which will investigate design to streamline reuse, repair, refurbishment and recycling; ReCycle which will look at improving global recycling infrastructure; ReUse which will develop replicable and sustainable global reuse systems; Policy & legislation; and capacity building to boost the number of governments, companies and NGOs taking part, and help facilitate a regional e-waste summit.

"Universities have a unique role in building e-waste minimisation into formal education for engineers and IT professionals, and leading collaborative research projects with published results that will inform both the science and the legal and regulatory debate," he said.

He was approached by the UN last year to create the hub. "The program is advanced in Europe and the US, but has not had a large presence here, which is ironic as most of the manufacture and disposal of consumer electronics takes place in the Asia-Pacific," he said.

He said the EU had introduced the Waste Electrical and Electronic Equipment (WEEE) Directive, which states manufacturers must take back and dispose of the goods they produce.

"Developed countries are the biggest designers and consumers of technology but the manufacturing, and therefore the waste disposal often takes place out-of-sight out-of-mind in developing countries," he said.

"UN figures show only a small minority of the world's population is covered by any regional e-waste policy measures. As a result waste that is not stored and processed adequately results in toxic emissions from burning, soil and water contamination from pollutants such as mercury, lead and cadmium leaching, and the inefficient recovery of valuable recyclable materials," Herat said.



*Griffith E-waste Research Group head Sunil Herat and associate director of Research Computing Services at Griffith University Malcolm Wolski are figuring out how to reduce electronics waste from computers.*

## IT hardware standards are lacking

The Australian Standard for Computer Accommodation AS2834-1995 has failed to keep up with current support system requirements for IT hardware, according to the Melbourne Afcom user group for Data Centre professionals. Afcom is a US association of data centre management professionals.

To solve this, the organisation is inviting people or organisations to contribute ideas in revising the review, after receiving endorsement from Standards Australia.

"It is acknowledged that there are some elements not existing at all such as

resiliency and redundancy, inter-data centre and intra-data centre communications, energy conservation (green data centres) and infrastructure racking," Afcom said.

To participate in this review, contact Alan McCubbin on 03 95894054.

Responders will then be on the review committee and advised of a date for a conference call to commence review proceedings.

At this call, any options to the proposed direction or tactics of this review will be discussed.

## Keeping a company connected in rural Victoria

Victorian water company Wannon Water has installed a unified communications network from Microsoft and Nortel.

The new network will integrate the organisation's existing Nortel communications network with Microsoft Live Communications Server 2005 and Microsoft Office Communication Server 2007, creating a company-wide unified communications network covering 200km<sup>2</sup> of rural Victoria.

Staff will be able to view other staff when they are online at any of the company's 21 field offices, direct incoming and internal calls, and travel less.

The system will be rolled out across the company, starting with the knowledge and technology department where it has been tested for the past month.

The system will include Nortel's Communication Server 1000 integrated with Microsoft Live Communications Server and Office Communications Server. It also includes more than 150 Nortel 2002 and Nortel 2004 IP handsets, and Nortel Business Communication Manager IP PBXs at the company's smaller regional offices.

The company hopes the new system will reduce communications costs by eliminating long-distance charges on its wide area network, reduce mobile phone use, encourage remote training and support, and better comply with legislated customer service levels.

Initially, the company put out a public tender to unify its separate communications networks which were a result of the merger of three regional water authorities



*Andrew Dille, a member of the IT team, working in the network room of the company's head office in Warrnambool.*

to create Wannon Water. In that process it discovered the benefits of unified communications.

One of them is the ability to remotely support staff through the Microsoft Office Communicator client and offering limited remote training by taking control of their PCs to run live tutorials on how to use the

software.

"With more than 150 full-time staff, it all adds up to improved efficiencies and a marked reduction of our carbon footprint through unnecessary travel, which is one of the operational goals of the organisation," said John Parker, systems support officer.

## 3D images to reveal the earth's hidden riches

The Victorian government has invested in a state-of-the-art 3D facility to help prospectors find untapped deposits of minerals, oil and gas in the state.

The 3D Visualisation Room at GeoScience Victoria is a state-run facility designed to reduce the time, cost and risk of searching for mineral and petroleum deposits.

It allows exploration companies to look

at maps of Victoria and Bass Strait in 3D form showing where mineral, oil and gas deposits were located, giving them a more accurate picture of where to drill.

Up to 1.4 million kilograms of gold is estimated to be in Victoria, with some of that lying underground north of Bendigo and near Walhalla and Woods Point.

State energy and resources minister

Peter Batchelor said the technology would assist the development of a whole-of-Victoria 3D model currently being constructed as part of the Victorian government's \$2.5 million Rediscover Victoria 3D program.

He said the 3D maps would also help to identify potential sites for geosequestration, the capture and permanent storage of carbon dioxide.

## Australian researcher recognised

A research director from National Information and Communications Technology Australia (NICTA), Prof Toby Walsh, has been elected a Fellow of the Association for the Advancement of Artificial Intelligence (AAAI).

This fellowship recognises significant, sustained contributions to the field of arti-

ficial intelligence. It has been won by four Australian residents since it was established in 1990. Around ten AAAI members from across the world are selected for the fellowship award in any single year.

Walsh is the research manager for the managing complexity group at NICTA's Neville Roach Laboratory in Sydney.

This research group addresses issues arising from the design, operation and analysis of large-scale complex systems.

Walsh has made a major contribution to the Smart Transport and Roads traffic management project, which NICTA is undertaking in collaboration with the NSW Roads and Traffic Authority.

## When computer scientists make art

An exhibition opening this month at the University of Sydney's School of Information Technologies building will allow those working in engineering-related fields to show their artistic side.

Called "Visual Connections at the School of IT", the exhibition includes pieces by scientists and artists with a connection to the School of IT such as past students and lecturers.

Some works in the exhibition are images of information visualisation where the artist has taken a large amount of information and rendered it into two- and three-dimensional surfaces, creating pictures from the abstract data.

Artists whose works are exhibited include PhD graduates Keith Nesbitt and Tim Dwyer, and Seok-Hee Hong who is a senior lecturer and Australian Research Council fellow at the School of IT.

According to Prof Peter Eades, who helped organise the exhibition and is the chair of software technology at the School of IT, the exhibition explores the way people perceive a world rich in information while describing the links between information



*This artwork, **Abstract Trains of Thought** by School of IT alumnus Dr Keith Nesbitt, is one of the works featured in the exhibition at the University of Sydney.*

technology and art.

"Artists have had a long tradition of exploring and communicating in visual ways," said Eades.

"The information they seek to express ranges from unspoken emotions to cold logic, from the perceptual to the cognitive. So there is a connection between these artists and these scientists who visualise

information."

Eades said that many techniques and tools classically used by artists such as spaces of points, lines and surfaces, colours, symmetries, enclosures and connections, are now used algorithmically by computer scientists.

The exhibition will be on display until 24 June.

## Storing information about the planet's resources

IT companies IBM Australia and Tardis Services have signed a contract with Geoscience Australia to provide and support a robotic archive and data delivery system.

The system is designed to handle large data sets in a secure setting. Funded as part of Geoscience Australia's energy security program, the robotic system will be installed and operating by the end of this year.

Geoscience Australia has a database of national petroleum exploration data which is used by industry to assess Australia's hydrocarbon reserves and resources. It is central to the pre-competitive regional

studies made available to industry to stimulate exploration in frontier areas.

Currently, the data is held on a variety of media occupying several kilometres of shelf space. The new robotic system, which works on a principle similar to a music jukebox, will make retrieval of this information much faster.

The system is the heart of a larger strategy using IBM's scale out file service, a managed service providing technical assistance.

"This system will provide a common data management platform and has the potential to support data well beyond the

petroleum repository to include additional information such as satellite imagery archives," said chief executive officer of Geoscience Australia Dr Neil Williams.

"We're talking about petabytes (PB) of data which represents thousands of terabytes and billions of megabytes," he said.

IBM's Brendan Hawke said that as well as being compatible with Geoscience Australia's existing infrastructure, the new storage and retrieval system allowed for a predicted doubling of datasets over the next ten years.

This would result in an increase from the initial 1.2PB of data to 2.7PB.

## Microelectronics prize awarded to Adelaide student

Engineering student Troy Tobin has won the annual Institution of Radio and Electronics Engineers Prize in Microelectronics from the University of Adelaide.

The award recognises the best performance in the final year of the microelectronics digital and analogue courses at the university and was accepted by Tobin at the School of Electrical and Electronic Engineering at the University of Adelaide.

The award was presented by Jeff Walsh, deputy chair of the Information Telecom-

munications and Electronic Engineering College of Engineers Australia.

The project involved the development of a smart camera which was implemented in a software front-end and interfaced to a high-bit video stream.

The camera has applications in the field of surveillance where complex lighting conditions reduce the effectiveness of traditional cameras.

An example is a person in a building looking through a window at a photogra-

pher standing outside. The lighting conditions inside are much darker than those experienced in the outside environment. Using a conventional camera, the photographer would be unable to capture the difference in luminosity.

Tobin's camera system allows pixels in the captured images to be altered independently of the rest of the image. This method of processing allows information from all lighting conditions to be captured, producing a higher-quality photo.



Participants in discussion at the Software Engineering Forum in Perth.

## Thinking more about software engineering

by Dr Geoffrey Roy and Dr Jocelyn Amarego

Although much has been written on software engineering, definitions of its precise nature and foundations are still evolving.

The Software Engineering Forum, which is run by the Information Technology and Electronics Engineering College in Perth, aims to provide a meeting place for software engineers in addition to run-

the forum their own particular experiences in software development and project management

The forum is run as a round table with a topic leader for each meeting. A member, or occasionally a special visitor, will be invited to introduce the chosen topic for the meeting.

### Previous forum topics include requirements engineering, risk management and programming.

ning Chartered Professional Development activities.

The forum holds monthly meetings where industry professionals can meet and discuss the technical aspects of their discipline, exchange ideas, concepts and methodologies, and conduct technology transfer, both informally and through formal opportunities for linkage-type research opportunities. It also runs technical seminars and workshops.

Anyone who would like to attend is most welcome, but each member is expected to attend regularly and be an active contributor.

In this way members get to know each other and they are encouraged to bring to

This introduction will not last more than 10 minutes – minimal preparation is required.

The forum then functions through questions, discussion, and exchange of

experiences from the members.

There is a mix of academic and industry members: the ratio is about 1:3.

The forum is also open to non-Engineers Australia members as it is recognised that the software development industry crosses a range of traditional discipline boundaries, but there are significant areas of common interest and challenges for both software designers and project managers.

Previous forum topics include requirements engineering in an agile environment, risk management and the importance of programming.

Those interested in joining the forum can contact Dr Geoff Roy at [geoff@cad-plan.com.au](mailto:geoff@cad-plan.com.au).

## Workshop on software requirements

The Software Engineering Forum will be running a one-day workshop on progress in software requirements engineering on 1 August in Perth.

The goal of this workshop is to explore a range of design and management issues that arise from new developments

in requirements engineering.

The workshop is targeted at software designers and project managers that recognise the importance of getting requirements right. For more information on the workshop, contact Sharleen Mantle at [SMantle@engineersaustralia.org.au](mailto:SMantle@engineersaustralia.org.au).

For a more comprehensive list of engineering events, visit Engineers Australia's online events calendar at [www.engineersaustralia.org.au/events](http://www.engineersaustralia.org.au/events)

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

**Conference: 2008 international conference of computer science and engineering** (3 days) London 2 Jul. *Inquiries:* email [info@iaeng.org](mailto:info@iaeng.org), web [www.iaeng.org/WCE2008/ICCSE2008.html](http://www.iaeng.org/WCE2008/ICCSE2008.html)

**Conference: Oceania com** (2 days) Sydney 7 Jul. *Inquiries:* 02 9080 4307, fax 02 9290 3844, email [registration@informa.com.au](mailto:registration@informa.com.au), web [www.comworldseries.com/oceania](http://www.comworldseries.com/oceania)

**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](http://www.uow.edu.au/conferences/acisp%202008/index.html)

**Conference: Multiconf-08: Conference in computer science, information technology, computer engineering, control and automation technology** (4 days) Orlando, US 7 Jul. *Inquiries:* web [www.promoterresearch.org](http://www.promoterresearch.org)

**Conference: IEEE 8th international conference on computer and information**

**technology** (4 days) Sydney 8 Jul. *Inquiries:* 02 9514 4523, email [cit2008@it.uts.edu.au](mailto:cit2008@it.uts.edu.au), web [attend.it.uts.edu.au/cit2008](http://attend.it.uts.edu.au/cit2008)

**Conference: 2008 world congress in computer science, computer engineering, and applied computing** (4 days) Las Vegas 14 Jul. *Inquiries:* Professor Hamid R Arabnia, email [hra@cs.uga.edu](mailto:hra@cs.uga.edu), web [www.world-academy-of-science.org/worldcomp08/ws](http://www.world-academy-of-science.org/worldcomp08/ws)

**Conference: IWCE in association with 17th wireless & mobile comms conference** (3 days) Melbourne 23 Jul. *Inquiries:* 02 9080 4000, fax 02 9290 2141, email [info@iir.com.au](mailto:info@iir.com.au), web [www.iir.com.au](http://www.iir.com.au)

**Conference: Broadband Australia 2008** (2 days) Sydney 24 Jul. *Inquiries:* 02 9080 4307, fax 02 9290 3844, email [registration@informa.com.au](mailto:registration@informa.com.au), web [www.informa.com.au/broadbandaustralia](http://www.informa.com.au/broadbandaustralia)

**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](mailto:helen@materialsaustralia.com.au), web [www.aumrs.com.au/ICEM-08](http://www.aumrs.com.au/ICEM-08)

**Conference: 5th IET visual information engineering 2008**

(4 days) Xi'an, China 29 Jul. *Inquiries:* Shuai Wan +86 29 8849 2714, email [swan@nwpu.edu.cn](mailto:swan@nwpu.edu.cn), web [vie08.qmul.net/index.php](http://vie08.qmul.net/index.php)

**Conference: Siggraph 2008: 35th international conference and exhibition on computer graphics and interactive techniques** (5 days) Los Angeles 11 Aug. *Inquiries:* web [www.siggraph.org/s2008](http://www.siggraph.org/s2008)

**Conference: Virtual worlds conference & expo** (2 days) Los Angeles 3 Sep. *Inquiries:* Tonda Bunge +1 512 484 5574, email [tonda@showinitiative.com](mailto:tonda@showinitiative.com), web [www.virtualworldsexpo.com](http://www.virtualworldsexpo.com)

**Conference: International conference on automated software engineering** (5 days) L'Aquila, Italy 15 Sep. *Inquiries:* web [www.di.univaq.it/ase2008](http://www.di.univaq.it/ase2008)

**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](mailto:ichqp08@elec.uow.edu.au), web [www.ichqp2008.org.au](http://www.ichqp2008.org.au)

**Conference: Communications policy & research forum 2008** (2 days) Sydney 29 Sep. *Inquiries:* email [c.abad@networkinsight.org](mailto:c.abad@networkinsight.org), web [www.networkinsight.org/events/cprf08.html/group/6](http://www.networkinsight.org/events/cprf08.html/group/6)

**Conference: 11th international IEEE conference on intelligent transportation systems** (4 days) Beijing 12 Oct. *Inquiries:* email [itsc08@gmail.com](mailto:itsc08@gmail.com), web [www.ieeeitsc.org](http://www.ieeeitsc.org)

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

**Conference: IEEE international conference on e-business engineering** (3 days) Xi'an, China 22 Oct. *Inquiries:* Hua Zhang +86 29 8266 8971, email [icebe08@mail.xjtu.edu.cn](mailto:icebe08@mail.xjtu.edu.cn), web [conferences.computer.org/icebe](http://conferences.computer.org/icebe)

**Conference: ICSEA 2008: 3rd international conference on software engineering advances** (6 days) 26 Oct Sliema, Malta. *Inquiries:* [www.iaria.org/conferences2008/ICSEA08.html](http://www.iaria.org/conferences2008/ICSEA08.html)

**Conference: International conference on computers and industrial engineering** (3 days) Beijing 31 Oct. *Inquiries:* web [www.38cie.net/conference.aspx](http://www.38cie.net/conference.aspx)

**Conference: Australasian computer-human interaction conference** (5 days) Cairns 8 Dec. *Inquiries:* web [www.ozchi.org/mediawiki/index.php/OZCHI\\_2008](http://www.ozchi.org/mediawiki/index.php/OZCHI_2008)

**Conference: 2008 international conference on computer science and software engineering** (3 days) Wuhan, China 12 Dec. *Inquiries:* email [csse@highsci.org](mailto:csse@highsci.org), web [www.highsci.org/csse2008submission/website/csse/index.aspx](http://www.highsci.org/csse2008submission/website/csse/index.aspx)

**Conference: 5th international conference on electrical and computer engineering** (3 days) Dhaka, Bangladesh 20 Dec. *Inquiries:* email [icecetek@eee.buet.ac.bd](mailto:icecetek@eee.buet.ac.bd), web [www.buet.ac.bd/eee/icece](http://www.buet.ac.bd/eee/icece)

**Conference: Information online 2009** (3 days) Sydney 20 Jan, 2009. *Inquiries:* Emma Waygood 02 9437 9333, fax 02 9901 4586, email [infoonline2009@conferenceaction.com.au](mailto:infoonline2009@conferenceaction.com.au), web [www.information-online.com.au](http://www.information-online.com.au)

## CALL FOR PAPERS

**Conference: Wallingford Software's 9th international user conference** (3 days) Reading, England 16 Sep. *Inquiries:* [www.wallingfordsoftware.com](http://www.wallingfordsoftware.com)

**Abstracts due:** 18 Jul

## ENGINEERS AUSTRALIA SALARY AND BENEFITS SURVEY 2007



This publication, now in its fifth year, offers a different perspective on salaries and benefits as the information was derived from employers' HR departments. The online survey was commissioned by Engineers Media, undertaken by New Focus Research Pty Ltd and completed in December 2007.

Compiled with input from 143 engineering employers, employing approximately 13,000 engineers, this publication gives you the latest data on gross base salary and salary packages by total sector, discipline and grade. Separate tables analyse the data by private and public sectors and by location.

To purchase an electronic copy in pdf format go to

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Member price \$31 plus GST



### Cube enclosure protects business machinery

Rittal has launched the MicroTCA Cube enclosure, designed to MicroTCA.OR1.0 specifications for an industrial environment-based setting.

Manufactured from stainless steel, the unit measures 307mm x 118mm x 285/319 mm and is designed for the space-saving installation required by machine controllers and businesses which operate automation technology applications.

The enclosure is fully assembled, fitted with a backplane, wired and tested. It has an integrated AC/DC powerpack with a 250W output.

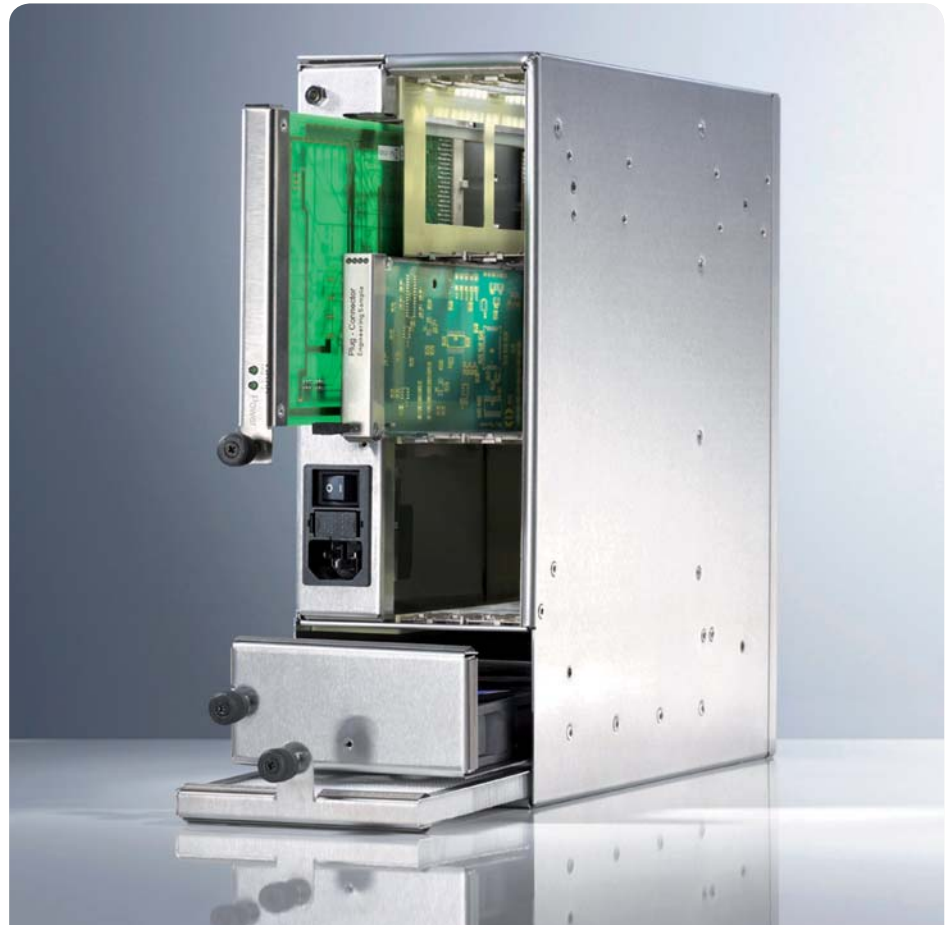
The unit can be assembled in a variety of ways including mounted on a support rail fitted directly on the enclosure's mounting plate or straight onto the machine itself.

This can be performed with the aid of the adaptor plates available as accessories which have integrated drilled keyholes or brackets for mounting directly on support rails. Both can be affixed to the enclosure's rear or side panel.

The unit has seven slots, including six for advanced mezzanine cards (AMC) and one memory control hub. In the unit, the AMCs are inserted directly in the backplane.

The system has self-diagnosis and switch functions and heat dissipation which is ensured by a plug-type fan module with two axial fans and a filter.

[More information – Qikreply 13](#)



*The enclosure is fully assembled, fitted with a backplane, wired and tested.*

### Notebook cases now available

Available in top-loading and clamshell configuration, the new Titanium notebook cases from Targus Australia are made from polyester and available in black or charcoal. They are supported by a lifetime warranty.

The Topload Titanium measures 39.4cm x 15.6cm x 33cm and weighs 1.49kg. A padded laptop compartment accommodates notebooks with up to 15.4 inch screens and incorporates an adjustable divider for smaller sizes.

A zip-down workstation with multiple pockets for accessories and consumables is complemented by a front-zippered pocket designed for quick-access items such as tickets and passports.

A separate zip-around file section has two dividers providing storage for documents or magazines with a rear slip pocket.

The case has rubber feet for shock absorption and has a lockable main compartment. It has dual handles, a shoulder strap and a trolley strap to hook onto rolling



*The case has rubber feet for shock absorption and has a lockable main compartment.*

luggage.

Also designed for notebooks with 15.4 inch screens, the Clamshell Titanium is slightly larger at 39.4cm x 16cm x 34cm

and weighs 1.64kg. With identical storage capacity, the main difference is the means of access and the moulded handle.

[More information – Qikreply 20](#)

## Satellite tracking for mobile fleets

Kirtech has released IntelligentFleet, a GPS tracking software for fleet tracking.

The software offers full asset visibility with both 2D mapping and 3D satellite imagery with extensions to the Google Earth interface.

The software makes it easy to manage containers, vehicles and other mobile (or potentially mobile) assets, anywhere, anytime.

The software offers customers the ability to send tracking signals via the normal mobile telephone network (GPRS or SMS) for tracking in metropolitan regions, or signalling through satellite (Inmarsat) for world-wide tracking where mobile networks may not be available.

GPS tracking hardware may be installed in vehicles such as trucks, buses, cars, vans, aircraft, tractors, trains and even bicycles to give business operators the tools to know where their assets are, what they are doing, what they have done and more.

With advanced GPS devices, the software can advise when doors have been

opened, movement detected, speed limits exceeded and temperature limits exceeded. The GPS tracking software can monitor engine hours load levels.

**The software makes it easy to manage mobile assets.**

The software may also provide two-way satellite communications with the driver and may include the option of a panic button when operating in potentially hazardous

environments.

The software can provide detailed street-level maps covering most of the populated areas in the world and its Google Earth integration provides detailed 3D satellite imagery where street level mapping may not be available.

The software supports customers in most countries in the world including Afghanistan and Zimbabwe.

*More information – Qikreply 24*

## Liquid crystal display televisions

Teac Australia has released two high definition LCD televisions, the 19 inch LCD-V1955HD and the 22 inch LCDV2255HD LCD/DVD combo units.

The units have integrated DVD players and high definition tuners.

They also feature the company's MST-ACE chip which delivers improved colour, contrast and detail. The unit can produce picture quality up to 1080i images.

It has a MMC, MS and SD card reader which allows downloaded DivX movies or photos to be viewed without having to burn them to a disc.

Both units have a resolution of 1440 x 900 and a widescreen aspect ratio of 16:10. The remote control can operate the television and the DVD player from one unit.

*More information – Qikreply 18*

## Securing embedded web devices

Rabbit has announced the release of an updated version of the Secure Embedded Web Application Kit which has new security sample programs and software tools.

Customers can use the kit to implement web and data security into their embedded application.

The kit offers a guide for design engineers who are new to the challenges of embedded security, getting them up-to-speed quickly and developing code for secure web pages and data exchanges.

The updated version has a RCM4300 RabbitCore with a 512MB mini SDTM card, a prototyping board, accessories, and development tools to get up and running quickly.

It has a Dynamic C integrated development environment with an editor, compiler, and in-circuit debugger.

The kit has enhanced with support for file allocation table file systems, for easy data storage, support for secure sockets layer and transport security layer, and encryption standard security. The included security application sample programs facilitate the implementation of a solid embedded system that uses the latest SSL/TLS secure data transmission technology.

For a limited time, the reference book Practical Embedded Security will be bundled with the kit.

*More information – Qikreply 17*



*The kit offers a guide for design engineers who are new to the challenges of embedded security.*

## Japanese portable computers

Tegatech Australia is now distributing a new range of portable computers by Japanese manufacturer Kohjinsha.

Some of the features of the computers are DVD RW drives, 120GB hard disks and touchscreens.

Five models are available. One is the SA5 which has a 500MHz processor, 512MB memory and a 40GB hard disk.

The SH610BS has a 600MHz processor, 512MB memory and a 120GB hard disk.

The SH811WS has a 800MHz processor, 1GB memory and a 120GB hard disk.

The SR8KP06S has a built-in DVD drive and available in black or white which a 800MHz processor, 1GB of memory and a 60GB hard drive.

*More information – Qikreply 22*

## Voltage supervisor for up to five channels

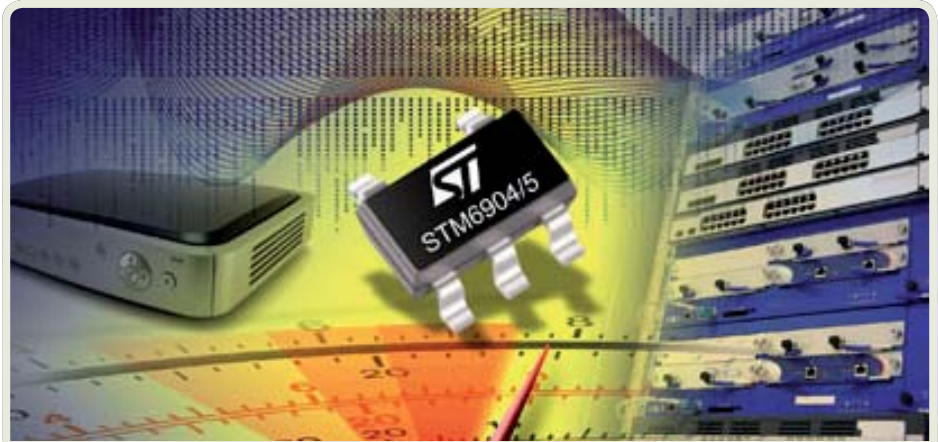
STMicroelectronics has released STM6904/5 four- and five-channel voltage supervisors that save space, cost and power, while ensuring the integrity of multi-voltage systems such as set-top boxes, telecom and networking equipment, computing and data-storage systems.

The STM6905 has five monitored channels and a fixed delay-to-reset time of 210ms. The STM6904 offers additional user-selectable reset delay times while monitoring up to four channels.

By providing more channels than earlier devices, these new integrated circuits allow engineers to monitor more voltage rails within a given system without adding extra supervisor circuits.

The units generate a logic-low reset signal if any of the monitored voltages fall below the threshold. A manual reset pin is also provided, allowing designers to have a push-button or system-controlled reset.

Two of the channels have factory-preset thresholds, while the remaining inputs are user-configured using external resistors. The primary monitor can be factory-preset



*The units generate a logic-low reset signal if any of the monitored voltages fall below the threshold.*

for a threshold between 2.866V and 3.078V. The second fixed threshold can be preset between 1.050V and 2.333V. The remaining inputs provide freedom for engineers to adjust the threshold voltage from 1.050V to 3.078V using a voltage-divider network.

Both devices operate from 0.8V to

5.5V across the -40°C to 85°C industrial temperature range. Voltage-threshold accuracy of +/-1.8 % is maintained over the full temperature and voltage ranges. The reset output is valid for supply voltages down to 0.8V.

☞ *More information – Qikreply 19*

## Module for cellular base stations and antennas

GE Fanuc Intelligent Platforms has announced the ICS-1554 PMC module with four 16-bit analogue to digital converters sampling synchronously at frequencies up to 160MHz.

The module provides throughput for applications such as radar, wireless test and measurement, 3G and 4G cellular base station developments, signal intelligence, smart antenna, radar beam forming and satellite ground stations.

The module can be combined with a host processor for single-slot processing for software-defined radio applications.

Simultaneous down conversion of up to 16 arbitrary signal bands is implemented by four digital down converters.

A field-programmable gate array (FPGA) is provided for user-defined signal processing functions, giving greater capacity and lower power consumption than previous generations of digital receivers.

The FPGA provides signal processing that can be loaded with standard functions such as wide band display data channel, fast fourier transform and time stamping, or programmed by the user.

The module has four digital down-

converters and supports simultaneous wide- and narrow-band operation by the use of dual decoupled first in first out memory.

Up to 64 user input-outputs can be connected directly from the FPGA to the connector to provide an alternative high-speed data path from the module.

The input output pins support low voltage transistor-to-transistor logic and low-voltage differential signalling. Included is a hardware development kit providing support for users who wish to implement their own signal processing algorithms in the FPGA.

☞ *More information – Qikreply 21*

## Communication controllers for industrial applications

The industrial automation group of Advantech Corporation has released the ADAM-6501 communication controller.

It is one of the smallest application-ready Intel XScale communication controllers currently available for the industrial market.

With a 400MHz Intel XScale processor, it provides a computing platform for intensive applications.

With a CompactFlash slot, the controller can be expanded with additional file storage or other devices like modems or wireless local area network cards.

There is also an embedded web server,

FTP server, and telnet server that make it possible to create a remotely-operated controller.

For the operating system, the unit has embedded Windows CE .NET 4.2 and for applications there is 32MB of onboard flash memory and 64MB of SDRAM.

The unit has an option to bundle with Advantech Studio, a web-enabled HMI/SCADA software.

Networking options include one RS-232, one RS-485 and one RJ-45 Ethernet port.

It has drivers for Modbus/RTU and Modbus/TCP for networking integration.

☞ *More information – Qikreply ?*

For more information on any of these products, send an email to [ralph@engineersmedia.com.au](mailto:ralph@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.