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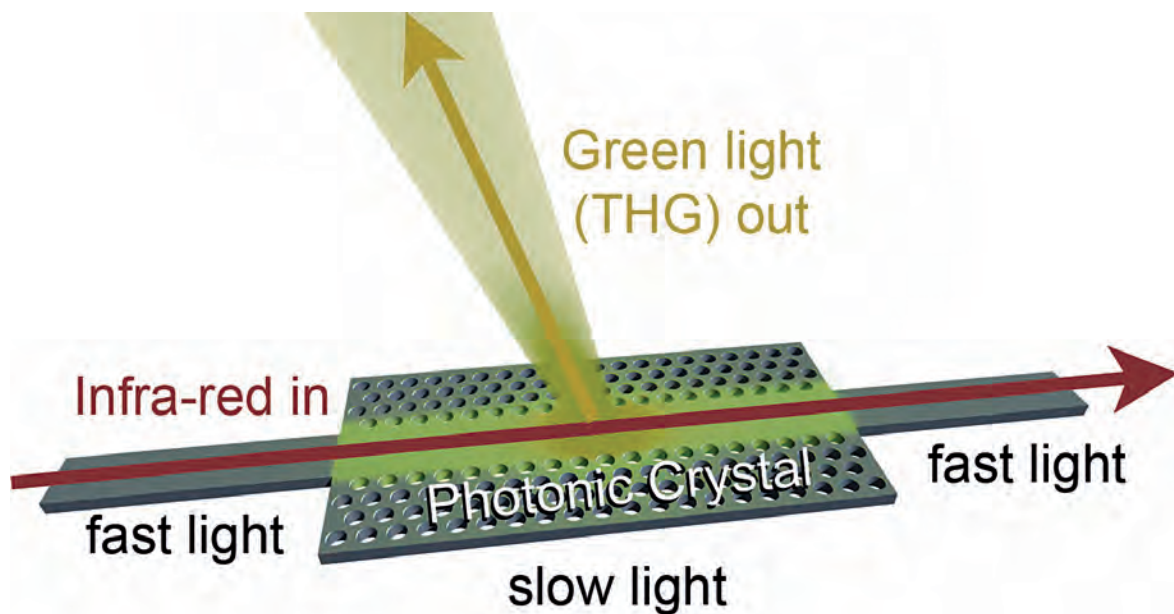
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A diagram of the science behind the green light emitted from the chip which is a significant development for photonics and chip architecture.

Unusual green light could change chip design

A sparkle of green light from a silicon chip was the first indication to researchers at the University of Sydney that their experiment had taken a surprising turn.

"I was extremely puzzled" said Dr Christian Grillet of the University of Sydney. "We were using infrared light, not green. And besides, silicon does not transmit light at that wavelength".

Grillet's colleague, Dr Christelle Monat was in the labs of the university's School of Physics at the time. "I didn't believe the camera. I had to look with my own eyes. It was as strange as seeing a house-brick suddenly emit light." Their infrared laser

was being converted to green light – light of higher energy – in a process known as third harmonic generation.

The research team's paper, "Green light emission in silicon through slow-light enhanced third-harmonic generation in slow light photonic-crystal waveguides", was published in the journal *Nature Photonics*.

Asked about the potential of this discovery, Monat said "One could imagine that a small green light indicator could help users of numerous internet applications. This could be used to immediately inform companies such as Skype of a problem in the clarity of their connections, thereby

allowing them to fix this in real-time, all without the user noticing."

The key to this unlikely event was a regular pattern of sub-microscopic air holes in the researchers' silicon chip, creating what is known as a photonic crystal. At the time of the discovery, Monat and Grillet were assisting PhD student Bill Corcoran with experiments on slow light, itself a very novel and surprising phenomenon.

Corcoran explained: "The experiments use specially designed photonic crystals from our colleagues at St Andrews in Scotland. They allow us to slow the laser light used for telecommunications to 1/40th of

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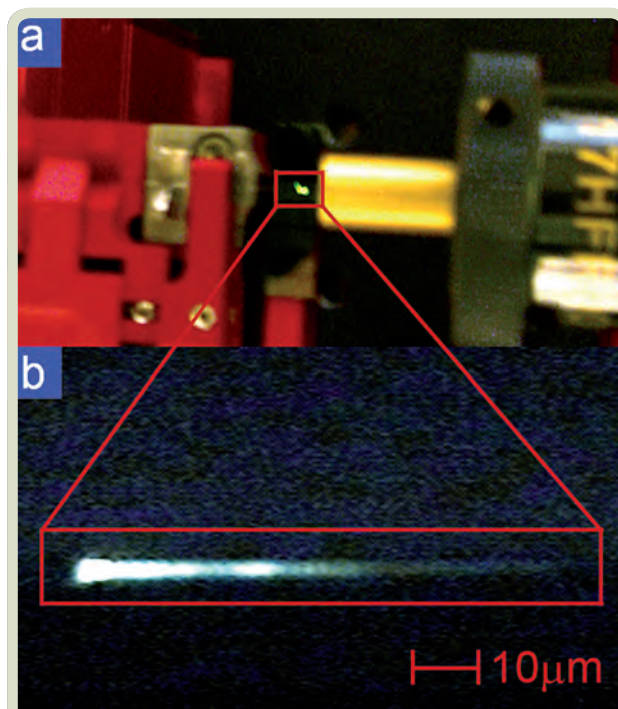
its usual speed.

“As the light slows down, the energy from the laser is greatly concentrated. This energy can be used like traffic lights on the road to control the movement of large amounts of optical data through networks much more efficiently.”

The researchers work in a field known as photonics. They say that converting infrared to green light adds another important tool to the impressive suite of capabilities of silicon, already the material of choice for the microelectronics industry.

“Being able to control light on a chip, along wires no wider than one hundredth of the width of a human hair, represents the first step to realise all sorts of operations with significantly better performance than electronics alone,” Monat said. “And if we can do that in silicon, even more complex and

exciting architectures become possible by integrating and marrying both the photonic and electronic worlds.”



The unusual green light emitted from the silicon chip.

Software should have higher priority in tax breaks

The Australian Information Industry Association (AIIA) is concerned at the omission of software and related services from the Draft Investment Allowance Tax Break Initiative announced by the federal government.

According to AIIA CEO Ian Birks, the omission will decrease the attractiveness of investment in computer systems and is a “serious oversight” for an initiative designed to spur productivity.

“In the past, the federal government has identified technological innovation as a driver of longterm productivity.

Software is integral to this process, and should not be ignored in incentive schemes designed to stimulate activity.

“This provision draws an arbitrary line between ‘tangible’ assets such as hardware and ‘intangible’ assets such as software and services. The value of investment in these systems is in the whole, not the parts, and any incentive scheme must recognise that,” Birks said.

According to the AIIA, computer systems are frequently purchased with embedded software and related services attached. Services then form the bulk of the systems purchase.

The administrative burden of dividing the costs between these areas will turn many investors away from accessing the tax breaks and act as a disincentive to technology investment, the AIIA said.

Software is already treated as an asset by the federal government for depreciation and work-related expenses.

According to the AIIA, there is no reason for excluding software and services from the tax break provisions, other than modelling those provisions after the capital allowance deduction scheme.

“Given that the tax break initiative is a temporary proposal, AIIA recommends a simple tax incentive model for computer systems, such as a 150% tax deduction on the total system investment,” said Birks.

According to the AIIA, this would be a viable proposal as the current draft of the tax break initiative proposes the possibility that the taxpayer may be able to claim up to 130% of the tangible asset’s value – excluding software.

The provisions are outlined in the Tax Laws Amendment (Small Business and General Business Tax Break) Bill 2009 (Exposure Draft).

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Dr. Louis J. Ippolito \$163.64 + GST = \$180

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Successful Service Design for Telecommunications – a Comprehensive Guide to Design and Implementation

Sauming Pang \$140.91 + GST = \$155

The author provides a consistent approach to designing scalable and operable processes that can be used to deliver a variety of technologically based services; offering concepts, principles and numerous examples that the readers can easily adapt to their technological environment. Defines what telecommunications services are from business, technical and operational perspectives and how to implement including strategies for both new service introductions and enhancements to existing services. Principles and management processes described can be used on all telecommunications services (fixed, mobile, broadband and wireless) and technology (e.g. IT and Internet) based services. Features numerous real-life scenarios

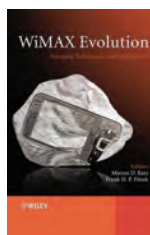
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Marcos Katz, Frank Fitze \$190.91 + GST = \$210.00

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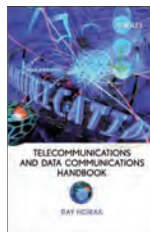


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Finite Element Analysis of Antennas and Arrays

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Antenna technologies have received renewed interest because of the rapid development of wireless devices and advanced defense applications. Consequently, highly accurate and efficient modeling and simulation tools are needed to satisfy the demand for sophisticated antenna designs. Finite Element Analysis of Antennas and Arrays covers all the technical aspects in the analysis of complex antennas and arrays using the finite element method.

2008 9780470401286 436pp

Quality of Service Mechanisms in Next Generation Heterogeneous Networks

Abdelhamid Mellouk 209.09 + GST = \$230

Today, the proliferation and convergence of different types of wired, wireless, and mobile networks are crucial for the success of the next generation networking. This book presents and explains all the techniques in new generation networks which integrate efficient global control mechanisms in two directions: (1) maintain QoS requirements in order to maximize network resources utilization, and minimize operational costs on all the types of wired-wireless-mobile networks used to transport traffic, and (2) mix the QoS associated with home, access, and core networks in order to provide Quality of Service/Quality of Experience expected by users of new services.

2008 9781848210615M458pp



GSM – Architecture, Protocols and Services 3e

Jörg Eberspächer et al \$163.64 + GST = \$180

GSM is the world's most commonly used technology for wireless communication. Providing an overview of the innovations that have fuelled this phenomenon, this new edition offers a clear introduction to the field of cellular systems. Special emphasis is placed on system architecture and protocol aspects, and topics range from addressing concepts through mobility management to network management. It contains around 25% new and reworked material and has been thoroughly updated to encompass recent advances and future trends.

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Is cloud computing just vapour?

According to IDC, worldwide IT spending on cloud services will grow almost threefold and reach about \$58 billion in 2012.

Cloud computing is a style of computing where resources like hard disk space and word processing are provided as services over the internet. Compared to the traditional method of using desktop computers, the users do not need to know much about the technological infrastructure supporting their computer use. In theory, they also spend less time fixing their computer breaking down, as maintaining the infrastructure supporting the “cloud” is outsourced to people who have specialised knowledge in fixing computers.

IDC expects this model to offer a cheaper way for businesses to use IT and thus predicts increased favour for it during the economic downturn. In a recent IDC survey conducted with 696 IT executives and CIOs across Asia-Pacific excluding Japan, it was found that 11% of the respondents were already using cloud-based solutions.

The survey revealed that more than 50% of the respondents indicated cost cutting as the key driver behind the adoption of cloud computing.

A further 41% of the respondents indicated that they are either evaluating cloud solutions for use in their businesses, or already piloting cloud solutions. When

asked about their opinion of the current state of cloud computing, 17% of the respondents stated that although cloud computing is very promising, there are currently not enough services available to make it compelling.

Chris Morris, lead analyst for Cloud Computing Research in Asia-Pacific predicts strong growth in the next three years in the use of cloud computing services.

However, he said that supplying low-cost services alone will not guarantee success, as users are also indicating that any cloud solution they buy must offer competitive pricing, offer service level agreements and offer complete solutions.

Fostering satellite communication

Students and researchers at RMIT University will have access to satellite communications technology thanks to the support of networking company ITC Global.

The company has provided the School of Electrical and Computer Engineering with an industry standard two-way earth terminal, allowing the university to access the company’s global communications network using geosynchronous satellites.

The university’s communications laboratory has been renamed the ITC Global Satellite Communications Laboratory.

Associate Professor James Scott, who is Discipline Head of Communica-

tion Engineering at the university, said the company’s sponsorship would enable students to gain a practical understanding of the challenges involved in operating live satellite links.

“Our students will be learning the skills they will need for their careers by working on the latest generation of systems that are used in the industry,” he said.

“We can now conduct teaching and research experiments that involve actual uplinking to working satellites.

Associate Professor Scott said discussions had already begun with ITC Global on possible joint research and develop-

ment projects, and the university looked forward to mutually beneficial technical collaborations with the company into the future.

Chris Hill, Manager of ITC Global’s Australian Operations and an alumnus of RMIT’s Master of Telecommunication Engineering program, said the quality of the University’s programs deserved strong industry support.

“The system RMIT students and researchers will work with is the same that our clients use in Australia and around the world, so the skill sets they develop will be directly transferable into the workplace.”

Company promises better results in search engines

A company which sells software in search engine optimisation is providing a money back guarantee that its customers’ websites will appear on the first page of a Google search.

The guarantee, made by SEODEvelop, is for defined search terms after using the service. Full details can be found at www.SEODEvelop.com.

The idea is that rather than spend thousands of dollars on bidding for search terms with Google Ads, the company applies analytical skills, website enhancements and selective social network site seeding to make the website more visible to Google and other search engines. Other tactics include keyword research and selection. These are manual processes rather than automated submission routines.

The company delivers fortnightly reports for the length of the SEO campaign that describe’s a website’s progress against the campaign’s objectives.

If the campaign does not deliver a

Google page one listing by the end of the quoted period, the company returns all money paid by the client. This guarantee applies to all campaigns except where the keyword competition is greater than 50 million.

SEODEvelop founder Raaj Menon said an SEO campaign could cost as little as \$600, although the cost and length of each campaign was based on a detailed quote to the client.

“The cost of a campaign is based on

Disappointment for Canberran broadband bidder

TransACT is disappointed that the National Broadband Network (NBN) request for proposal (RFP) process has been terminated and believes that its proposal did provide value for money.

The company’s proposal was based on the federal government’s original request that the National Broadband Network provide fibre-to-the-node (FTTN) and fibre-to-the-premises (FTTP) infrastructure. This differs from this morning’s announcement that the NBN will comprise of only FTTP infrastructure.

The company’s chief executive officer Ivan Slavich suggests his company’s proposal would have been different if it was known the federal government just wanted an FTTP solution. “Our proposal was written according to the objectives stated in the request for proposal. We invested a significant amount of resources into preparing [it].” According to the company, the change in approach will cost the federal government an extra \$38 billion for broadband access, which may lead to increased prices for consumers.

the level of competition for keywords," he said. Menon said many business websites failed to achieve their goals because they were invisible to Google.

"Most customers look for a product or

service online by using a search engine," he said. "In eight out of 10 cases, that search engine is Google, so if your website does not appear on the first page of Google search results, then your website may as

well not exist as far as they are concerned.

"A first page presence on Google increases visits to your site, which immensely boosts your ability to attract and retain customers.

Project to create a smarter electricity network

IBM has signed a \$3.2 million agreement with electricity distributor EnergyAustralia for an energy network monitoring and control system.

A key project within EnergyAustralia's overall intelligent network program, the distribution monitoring and control project involves the rollout of 12,000 sensing devices throughout the electricity distribution network, creating a smart grid.

Benefits include a more efficient and reliable network and the possibility of other functions to be integrated into the network

such as renewable energy.

Under the initial agreement, worth, IBM will design and build the IT architecture to support the project, in which sensing devices will connect with EnergyAustralia's operational systems using a combination of fourth generation and existing technologies.

This world-class intelligent network will carry the necessary data for EnergyAustralia to reduce outages through faster fault location and preventative maintenance and, to work towards managing distributed energy sources such as solar and storage devices.

EnergyAustralia's managing director George Maltabarow said the project was an important part of the company's initial investment of \$170 million in its smart network rollout.

"This project will give us an instant picture of the electricity network which will help shorten power interruptions by allowing us to quickly locate and repair faults.

"It will also mean preventative maintenance can be better targeted so we can avoid faults and outages in the first place," Maltabarow said.

Telescope to explore the formation of planets

One of the biggest telescopes in Western Australia was launched at the University of Western Australia this month.

The Zadko telescope, co-located with the Gravity Discovery Centre near Gingin, is part of a global network of telescopes linked to a NASA satellite ground station. It will search for massive cosmic explosions known as gamma ray bursts which herald the formation of black holes at the edge of the known universe.

The telescope's geographical position in Western Australia allows it to explore a huge section of uncharted and previously unmonitored space.

It will be involved in joint international projects such as searching for potentially hazardous near-earth asteroids and tracing dangerous space junk while helping scientists learn about the formation of our own planet.

The telescope has already detected one of the biggest explosions in the universe. It occurred more than 11 billion years ago, before the Earth was formed, resulting in the death of a star.



Dr David Coward, from Physics, who is the Zadko telescope project leader, seen here looking at images from NASA.

More funding for computers in schools

The minister for education, Julia Gillard, has announced that 512 secondary schools were successful in the supplementary Round 2.1 of the federal government's National Secondary School Computer Fund.

The fund is part of the Rudd Government's \$2 billion Digital Education Revolu-

tion. As a result, the Government will spend \$36 million to buy around 34,700 new computers, including \$1.5 million in flexible funding for students with disabilities.

One of the providers is Lenovo which will see the company supply 220,000 IdeaPad S10e laptop personal computers to government secondary school students

in years 9 - 12 and their teachers across New South Wales.

Round 2.1 opened last December and closed in February. Schools that did not apply under Round one or two, or did not apply for the full number of computers were eligible to apply for funding in Round 2.1.

At the conclusion of Round 2.1, all secondary schools in Australia will have been given the opportunity to obtain funds to reach a ratio of 1:2 computers to students, including funding to address the

costs associated with delivering additional computers.

The Rudd Government has now invested more than \$290 million through the National Secondary School Computer

Fund, providing more than 290,000 computers in 2800 schools.

A full list of schools and further information about the fund can be read at www.digitaleducationrevolution.gov.au.

Optic fibre for far north Queensland

Cisco and Telstra have deploying a wireless broadband network at Djarragun College, a school in far north Queensland.

The aim of the network is to allow information to be shared by students at Djarragun College, an independent primary and secondary school in Gordonvale, about 20km south of Cairns, and its sister campus at Wangetti, about 100km away. The schools have about 700 Aboriginal and Torres Strait Islander students.

The connection between the schools will reduce the need for staff to travel between the two campuses.

On each campus are 50 Cisco Unified IP Phones and Cisco WebEx, a system of Internet-based real-time video applications. There will be wireless access to laptops in all classrooms and wireless handsets for staff.

There will be optic fibre installed near Djarragun College and a frame relay circuit at Wangetti.

Optic fibre has been run to the school at Gordonvale – essentially, fibre to the premises – connected to the nearest telephone exchange. A frame relay over copper was installed at the Wangetti Beach end to provide improved bandwidth and speed.

Jean Illingworth, Djarragun College



Students at Djarragun College in far north Queensland recently received a wireless broadband network.

principal, said: “This upgrade in technology and infrastructure will help our students embrace the knowledge and skills needed to lead the way in the 21st century.

It will expand their vision and thinking so they become people who can live and work anywhere and who are able to interact with any culture in any location.”

Rail agreement signals improvements for freight carriers

Signal engineering specialist Ansaldo STS Australia has signed a major new alliance agreement with the Australian Rail Track Corporation.

The agreement is to provide signalling systems projects to increase the capacity, reliability and efficiency of coal freight corridors in New South Wales and Victoria.

Under the agreement, Ansaldo will generate EUR 153 million in revenue over the next three years. It replaces the Hunter Valley and North Coast Signalling Alliance which was established in October 2005 to increase efficiencies in the Hunter Valley Coal Network and North-South Rail Corridor.

Under the alliance, Ansaldo STS has already commenced working on several major projects including delivering bidirectional

signalling on the Maitland-Branxton line, and the third track upgrade between Maitland and Minimbah.

The agreement will deliver a range of works, including loop extensions, additional lines and junction upgrades to improve capacity and efficiency in the Hunter Valley coal corridor.

Three existing loops will be upgraded and extended and one new loop will be built on the North Coast coal corridor. Control systems works will be performed on the south Sydney freight line.

The company will continue the upgrade works it is undertaking as part of the Train Control Alignment Project to support signalling infrastructure changes and reduce maintenance costs.

Electronics security company acquired

Australian company, Hills Industries taken a controlling 51% stake in Sydney-based UHS Systems, a company in the electronics and wireless communications market, particularly in security, telemetry and monitoring.

The acquisition is part of Hills’ plan to build a security business in Australia and New Zealand.

“The missing link for us was in the communications gateway and our new UHS acquisition leads the world in this market,” said Hills managing director Graham Twartz.

Twartz said that while the purchase price was not disclosed, UHS turnover in the current financial year to 30 June was expected to be around \$14 million.

Company awarded damages from Microsoft case

US company Uniloc, founded by Australian inventor Ric Richardson, has won a six-year legal battle against Microsoft Corporation over the use of its patented anti-piracy product activation system.

A US federal court has ordered that Microsoft pay Uniloc \$388 million in damages after it found Microsoft infringing a technology patented by Uniloc.

The technology, which generates unique identities for licensed users and prevents unauthorised use or copying of software, was used by Microsoft in its Windows XP operating system and Office XP program.

The Uniloc physical device recognition platform authenticates true identity of devices that attempt to access high-

value technology assets.

The patented method extracts the naturally-occurring, inherent physical characteristics of the device to create a unique device fingerprint.

The technology has been used in several markets including software and game security, identity management and critical infrastructure security.

Recently, its SoftAnchor program was a finalist in the 2009 Software & Information Industry Association CODiE Awards for Best Digital Rights Management Solution.

The program allows buyers of software to activate their product quickly and securely. It can distinguish between legal or pirated copies.

Public showcase for gigabit wireless chip

National Information and Communications Technology Australia (Nicta) recently gave a first public demonstration of a prototype system using its 60GHz gigabit wireless chip technology.

The demonstration comes after a research effort spanning four years, involving a team of 15 researchers. Project leader Professor Stan Skafidas said the success came from understanding emerging technology trends and collaborating

with industry.

The chip is one of the world's first transceivers integrated on a single chip operating at 60GHz on the complementary metal oxide semiconductor process, which is the most common semiconductor technology.

The technology will lead to wirelessly connected networks that will have audio and video transfer rates of up to 5GB/s, ten times the current maximum wireless transfer rate, at one-tenth the cost.

Early customer for Basslink

Internet service provider Internode has signed a three-year contract with Basslink for an initial data capacity of 622MB/s. The company expects this to increase to more than 1GB within the first year.

The Basslink deal will almost double In-

ternode's data capacity across Bass Strait. It also provides greater certainty of uninterrupted services for Tasmania by creating a redundant data path. The company expects to start using the new Basslink service before the middle of this year.

Fire brigade installs geographic system

GeoSamba Universal, a mapping and geographic analysis system, has been purchased by the NSW Fire Brigades (NSWFB).

The spatial functions of the system is currently being trialled by NSWFB to determine how it can be applied within the organisation.

The system is an Australian-built technology from iintegrate Systems, a subsidiary of NGIS Australia, that can share location intelligence and combine it with live or static spatial information. It is a web application that can be used to coordinate risk management and responses to natural hazards and emergencies.

Network routing upgraded

Nextep, NEC's wholesale broadband retailer, will be upgrading its network to a next-generation IP/MPLS routing infrastructure with Juniper Networks.

Nextep will deploy Juniper Networks M and MX Series Routers to scale its core network, enabling the rapid deployment of new advanced voice, video and data functions.

The company will also use the Juniper Networks SA4500 SSL VPN appliance to provide secure remote access with end-point security. This is a security measure that only allows devices that meet corporate security policies to access the network.

Nextep provides broadband internet to government and business customers. It distributes the services through a network of channel partners that includes leading tier-2 carriers, ISPs and system integrators.

University to use web-based records management

IT company Alphawest has shipped its first order of Saffron in Australia to Deakin University, following a trial last December.

Saffron is a web-based interface for HP TRIM – an electronic records management system – it is based on Web 2.0 technologies and was developed by Malaysian-based distributor VersaPAC.

Deakin University started using HP TRIM in 2008, with implementation help and support from Alphawest, initially on the Windows platform only.

The university also required remote web-based access

However, as the system was being rolled out for records and document management in support of the university's information management, technicians realised some departments were using Mac operating systems which the new system did not support.

The university also required remote web-based access to all the features of TRIM.

Alphawest then recommended that the university trial Saffron, a web-based application that is platform independent and runs across Windows, Apple and Linux.

Showing students what software engineering is about

As part of this year's Australian Software Engineering Conference (ASWEC), more than fifty Queensland software engineering and information technology students attended a SmartMinds forum held this month on the Gold Coast.

Hosted by Engineers Australia's Information Technology and Electronics Engineering College and the National Committee on Software Engineering (NCSWE), the forum saw students meet with conference delegates and take part in technical sessions, providing a valuable insight into the professional world. The Australian Computer Society also contributed to the event.

The conference saw students attend the keynote presentation, "Bringing Agile to Life @ the Enterprise Level" by Suncorp's chief information officer Jeff Smith.

This was followed by participation in smaller themed sessions and tool demonstrations. Engineers Australia's library manager Elena Vvedenskaia demonstrated the Online Library Services during the tool demonstrations, giving students direct experience of the benefits of membership.

Lecturers from Queensland University, Griffith and Queensland University of Technology contributed to the forum by inviting the students, writing the program and helping with logistics.

NCSWE chair Jennifer Murray led the students in a final session with fellow committee member Jocelyn Armarego. Jennifer engaged the audience with questions about their perception of the software engineering profession, and why they chose it as a discipline.

In choosing software engineering to study, students said they felt it was a very creative industry. Typical comments were "There is new stuff all the time", "the technology is always changing, and therefore will always offer challenges" or "Within one career, I will be able to change directions as my interests change".

Students identified that benefits of attending ASWEC were talking with people in the industry who were enthusiastic about their profession. Students were also curious to hear stories about practicing engineers' career progression.

The delegates were also candid about where the industry is going and about future opportunities. Keynote speaker Jeff Smith told the audience that he expected to hire fifty new graduates this year.

Students enjoyed hearing about the diversity of mentors Jennifer and Jocelyn's individual career paths. The pair articulated how they benefited being members of Engineers Australia in a very personal way. It



Engineers Australia's library manager Elena Vvedenskaia at the conference.



Engineers Australia co-hosted a session at the students' SmartMinds Forum at the Australian Software Engineering Conference this month.

gave them links, external to the workplace, with engineers in other industries.

Exhibitors also reported that the students' presence was valuable. "They see things through a different lens, and

their questions of our technical staff were insightful and very different from the delegates," reported an exhibitor. "We are hoping that we will see the SmartMinds session done again."

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

Courses: Basic communications principles (2 days) 4 May, 17 Aug; **Modern communication systems** (2 days) Canberra 7 May; **Satellite communications – overview** (1 day) Canberra 15 Jun; **Satellite communications – intermediate** (2 days) Canberra 15 Jun; **Satellite communications – advanced** (4 days) Canberra 15 Jun; **Digital television: Digital television: Advanced systems** (3 days) Canberra 22 Jun; **Introduction to project management** (3 days) Canberra 3 Aug; **Software project management** (3 days) Canberra 28 Sep; **Complex project management** (3 days) Canberra 24 Aug; **Managing integration projects** (2 days) Canberra 17 Aug; **Requirements engineering** (2 days) Canberra 29 Jun, 23 Nov; **Systems thinking and modelling** (3 days) Canberra 13 May, 28 Sep; **System dynamics modelling practicum** (3 days) Canberra 23 Nov; **Maximum entropy analysis** (2 days) Canberra 14 May; **Introduction to enterprise architecture** (2 days) Canberra 11 May, 28 Sep; **Systems planning** (3 days) Canberra 13 May, 30 Sep; **Battlefield digitisation** (3 days) Canberra 20 May; **Introduction to electronic warfare** (3 days) Canberra

18 May; **Optical surveillance systems** (3 days) Canberra 15 Jun; **GPS and its military application** (2 days) Canberra 22 Jun; **Modern military navigation systems** (3 days) Canberra 22 Jun; **Principles of geographic information analysis and remote sensing overview** (5 days) Canberra 28 Sep. *Inquiries:* Yvonna Gruszka, Business Services Unit, UNSW@ADFA 02 6268 8421, fax 02 6268 8690, email business.office@adfa.edu.au

Courses: Demystifying information security management systems (1 day) Melbourne 14 Jul, 13 Oct, Sydney 13 Jul, 12 Oct; **Building a business case for IT governance and information security** (1 day) Melbourne 21 May, 25 Sep, 23 Nov, Sydney 2 Jun, 9 Oct, 2 Nov; **Understanding and implementing a business continuity management system** (3 days) Melbourne 3 Jun, 24 Aug, Sydney 25 May, 25 Nov; **Understanding and implementing information security management** (3 days) Melbourne 18 May, 14 Sep, 14 Dec, Sydney 11 May, 27 Jul, 6 Oct; **Auditing information security management systems** (2 days) Melbourne 15 Jun, 26 Oct, Sydney 22 Jun, 10 Aug,

19 Oct. *Inquiries:* 1300 727 444, email training@saiglobal.com, web www.saiglobal.com/training

Courses: Practical fundamentals of telecommunications and wireless communications (2 days) Perth 11 May, Sydney 14 May, Brisbane 21 May; **Practical hazops for engineers and technicians** (2 days) Melbourne 5 May, Brisbane 11 May, Perth 18 May, Sydney 25 May. *Inquiries:* IDC Technologies 1300 138 522, fax 1300 138 533, web www.idc-online.com

Conference: Cebit 2009 (3 days) Sydney 12 May. *Inquiries:* web www.cebit.com.au

Conference: 18th annual PACRIM IT service management and help desk support conference 2009 (4 days) Sydney 1 Jun. *Inquiries:* Stephanie Catto 02 9021 8849, fax 02 9281 5517, email Stephanie.Catto@terrapinn.com web www.terrapinn.com/2009/pacrim

Conference: Digital technologies summit (2 days) Sydney 10 Jun. *Inquiries:* 02 8908 8555, web www.acevents.com.au/dts2009

Conference: Simulation, concepts, capability and technology 2009 (4 days) Adelaide 15 Jun. *Inquiries:* 02 6251 0675, fax 02 6251 0672, www.siaa.asn.au/simtect/2009/2009.htm

Conference: E-government 2009 (3 days) Canberra 15 Jun. *Inquiries:* [www.iqpc.com.au/ShowEvent.aspx?id=167488](http://www.iqpc.com.au>ShowEvent.aspx?id=167488)

Conference: 6th international conference on autonomic and trusted computing (4 days) Brisbane 7 Jul. *Inquiries:* web www.itee.uq.edu.au/~atc09

Conference: Kernel conference Australia 2009 (3 days) Brisbane 15 Jul. *Inquiries:* Claire Operie 02 9844 5275, email Claire.Operie@sun.com, web au.sun.com/sunnews/events/2009/kernel/index.jsp

Conference: Data centre management 2009 (2 days)

Sydney 28 Jul. *Inquiries:* web www.iqpc.com.au/ShowEvent.aspx?id=175574

Conference: Spatially enabled government summit (3 days) Canberra 31 Aug. *Inquiries:* web www.iqpc.com.au/ShowEvent.aspx?id=178068

Conference: Software testing Australia/New Zealand conference (2 days) Wellington 24 Aug, Sydney 27 Aug. *Inquiries:* web www.softed.com/stanz

Conference: Power industry conference: Convergence of IT, automation, control and communication technologies (2 days) Melbourne 2 Sep. *Inquiries:* Jasmin Hazelton 08 9321 1702, email jasmin.hazelton@idc-online.com, web www.idc-online.com/newsletters/images/0909_IT_CFP.pdf

Conference: 18th international conference on plastic optical fibres (5 days) Sydney 7 Sep. *Inquiries:* 02 9524 1799, fax 02 9524 1744, email pof2009@mtci.com.au, web pof2009.mtci.com.au

Conference: 6th annual wireles world 2009 (2 days) Sydney 9 Sep. *Inquiries:* 02 8908 8555, web wirelessworld2009.com

Conference: International global navigation satellite systems society symposium on GPS/GNSS (3 days) Gold Coast 1 Dec. *Inquiries:* 07 5520 4288, fax 07 5508 2175, email krys@ignss.org, web www.ignss.org

Conference: Asia-Pacific digital economy summit (4 days) Melbourne 14 Dec. *Inquiries:* web www.aiaa.com.au/pages/apacdigitaleconomysummit.aspx

CALL FOR PAPERS

Conference: International global navigation satellite systems society symposium on GPS/GNSS (3 days) Gold Coast 1 Dec. *Inquiries:* web www.ignss.org

Abstracts due: 17 Jul. ■

Transportation Infrastructure Security Utilizing Intelligent Transportation Systems

R Fries M Chowdhury J Brummond

\$200 + GST = \$220

Intelligent Transportation Systems, or ITS, integrates different computing, control, and communication technologies to help monitor and manage traffic management that helps reduce congestion while saving lives, time, and money. This book provides a comprehensive treatment of techniques to leverage ITS in support of security and safety for surface transportation infrastructure. Filling a gap in the practical application of security, Transportation Infrastructure Security Utilizing Intelligent Transportation Systems offers both students and transportation professionals valuable insights into the new security challenges encountered and how to manage these challenges with the use of computerized transportation systems.



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Steady state simulation software

ProSim, leading European process simulation software house, announces that a new release of its steady state simulation software, ProSimPlus, is now available.

ProSimPlus is a process engineering program used in design and operation of existing plants for process optimization, units troubleshooting or debottlenecking, plants revamping or for performing front-end engineering analysis.

It provides a thermodynamic module and a unit operations library that allow the modelling of processes.

It is used in industries such as chemical, petrochemical, oil, refining, gas treatment, pharmaceutical, specialty chemical or energy.

This new release has improvements such as a thermodynamic package, unit

operation models, convergence methods and a new graphical interface.

Simulis Thermodynamics, ProSim's thermodynamic server, is now embedded in ProSimPlus.

This module offers a full set of functions for the detailed analysis of the thermophysical phenomena that can occur in a process. In particular, transport or thermodynamic properties and phase equilibria on streams can be calculated.

The thermodynamic model library was enriched with equations of state PR78 and PR78BM and with several calculation services in particular for Reid vapor pressure, equilibrium constants and surface tension or residue curves plotting.

Several unit operation modules such as the pipe segment or the heat exchanger

were enhanced with more configuration options or new calculation methods. In particular, a new interface was built for the optimization module allowing the user to configure the calculation parameters more easily.

The new graphical interface facilitates the creation and the in-depth analysis of process diagrams. The user can build, structure and analyze the most complex flowsheet, thanks in particular to labels text, shape or image insertions or to the ergonomic features such as subflowsheets or zoom. Simulation results can be accessed directly from the flowsheet in popup tables, charts or in each unit operation windows.

For more information and application examples, visit www.prosim.net/en/modeling/prosimplus.html.

Recruitment software

Released in January, MYOB's StaffSearcher.com.au website is a recruitment tool that allows employers to post advertisements for new positions.

The system allows potential employers to post a job advertisement, at no cost, onto an online job board. Referrers create a database of their contacts and job skills. The StaffSearcher system then sends referrers on the database an automatic email when a role is posted on the job board that reasonably matches the experience and skills of someone in their network. The referrer then contacts the relevant potential candidate and determines their interest in the role.

There is a referral fee, or finder's fee to be paid once a suitable applicant is found, which the employer can negotiate. This referral network is designed to reach out to people who are not currently looking for a new role, which the website calls the passive job market.

The idea is that the best job candidates are in this passive market. According to MYOB, these people are not actively looking for jobs but experience shows many of them will switch roles when presented with the right opportunity.

New processor

Intel Corporation has released 17 enterprise-class processors, including the Xeon 5500 series. These chips can automatically adjust to specified energy usage levels, and speed data center transactions and customer database queries. They have

triple the memory bandwidth of previous server processors.

Technologies such as Turbo Boost Technology which dynamically boosts the clock speed of one or more of the individual processing cores, hyperthreading technology, integrated power gates, and virtualisation improved through extended page tables, improve the processors' speed.

Using the VMmark benchmark, which measures virtualisation performance, several 5500 series-based platforms shattered the previous record by as much as 150% versus the previous 5400 series.

They also have automated energy efficiency enhancements, providing users with greater control of their energy expenditures.

This includes a processor idle power level of only 10W, enabling a 50% reduction in system idle power compared to the previous generation.

New integrated power gates, based on Intel's unique high-k metal gate technology, allow idle cores to power down independently.

It supports up to 15 automated operating states. These improve chip power management by adjusting system power consumption based on real-time throughput.

For more details on the Intel Xeon processor 5500 series, visit www.intel.com/xeon. For more details on world records and other claims, visit www.intel.com/performance/server/xeon/summary.htm.

Music player with voice recognition

Apple has introduced the third generation of its iPod shuffle music player which is about the size of an AA battery, or nearly half the size of the previous model.

The player holds up to 1000 songs.

It also has a VoiceOver feature which allows the user to play a song, artist or playlist by speaking it aloud.

The player holds up to 1,000 songs. Rather than having the controls on the music player, they are now on the ear-phone cord.

It has an aluminum case and a stainless steel clip. It has up to 10 hours of battery life.

