



19th Australian Software
Engineering Conference
Perth, Western Australia

25-28 March 2008

Conference Program



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Last Update: 24 March 2008

19th Australian Software Engineering Conference (ASWEC 2008)
Perth, Western Australia
25-28 March 2008

ASWEC 2008 Distinguished Guest Speaker



THE HON FRANCIS M LOGAN BA(Hons) LA

Minister for Energy; Resources; Industry and Enterprise

Dinner Speech

Strategic developments in ICT, beyond the boom

The Minister for Resources; Industry and Enterprise is responsible for the State's resource sector including royalties and mining. Minister Logan is also responsible for the 'Beyond the Boom' Strategy to develop biotechnology, information communications technology, marine and defence, renewable energy and resource services as major contributors to the Western Australian economy.

ASWEC2008 Gala Dinner and Grammy Awards

6:30pm – 11:30pm, 27 March 2008,

Perth Convention and Exhibition Centre (PCEC)

River View Room 5, 21 Mounts Bay Road, Perth City

ASWEC 2008 Distinguished Guest Speaker



Professor Jeanette Hackett

Vice Chancellor,

Curtin University of Technology

Welcome Speech

I'm delighted to open the 19th Australian Software Engineering Conference (ASWEC). Even though the conference first started in 1986, this is the first time, it has been held in Western Australia. Western Australia, as we all know, is the center of the resources and oil and gas boom, that is currently the engine of growth for the Australian Economy. It is important to recognize the role of ICT and software systems in supporting this boom through logistics systems, mapping software, data mining, embedded control systems, smart manufacturing support services, electronic document handling, and remote communications.

ASWEC2008 Opening Speech

8:30am, 26 March 2008, Tech Park, Function Centre, Seminar Room 1
Hayman Rd. Bentley, Perth, Western Australia

ASWEC2008 Keynotes



Prof Ian Sommerville
Professor of Software Engineering
School of Computer Science,
St Andrews University, Scotland

Construction by Configuration: An Opportunity for Software Engineering Research

Triggered by the Year 2000 problem, the past 8 years have seen a radical shift in business application software development. Rather than developing software from scratch using a conventional programming language, the majority of commercial software is now developed through reuse – the adaptation and configuration of existing software systems to meet specific organisational requirements. This approach to development is likely to be extended beyond commercial systems and be increasingly widely used for all types of software development.

In this talk, I will discuss the implications of software construction by configuration for both software engineering and system dependability. I will briefly introduce a number of different reuse-based approaches to software development and, based on our experience with systems for medical records and university administration, highlight some of the issues and problems that can arise and how these may affect the dependability of the system. I will discuss some fundamental limitations of existing configurable systems and identify a number of challenges for research and practice to improve this approach to software engineering



Dr Richard Mark Soley
Chairman and Chief Executive Officer
Object Management Group, Inc.(OMG®)

Service Oriented Architecture: Making the Leap, Leveraging Model Driven Architecture

It seems that Service Oriented Architecture (SOA) is to be this year's hot buzzword, rather than a well-defined, meaningful and valuable part of the Enterprise Architecture landscape. Before the term fades away completely, perhaps we should agree what's valuable about the move to SOA and how to make the leap, and make the leap valuable. The SOA Consortium is making great strides in defining SOA to be a valuable business strategy for business agility, in the context of Enterprise Architecture, Business Process Management and other concepts; and the Object Management Group (OMG) is making headway on modeling standards for services (as opposed to yet another set of standards for moving bits around wires). Dr. Soley will introduce the SOA Consortium and give some context for OMG's work in service modeling, with a focus on early successes in implementing the SOA business strategy leveraging modeling technologies like UML, BPMN and MOF.

ASWEC2008 Keynotes



Prof Tharam Dillon

Distinguished Research Professor
DEBI Institute, Tier 1 Research Institute of Excellence
Curtin University of Technology

Ontology Based Software Engineering

Increasingly clients in cities are developing software overseas or in regional centres. The participating companies have found existing centralized software engineering techniques inadequate for multisite development. This project produces new principles and techniques for multisite distributed software development. Thus it proposes a new methodology, a new project management approach, a new workflow tracking technique and a new concept of software object/component that allows differentiated access. A platform is also developed for use in field studies for validation and benchmarking. The results will help Australia become a provider of software services for international clients and permit devolution to regional centres.



Prof Hans van Vliet

Professor in Software Engineering
VU University, Amsterdam
The Netherlands

Software Architecture Knowledge Management

Software architecture is a recognized and indispensable part of system development. Software architecture is often defined in terms of components and connectors, or the "high-level conception of a system". In recent years, there has been an awareness that not only the architecture design itself is important to capture, but also the knowledge that led to this design. This so-called architectural knowledge concerns the set of design decisions and their rationale. Capturing architectural knowledge is difficult. Part of it is tacit and difficult to verbalize. Like developers, software architects also are not inclined to document their solutions. Establishing ways to effectively manage and organize architectural knowledge is one of the key challenges of the field of software architecture. This architectural knowledge plays a role during development, when architects, developers, and other stakeholders must communicate about the system to be developed, possibly in a global setting. It also plays a role during the evolution of a system, when changes are constrained by decisions made earlier. I will discuss our ongoing research in this area.

ASWEC2008 Keynotes



Mr Simon Carlsen* and Mr Stig Petersen**

* StatoilHydro, Norway

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** SINTEF ICT, Norway

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Layered Software Challenge of Wireless Technology in the Oil & Gas Industry

Recent advances in wireless technology have enabled the development of low-cost wireless solutions capable of robust and reliable communication within application areas such as wireless networking, wireless sensing, monitoring, and control, and wireless asset and personnel tracking. For the Oil & Gas industry, using this technology will lead to reduced operation costs as well as enable new applications.

This Industry track plenary keynote will discuss many aspects of software challenges related to the introduction of wireless technology in the Oil & Gas Industry. First of all, a typical wireless device is an embedded platform with very limited resources (CPU speed, memory, storage space), and often with strict requirements for low power operation - yet at the same time they will need to execute software implementations of complex real-time networking algorithms. Secondly, a wireless solution has accompanying user applications for configuration, monitoring and control. A main challenge is to allow for these applications to be used by technical personnel which do not necessarily have extensive knowledge of the underlying wireless technology. Finally, introducing software applications for wireless networking, wireless sensor networks and wireless asset tracking will create the need for new management, control and user applications in different levels of the existing network infrastructure.



Mr Max Noble

Group General Manager, Thales, Australia

<http://www.thalesgroup.com.au>

"Targeted Change. Are you already Irrelevant?"

With operations in fifty countries and over 68,000 employees, Thales is a world leader in Mission-critical information systems for the Aerospace, Defence, and Security markets. Building on proven engineering capability, Thales has delivered major systems in all areas. Currently Thales is involved in all Airbus programmes, including cockpit displays and integrated modular avionics for the A380. Thales is also providing A380 simulators to several major airlines. Globalstar has selected Thales to design, produce and deliver 48 second-generation low-Earth orbit satellites as well as launch services and associated mission support. Within Australia Thales is the leading contractor in the Defence sector. Thales provides the Bushmaster armoured vehicle, and is supplying equipment and mission support for the Tiger helicopter. Thales is completing the up-grade of the FFG ships for Navy, which includes a major software delivery. Within the Australian simulation market Thales provides simulators for the F-111C strike aircraft, the Tiger helicopter, Wedgetail reconnaissance aircraft and ASLAV armoured vehicle. Thales also provides simulators to Qantas, virgin, Air New Zealand, and other carriers in the region. Currently Thales is providing the Security Access Control system for the APEC 2007 meetings.

ASWEC2008 Tutorials

Last Update: 24 March 2008



Prof Ian Sommerville

Professor of Software Engineering
School of Computer Science,
St Andrews University, Scotland

Tutorial Topic

**Fitting Software to the Organization: Reducing time
to value for new software systems**

Tuesday 25 March 2008



Dr Richard Soley

Chairman and Chief Executive Officer of the Object
Management Group, Inc. (OMG®).

Tutorial Topic

**Model based Software Development - past, present,
and future**

Friday 28 March 2008



Prof Tharam Dillon* and Mr Chen Wu**

*Distinguished Research Professor
**Research fellow
DEBI Institute, Tier 1 Centre of Research Excellence,
Curtin University of Technology, Australia

Tutorial Topic

Alternative Web Service Paradigms

Tuesday 25 March 2008



**Mr Simon Carlsen* and
Mr Stig Petersen****

* StatoilHydro, Norway
** SINTEF ICT, Norway

Tutorial Topic

**Development of a Wireless Sensor Software Network
on an Offshore Oil & Gas Platform**

Tuesday 25 March 2008

ASWEC2008 Special Session

Issues in ICT Education

This session is concerned with ICT education from the holistic perspective of preparation in high schools, university experience, and transition to the workforce, and the contribution by industry, government, and professional bodies.

Consultations to date with various stakeholders have revealed numerous concerns that include: the dispersed nature of the ICT sector; erroneous perceptions of ICT disciplines; decline in enrolments; gender imbalance; lack of industry involvement; and balancing knowledge with generic skills acquisition.

This forum will be led and chaired by the project team from Wollongong University with invited participants report on findings from consultations and research. Attendees will be invited to respond and to contribute to the issues and challenges that are of particular concern to the software engineering community.

Prof Joe Chicharo



Project Director

Prof Fazel Naghdy



Project Director

Dr. Tony Koppi



Project Manager

Aerospace and Real Time Issues

This special session addresses crucial issues in a variety of applications particularly in the aerospace industries and real time control systems, risk assessment, software reliability, software safety, error protection, reuse for reliability and safety, as well as issues in software development. These issues are of importance to a large number of other industries such as Offshore Oil and Gas Platforms and remote Resource Industry sites. We have put together a selection of papers that address different parts of these themes. The session will take the form of a lead presentation of 30 minutes by the session chair followed by 10 minute position paper presentations of each of their concerns followed by a 45 minute open panel discussion with audience participation and panel participation.

This Special session is organized and chaired by research scientists from the National Aeronautics and Space Administration, NASA, Kennedy Space Center, Florida, USA. NASA's mission is to pioneer the future of space exploration, scientific discovery, and aeronautics research. The Chairs are Computer Engineers performing research focusing on Safety of Computer Based Control Systems.

Janice Hill



Research scientist
NASA, Kennedy Space Center, USA
janice.l.hill@nasa.gov

Daniel Victor



Research scientists
NASA, Kennedy Space Center, USA
Daniel.Victor@nasa.gov

ASWEC2008 Special Session

Resource Management, Distributed Software Reuse and Web Applications

Both the by now well-established paradigm of Service Oriented Architectures (SOAs) and its new complement (or, depending on the point of view, antonym), Resource Oriented Architectures (ROAs), have a massive impact on the software engineering of distributed applications. A key promise of both paradigms are both less expensive and more flexible software development and change processes through wide-spread re-use of resources, both regarding services and data.

Popular though this promise is, it is a far cry for realized. The current discussion rightly points out many serious interoperability problems relating to the Web Service stack that is underlying most SOA implementations and that RESTful architectures strive to overcome. However, that is only part of the story. The other part touches on one of the key shared premises of SOAs and ROAs, namely the cross-organizational visibility of resources --- a premise that is largely not true. The original technology that was meant to solve this problem, UDDI, has failed due to fundamental design issues.

In this special session we shall discuss better ways to build collaborative and federated resource management systems and look at their impact on software engineering processes. The organizers will present examples from two very different projects they are heavily involved in, the resource registry approach of the TextGrid eHumanities project and the nascent European eGovernment Resource Network (eGRN), incidentally a field that Australia has helped to pioneer through visions such as the eGovernment Resource Centre. Participants are invited to present their own problem spaces and approaches in short vision statements. We expect that a lively discussion will result on organizational approaches, technical solutions and direct implications for the engineering of distributed software.

Prof Marc Wilhelm Kuster



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Dr. Christoph Ludwig



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ASWEC2008 Special Session

Industry Development Issues in Software Engineering

“A little knowledge that acts is worth infinitely more than much knowledge that is idle” (Gibran Khalil Gibran). Software Engineering is full of knowledge and yet, acts effectively. The right application of knowledge to benefit industry and society is “Wisdom”. Software Engineering is the best to measure the wisdom of applying knowledge. This special session will discuss what we have been done and yet so much there needs to do. However, it has never been easy and never will it be easy. The employment of Software Engineering methodologies has been rigorously employed to measure Wisdom based on Hard Science. The issues of primary concern in Software development to Industry and society do not always overlap those addressed by academics in the area. Frequently industry is interested in more practical issues that nevertheless have interesting research ramifications. This session is made from a selection of authors and papers that address different parts of these themes from Process issues, negotiation, architectural issues, to commercial of the shelf based development which are of interest to Industry which demonstrate that no limits of hard and collective research work is needed to follow Wisdom rather than accumulating knowledge!

This special session will involve a lead presentation by Professor Dr. Jubair Jwamear A. S. Al-Jaafar and Dr. Etienne Schneider, School of Computer Science, Universiti Teknologi PETRONAS, Malaysia for 45 mins, followed by position presentations of invited participants. At the end of the session, audience will be invited to respond and to contribute their issues, ideas and their experience of interest to Industry Software Development lasting 30 minutes.

Professor Dr. Jubair Jwamear A. S. Al-Jaafar



Universiti Teknologi PETRONAS, Malaysia
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Dr. Etienne Schneider



Universiti Teknologi PETRONAS, Malaysia
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ASWEC 2008 Programme Overview (update 24 March 2008)

Technology Park, Function Centre, Hayman Rd, Bentley, Western Australia and
 VC Chamber, Curtin University of Technology, Hayman Rd, Bentley, Western Australia
 Tech Park Map: <http://www.techparkwa.org.au/about-location.shtml> or see map attached to this program
 VC Chamber Map: http://www.properties.curtin.edu.au/your_campus/maps/ or see map attached to this program

	Tuesday 25th March 2008 <i>Curtin VC Chamber, Building 100, Curtin University</i>	Wednesday 26th March 2008 <i>Technology Park Function Centre</i>	Thursday 27th March 2008 <i>Technology Park Function Centre</i>	Friday 28th March 2008 <i>Technology Park Function Centre</i>
7:30 am		Registration and Refreshments	Registration and Refreshments	Registration and Refreshments
8:30 - 9:30 am	Tutorial Registration are in Building 100, VC Chamber Foyer SC meeting all day (Conference Room 1) OC and Volunteers Briefing VC Chamber Foyer	OPENING SPEECH Vice Chancellor Jeanette Hackett KEYNOTE Ian Somerville Construction by Configuration	KEYNOTE Richard Soley Service Oriented Architecture: Making the Leap, Leveraging Model Driven Architecture	KEYNOTE Hans van Vliet Software Architecture Knowledge Management
9:30 - 10:30 am		KEYNOTE Tharam Dillon Ontology Based Software Engineering	KEYNOTE Simon Carlsen and Stig Peterson Layered Software Challenge of Wireless Technology in the Oil and Gas Industry	KEYNOTE Max Noble Targeted Change. Are you already Irrelevant?
10:30 - 11:00 am		Morning Tea / Posters / Booths	Morning Tea and Posters/Booths	Morning Tea / Posters / Booths
11:00–12.30 pm	TUTORIAL Simon Carlsen & Stig Petersen Development of a Wireless Sensor Software Network on an Offshore Oil and Gas Platform	Research Papers / Experience Reports (4 parallel tracks)	Research Papers / Experience Reports (4 parallel tracks)	Research Papers / Experience Reports (3 parallel tracks) & Tutorial Dr. Richard Soley <u>Model based Software Development - past, present and future</u>
12:30– 1:30 pm	Lunch Break	Lunch Break / Posters / Booths	Lunch Break / Posters / Booths	Lunch Break / Posters / Booths
1:30-3:00 pm	TUTORIAL Tharam S Dillon Alternative Web Service Paradigms	Research Papers / Experience Reports (4 parallel tracks)	Research Papers / Experience Reports (4 parallel tracks)	3 Special Sessions and 1 Research/Experience Reports Track
3:00–3:30 pm	Afternoon Tea Break	Afternoon Tea / Posters / Booths	Afternoon Tea / Posters / Booths	Afternoon Tea / Posters / Booths
3:30– 5:00 pm	TUTORIAL Ian Somerville Fitting Software to the Organisation: Reducing Time to Value for New Software Systems	Research Papers / Experience Reports / special session (3 parallel tracks) & RESEARCH FORUM Future Trends in Software Development Chair: Brian von Konsky	Research Papers / Experience Reports (3 parallel tracks) & INDUSTRY FORUM Agile Development vs Traditional Software Engineering Chair: Ashley Aitken	3:30-4:30pm 3 Special Sessions and 1 Research/Experience Reports Track Continues
5.00 – 6.00 pm	Break	5.00 – 6.00 pm Engineering Australia's Special Session	Break	4:30-5:00pm Closing Speeches with Best Paper / Presentation Awards
6:00pm onward	Dinner invitation to Keynotes Speakers, Steering Committee, Organisation Committee <i>Blue Water Grill, Point Heathcote Reserve, Applecross, Perth</i>	6:00 – 9:00 pm Welcome Cocktail Party (ACS) Australian Computer Society Address (30min) <i>Technology Park, Function Centre</i>	6:30 – 12 midnight Gala Dinner and Awards Dinner Speech Minister Francis Logan <i>Perth Convention and Exhibition Centre (PCEC) River View Room 5 21 Mounts Bay Road, Perth City</i>	

We revert from daylight savings time back to normal at 3am on Sunday 30th March 2008

ASWEC 2008 - Full Conference Programme

(Last update 24 March 2008)

Tuesday 25th March 2008 – Tutorial Day

Curtin VC Chamber, Building 100, Curtin University

11.00 am – 12:30 pm	<p>TUTORIAL</p> <p>Wireless Sensor Networks: Introduction to Installation and Integration on an Offshore Oil & Gas Platform</p> <p><i>Stig Petersen and Simon Carlsen</i> <i>SINTEF ICT, Norway and StatoilHydro, Norway</i></p>
12:30 – 1:30pm	Lunch
1:30 pm – 3:00 pm	<p>TUTORIAL</p> <p>Alternative Web Service Paradigms</p> <p><i>Tharam S. Dillon - Distinguished Research Professor</i> <i>Chen Wu - Research Fellow</i> <i>DEBI Institute, Tier 1 Institute of Research Excellence</i> <i>Curtin University of Technology, Australia</i></p>
3:00 pm – 3:30 pm	Afternoon Tea
3:30 pm – 5:00 pm	<p>TUTORIAL</p> <p>Fitting Software to the Organization: Reducing Time to Value for New Software Systems</p> <p><i>Ian Sommerville</i> <i>Professor of Software Engineering</i> <i>School of Computer Science</i> <i>St. Andrews University</i> <i>Scotland</i></p>
5:00 pm – 6:30pm p	Food and Drinks
6:30 pm – 9:00 pm	Dinner invitation to Keynotes Speakers, Steering and Organising Committees <i>Blue Water Grill, Heathcote Reserve, Applecross, Perth</i>

ASWEC 2008 - Conference Programme

Wednesday 26th March 2008 – Conference Day 1

Technology Park, Function Centre

7:30 am	Registration and Refreshments	
8:30 - 10:30 am	Keynotes <i>Seminar Room 1</i> Chairs: Elizabeth Chang Curtin University of Technology/ Daniel Berinson Systec IT	OPENING SPEECH <i>Jeanette Hackett</i> Vice Chancellor of Curtin University of Technology Perth, Australia
		KEYNOTE Construction by Configuration: Challenges for Software Engineering Research and Practice <i>Ian Somerville</i> Professor of Software Engineering School of Computer Science, University of St Andrews Scotland
		KEYNOTE Ontology-Based Software Engineering-Software Engineering 2.0 <i>T. S. Dillon, E. Chang and P. Wongthongtham</i> DEBI Institute, Curtin University of Technology, Australia
10:30 - 11:00 am	Morning Tea / Posters / Booths	
11:00 – 12:30pm	1.Agile Development-I <i>(Industry Track)</i> <i>Seminar Room 1</i> Chair: Ashley Aitken Curtin University of Technology	Experiences Applying Agile Methodologies (SCRUM) to Software Development in a Research Organisation (Experience Report) <i>Ryan Fraser - CSIRO, Australia</i> Going Agile - A Case Study (Experience Report) <i>Dwayne Read - Strategic Systems</i> <i>Grey Properjohn - Snowden Technologies, Australia</i> Opening a Closed System: Implementing a Remote Communication Mechanism over an Existing Product (Experience Report) <i>John Ryan-Brown, Simon McBride and Nathan Keynes - The Australian e-Health Research Centre, CSIRO ICT Centre</i>
	2.Model Driven Development-I <i>(Research Track)</i> <i>Seminar Room 3</i> Chair: Mohammed Bennamoun University of Western Australia	Concern-Oriented Model-Driven Development Framework <i>Agung Fatwano and Clive Boughton - The Australian National University, Australia</i> Proposed Design Notation for Model Transformation <i>Lukman Ab. Rahim, Sharifah Bahiyah Rahayu Syed Mansoor, Universiti Teknologi Petronas, Malaysia</i> Formalising MDA-Based Refactorings <i>Liliana Favre and Claudia Pereira</i> <i>Universidad Nacional del Centro de la Provincia de Buenos Aires, Argentina</i>

	<p>3. Methodologies (Joint Research and Industry Track) Seminar Room 4</p> <p>Chair: Brian von Konsky, Curtin University of Technology</p>	<p>Comparison of Method Chunks and Method Fragments for Situational Method Engineering Brian Henderson-Sellers - University of Technology, Sydney, Australia Cesar Gonzalez-Perez - IEGPS, CSI Jolita Ralyté - University of Geneva, Switzerland</p> <p>Component Based Software Development – An Industrial Experience with a Labour Market Information System (Experience Report) Bhim Upadhyaya - Cyber Inc, USA</p> <p>An Exploration of Power-Law in Use-Relation of Java Software Systems Makoto Ichii, Makoto Matsushita and Katsuro Inoue - Osaka University, Japan</p>
	<p>4. Project Management (Joint Research and Industry Track) Seminar Room 5</p> <p>Chair: Judy Bamberger Process Solutions</p>	<p>From Scrum to Solo: How Small is Too Small a Team to Still Call it Software Engineering? (Experience Report) Andrew Dent – AD Software, Australia</p> <p>Building Bridges: Effective Mixed Teams of Software Professionals and Research Academics (Experience Report) Ronald Jones – iVEC, Australia Ryan Fraser and Terry Rankine – CSIRO, Australia</p> <p>Implementing Hierarchical Storage on the Basis of File Use (Experience Report) Simon Kravis - KAZ Group Pty Limited</p>
12:30 -1:30 pm	Lunch Break / Posters / Booths	
1:30 – 3:00 pm	<p>1. Agile Development-II (Joint Research and Industry Track) Seminar Room 1</p> <p>Chair: Ashley Aitken Curtin University of Technology</p>	<p>Software Metrics for Agile Software Development Martin Kunz, Reiner R. Dumke and Niko Zenker, Software Engineering Group, University of Magdeburg, Germany</p> <p>Learning from Experience: A New Approach to Evaluating Health Information Systems (Experience Report) Nicola T. Shaw - iCARE, Canada</p> <p>Integrating Agile Concepts into Traditional Software Development Processes (Experience Report) Aidan Morgan - Thales Australia</p>
	<p>2. Model Driven Development-II (Joint Research and Industry Track) Seminar Room 3</p> <p>Chair: Mohammed Bennamoun University of Western Australia</p>	<p>Automated Derivation of Speech Interfaces: A Model-Based Approach Samuel Lahtinen, Heikki Suontausta and Kai Koskimies - Tampere University of Technology, Finland</p> <p>Multi-Platform MDE Workbench Architecture (Experience Report) Daniel Exertier Benoit Langlois and Olivier Cault – Thales, Engineering and Process Management</p> <p>Integration of a Document-Centred Process Model with a Model-based Development Approach</p>

		(Experience Report) <i>Michael Deynet - Clausthal University of Technology, Germany</i>
	3. Software Paradigms (Research Track) <i>Seminar Room 4</i> Chair: <i>David McMeekin Curtin University of Technology</i>	Towards a Unified Framework for Cohesion Measurement in Aspect-Oriented Systems <i>Avadhesh Kumar - Amity Institute of Information Technology, India Rajesh Kumar - Thapar University, India P. S. Grover - GGS Indraprastha University, India</i> Semi-quantitative Modelling for Managing Software Development Processes <i>He Zhang and Jacky Keung - University of New South Wales and National ICT Australia Barbara Kitchenham - Keele University, UK Ross Jeffery - University of New South Wales and National ICT Australia</i> Understanding Self-Organising Teams in Agile Software Development <i>Nils Brede Moe, Torgeir Dingsøy and Tore Dybå - SINTEF ICT, Norway</i>
	4. Testing Solutions-I (Joint Research and Industry Track) <i>Seminar Room 5</i> Chair: <i>Karl Reed, La Trobe University</i>	Automatic Generation of Test Models for Model Transformations <i>Junhua Wang, Soon-Kyeong Kim and David Carrington - University of Queensland, Australia</i> Towards Automated Test Sequence Generation <i>U. Farooq, C. P. Lam and H. Li - Edith Cowan University, Australia</i> Improving Combinatorial Methods to Optimise Efficient Test Suite Generation (Experience Report) <i>Christopher Stanbridge, John Ryan-Brown and David Hansen - The Australian e-Health Research Centre, CSIRO ICT Centre</i>
3:00 – 3:30 pm	Afternoon Tea / Posters / Booths	
3:30 – 5:00 pm	1. Research Forum “Future Trends in Software Development” <i>Seminar Room 1</i> Chair: <i>Brian von Kinsky, Curtin University of Technology</i>	<i>Research Forum Discussion</i> ‘Future Trends in Software Development’ <i>Panel Members:</i> <i>Ian Sommerville - St Andrew’s University, UK Richard Soley - OMG Inc, USA Tharam S. Dillon - DEBI Institute, Curtin University of Technology Brian Henderson-Sellers - UTS, Sydney, Australia Others: TBA</i>
	2. Metrics and Management- I (Joint Research and Industry Track) <i>Seminar Room 3</i> Chair: <i>Mark Reynolds University of Western Australia</i>	Quality Measurement Model for Analysis and Design Tools Based on FLOSS <i>O. Alfonso, K. Domínguez, L. Rivas, M. Pérez, L. Mendoza and M. Ortega - Universidad Simon Bolivar, Venezuela</i> An Empirical Study of Evolution of Inheritance in Java OSS <i>E. Nasser, S. Counsell and M. Shepperd - Brunel University, United Kingdom</i>

		<p>Lessons Learned from Developing Second Life Applications (<i>Experience Report</i>) <i>Neisha Hitchcock, Kenichi Yoshimura and Zaid Faydi – IBM Corporation</i></p>
	<p>3.Resource Management, Reuse and Web Applications for e-Government <i>(Special Session)</i> <i>Seminar Room 5</i></p> <p>Chairs: <i>Marc Wilhelm Küster and Christoph Ludwig - University of Applied Sciences Worms</i></p>	<p>This session runs between 3:30-5:30pm OPENING SPEECH Software Reuse through Resource Registries <i>Marc Wilhelm Küster and Christoph Ludwig - University of Applied Sciences Worms, Germany</i></p> <p>Towards Formalising Resource Based Non-conformance in Business Processes <i>Sean Thompson and Torab Torabi - La Trobe University, Australia</i></p> <p>Performance Modelling for e-Government Service Oriented Architectures (SOAs) (<i>Experience Report</i>) <i>Paul Brebner, Liam O'Brien and Jon Gray – NICTA, Australia</i></p> <p>OPEN Discussion lead by the session chairs (40min) <i>'Collaborative and Federated Resource Management, eGovernment Resource Network, e-Humanities'</i></p>
	<p>4.Open Source Development <i>(Industry Track)</i> <i>Seminar Room 4</i></p> <p>Chair: <i>Arnold Wong</i> <i>Australian Computer Society</i></p>	<p>Development of an Open Source Inundation Model <i>(Experience Report)</i> <i>Duncan Gray and Ole Nielsen - Geo Science Australia</i></p> <p>PoSSIS – THALES Internalised Open Source <i>(Experience Report)</i> <i>Didier Boulet - Thales Group, Australia</i></p> <p>Open Source Communities as Social Networks: An Analysis of Some Peculiar Characteristics <i>Giulio Concas, Manuela Lisci, Sandro Pinna, Guido Porruvecchio and Selene Uras - University of Cagliari, Italy</i></p>
5:00 – 6:00 pm	<p>Engineering Australia's Special Session, Invited speakers: <i>Stig Petersen and Simon Carlsen</i> <i>SINTEF ICT, Norway and StatoilHydro, Norway</i></p>	
6:00 – 9:00 pm	<p>Welcome Cocktail Party <i>Host: Mohammed Bennamoun – UWA</i></p> <p>Australian Computer Society Address (15mins) EA Comments (10mins)</p> <p><i>Technology Park, Curtin Function Centre</i></p>	

ASWEC 2008 - Conference Programme

Thursday 27th March 2008 – Conference Day 2

Technology Park, Function Centre

7:30 am	Registration and Refreshments	
8:30 - 10:30 am	Keynotes <i>Seminar Room 1</i> Chair: <i>Daniel Berinson</i> <i>Systemc IT</i>	KEYNOTE Service Oriented Architecture: Making the Leap, Leveraging Model Driven Architecture <i>Richard Soley, Chairman and Chief Executive Officer</i> <i>Andrew Watson - Object Management Group, Inc.</i>
		KEYNOTE Layered Software Challenge of Wireless Technology in the Oil and Gas Industry <i>Stig Petersen - SINTEF ICT, Norway</i> <i>Simon Carlsen - Amund Skavhaug, StatoilHydro, Norway</i>
10:30 - 11:00 am	Morning Tea / Posters / Booths	
11:00 – 12:30 pm	1.Service Oriented Approach <i>(Joint Research and Industry Track)</i> <i>Seminar Room 1</i> Chair: <i>Paul Strooper</i> <i>Univ of Queensland</i>	An Empirical Approach for Semantic Web Services Discovery <i>Chen Wu, Elizabeth Chang, and Ashley Aitken</i> <i>DEBII, Curtin University of Technology ,Australia</i> A Survey of Policy-Based Management Approaches for Service Oriented Systems <i>Tan Phan, Jun Han and Jean-Guy Schneider - Swinburne University of Technology, Australia</i> <i>Tim Ebringer and Tony Rogers - CA Labs, Australia</i> Challenges of Deploying SOA in Western Power (Experience Report) <i>Daniel M. Berinson - Systemc IT, Australia</i>
	2.Software Infrastructure-I <i>(Research Track)</i> <i>Seminar Room 5</i> Chair: <i>Farookh Hussain</i> <i>Curtin University of Technology</i>	TUBE: Automated Protocol-Level Middleware Interoperation <i>Richard Slamkovic, George Fernandez and Jim McGovern - RMIT University, Australia</i> Toward an Integrated Framework of Software Project Threats <i>Paul L. Bannerman - NICTA, Australia</i> Situated Software Development: Work Practice and Infrastructure Are Mutually Constitutive <i>Julia Prior, Toni Robertson and John Leaney - University of Technology, Sydney, Australia</i>
	3.Software Architecture-I <i>(Research Track)</i> <i>Seminar Room 4</i> Chair: <i>Brian von Kinsky</i> <i>Curtin University of Technology</i>	Embedding Architectural Practices into Extreme Programming <i>Amir Azim Sharifloo, Amir S. Saffarian and Fereidoon Shams - Shahid Beheshti University, Iran</i> Key Aspects of Software Release Planning in Industry <i>Markus Lindgren - ABB Force Measurement, Sweden</i> <i>Rikard Land and Christer Norström - Malardalen University, Sweden</i> <i>Anders Wall - ABB Corporate Research, Sweden</i> Experiments with Analogy-X for Software Cost

		<p>Estimation <i>Jacky Keung and Barbara Kitchenham - NICTA Ltd, Australia</i></p>
	<p>4.Metrics and Management- II (Research Track) Seminar Room 3</p> <p>Chair: <i>Valerie Maxville WA IEEE Computer Society</i></p>	<p>Refactoring Effect Estimation Based on Complexity Metrics <i>Yoshiki Higo, Yoshihiro Matsumoto, Shinji Kusumoto and Katsuro Inoue - Osaka University, Japan</i></p> <p>Correctness Criteria for Normalisation of Semi-structured Data <i>Scott Uk-Jin Lee, Jing Sun and Gillian Dobbie - The University of Auckland, New Zealand Lindsay Groves - Victoria University of Wellington, New Zealand Yuan Fang Li - National University of Singapore, Singapore</i></p> <p>Commercial-Off-The-Shelf Software Development Framework <i>Basem Suleiman, University of New South Wales, Sydney, Australia</i></p>
12:30 -1:30 pm	Lunch Break	
1:30 – 3:00 pm	<p>1.Analysis and Modelling (Joint Research and Industry Track) Seminar Room 1</p> <p>Chair: <i>Amandeep Sidhu Curtin University of Technology</i></p>	<p>Analysis and Design of Multi Agent Knowledge Development Process <i>Cheah Wai Shiang and Leon Sterling - University of Melbourne, Australia</i></p> <p>Root Cause Analysis Using Sequence Alignment and Latent Semantic Indexing <i>R.P. Jagadeesh Chandra Bose - Accenture Technology Labs, India U. Suresh - Philips Research, India</i></p> <p>Commercial-Off-The-Shelf Software Development Framework <i>Basem Suleiman - University of New South Wales, Australia</i></p>
	<p>2.Testing Solutions-II (Research Track) Seminar Room 5</p> <p>Chair: <i>Karl Reed, La Trobe University</i></p>	<p>Automated Usability Testing Using HUI Analyzer <i>Simon Baker, Flora Au, Gillian Dobbie and Ian Warren - University of Auckland, New Zealand</i></p> <p>Selection of Regression Test Suite to Validate Software Applications upon Deployment of Upgrades <i>Anjaneyulu Pasala, Yannick L. H. Lew Yaw Fung, Fady Akladios, Appala Raju G. and Ravi P. Gorthi - Infosys Technologies Ltd, India</i></p> <p>Yet Another Performance Testing Framework <i>Shiping Chen, David Moreland, Surya Nepal and John Zic - CSIRO, Australia</i></p>
	<p>3.Software Architecture-II (Joint Research and Industry Track) Seminar Room 4</p> <p>Chair: <i>Peng Lam Edith Cowan Univ.</i></p>	<p>Specifying Software Architectures Using a Formal-Based Approach <i>David Hemer and Yulin Ding - The University of Adelaide, Australia</i></p> <p>Retail Energy Data Semantic Modelling (Experience Report) <i>Nada Reinprecht - National Electricity Market Management Company</i></p> <p>Modular Specification of GUI Layout Using Constraints</p>

		<i>Christof Lutteroth and Gerald Webe - The University of Auckland, New Zealand</i>
	<p>4. Metrics and Management- III (Joint Research and Industry Track) Seminar Room 3</p> <p>Chair: Valerie Maxville, WA IEEE Computer Society</p>	<p>An Empirical Study into Use of Dependency Injection in Java <i>Hong Yul Yang, Ewan Tempero and Hayden Melton - University of Auckland, New Zealand</i></p> <p>Five Metrics Each One of Us Should be Collecting and Using (Experience Report) <i>Judy Bamberger - Process Solutions, Australia</i></p> <p>TRELIS: (another) Death March Project? (Experience Report) <i>Diane Jamieson – Curtin University of Technology</i> <i>Paul Wilkins, Greg Forbes and Neville Binning – Department of Planning and Infrastructure, Australia</i></p> <p>Peer Assessment of Group-Based Software Engineering Projects <i>David Hemer - The University of Adelaide, Australia</i></p>
3:00 – 3:30 pm	Afternoon Tea / Posters / Booths	
3:30 – 5:00pm	<p>1. Industry Panel Discussion Seminar Room 1</p> <p>Chair: Ashley Aitken Curtin University of Technology</p>	<p>INDUSTRY PANEL DISCUSSION <i>'Agile Development vs. Traditional Software Development'</i></p> <p>Panel Members: <i>Richard Soley - OMG Inc, USA</i> <i>Max Noble - The Software Delivery Centre, Thales Australia</i> <i>Dwayne Read – Strategic Systems, Australia</i> <i>Daniel Berinson – Systec IT, Australia</i> <i>Judy Bamberger - Process Solutions, Australia</i></p>
	<p>2. Requirement Engineering (Joint Research and Industry Track) Seminar Room 3</p> <p>Chair: Leon Sterling University of Melbourne</p>	<p>A Framework for Requirements Engineering Process Development (FRERE) <i>Li Jiang - University of Adelaide, Australia</i> <i>Armin Eberlein - American University of Sharjah, UAE</i></p> <p>Assessing Value of SW Requirements <i>Pasi Ojala - Nokia Corporation and Oulu University of Applied Sciences, Finland</i></p> <p>Business Process Oriented Requirements Modelling and Systems Fulfilment - a Meta Model Driven Approach (Experience Report) <i>John Forrest - Holocentric Pty Ltd, Australia</i></p>
	<p>3. Software Supporting Technologies and Tools (Research Track) Seminar Room 4</p> <p>Chair: Terry Woodings University of Western Australia</p>	<p>Checklist Based Reading's Influence on a Developer's Understanding <i>David A. McMeekin, Brian R. von Kinsky, Elizabeth Chang and David J. A. Cooper - Digital Ecosystems and Business Intelligence Institute, Curtin University of Technology, Australia</i></p> <p>Tool Support for Teaching Design Patterns <i>Jens Dietrich and Elizabeth Kemp - Massey University, New Zealand</i></p> <p>Technologies and Strategies for Integrating Object-Oriented Analysis and Design Education with Programming <i>Justin C. W. Debusse and Tony Stiller - University of the</i></p>

		<i>Sunshine Coast, Australia</i>
	<p>4. Ontology Engineering (Research Track) <i>Seminar Room 5</i></p> <p>Chair: <i>Pornpit Wongthongtham, Curtin University of Technology</i></p>	<p>An Ontology Framework for Managing Security Attacks and Defences in Component Based Software Systems <i>Artem Vorobiev, Jun Han and Nargiza Bekmamedova - Swinburne University of Technology, Melbourne, Australia</i></p> <p>Ontologies Integration for University Institutions: Approach to an Alignment Evaluation <i>Richard Gil, Ana María Borges, Luís Ramos and Leonardo Contreras - Bolivar University, Caracas, Venezuela</i></p> <p>Analyzing and Modelling Open Source Software Bug Report Data <i>Fengzhong Zou and Joseph Davis - The University of Sydney, Australia</i></p>
5:00-6:00pm	Break	
6:30 –12:00	<p>Gala dinner <i>Host: Daniel Berinson, Systec IT</i></p> <p>Dinner Speech-The Honourable Francis M Logan MLA, Minister for Energy; Resources; Industry and Enterprise</p> <p>Grammy Awards and Ballroom dance <i>Perth Convention and Exhibition Centre (PCEC), River View Room 5, 21 Mounts Bay Road, Perth City, Bus departure at Function Centre from 6pm, then hotels</i></p>	

ASWEC 2008 - Full Conference Programme

Friday 28th March 2008 – Conference Day 3

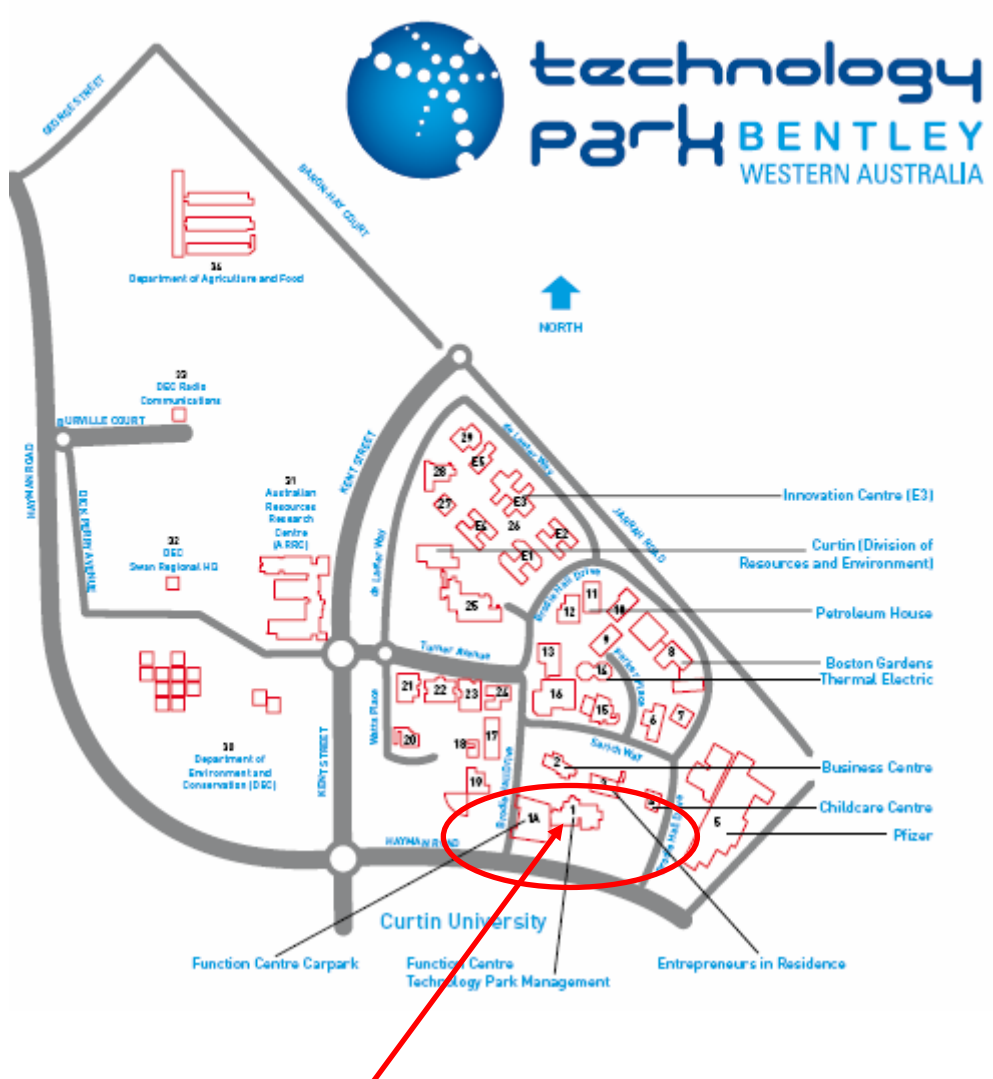
Technology Park, Function Centre

7:30 am	Registration and Refreshments	
8:30 - 10:30 am	Keynotes <i>Seminar Room 1</i> Chair: Mohammed Bennamoun University of Western Australia	KEYNOTE Software Architecture Knowledge Management <i>Hans van Vliet - Professor of Software Engineering, VU University, Amsterdam, Netherlands</i>
		KEYNOTE Targeted Change. Are you already Irrelevant? <i>Max Noble - Group General Manager, Thales, Australia</i>
10:30 - 11:00 am	Morning Tea/Poster/Booths	
11:00 – 12:30 pm	1. Collaborative Software Approaches <i>(Research Track)</i> <i>Seminar Room 4</i> Chair: Nada Reinprecht - National Electricity Market Management Company	Supporting Evolving Multi-agent Systems with a System Evolution Directory <i>Bin Lu, Leon Sterling and Kuldar Taveter - Melbourne University, Australia</i> On Code Generation for Derived Associations <i>Jens Dietrich - Massey University, New Zealand Bastian Schenke and Gerd Wagner - Brandenburgische Technische Universität Cottbus, Germany</i> Experiences on the Belief-Theoretic Integration of Para-consistent Conceptual Models <i>Ebrahim Bagheri and Ali A. Ghorbani - University of New Brunswick, Canada</i>
	2. Education and Training <i>(Industry Track)</i> <i>Seminar Room 3</i> Chair: Jocelyn Armarego, Murdoch University	Improving the Success and Effectiveness of Software Developer Training (Experience Report) <i>Ashley M. Aitken - Curtin University of Technology, Australia</i> The Benefits to Students of Work Experience Programmes (Experience Report) <i>Tracy Footitt – Thales Australia</i> Skill Set Visualisation for Software Engineering Job Positions at Varying Levels of Autonomy and Responsibility (Experience Report) <i>Brian R. von Kinsky – Curtin University of Technology</i> <i>David Hay – Thales Australia</i> <i>Bob Hart – Australian Computer Society</i>
	3. Application Development-I <i>(Joint Research and Industry Track)</i> <i>Seminar Room 6</i> Chair: Kevin Vinsen Thales Australia	Towards Integrated Model-Driven Testing of SCADA Systems Using the Eclipse Modelling Framework and Modelica <i>Jörn Guy Süß, The University of Queensland, Australia</i> <i>Adrian Pop, Linköpings Universitet, Sweden</i> <i>Peter Fritzson, Linköpings Universitet, Sweden and</i> <i>Luke Wildman, The University of Queensland,</i>

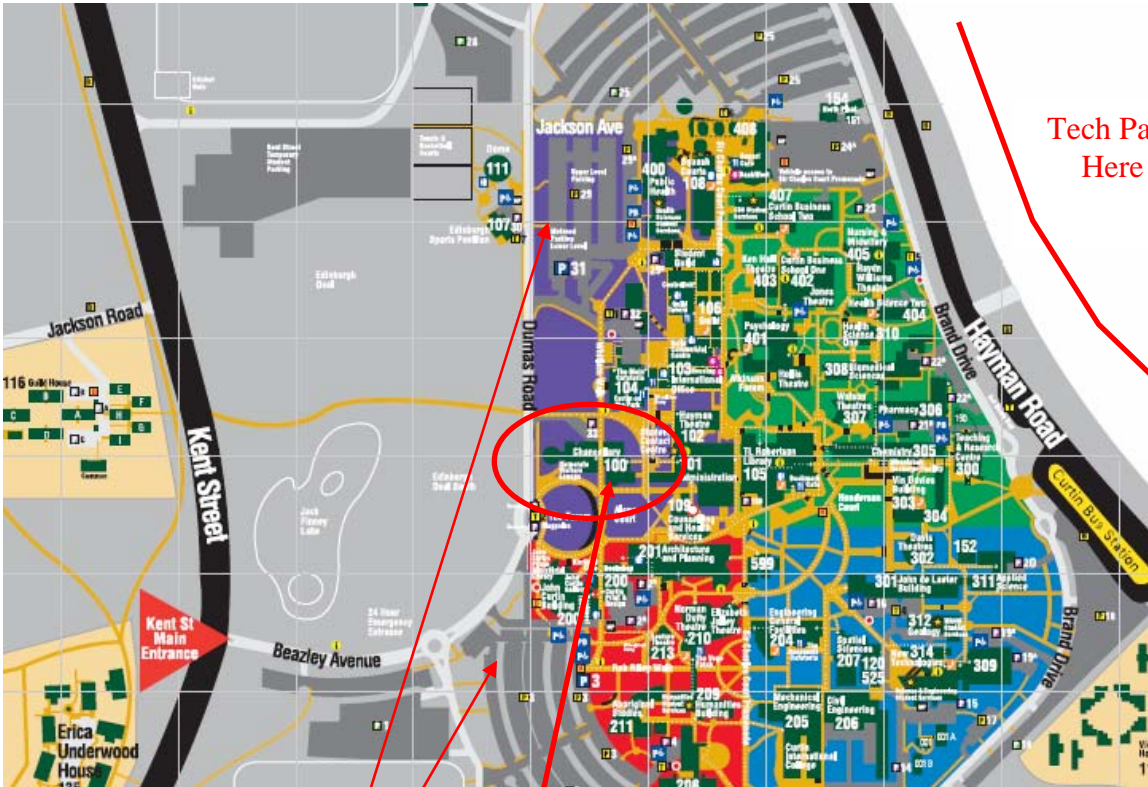
	<p>Co-Chair: <i>David Cooper</i> <i>Curtin University</i></p>	<p><i>Australia</i></p> <p>Development and Utilisation of aseXML in the Energy Industry (Experience Report) <i>Andrew Screen – AGL, Australia</i></p> <p>23 years of Refactoring (Experience Report) <i>Philip Christensen – Formsys, Fremantle, Australia</i></p>
11:00 – 12:30 pm	<p>4. Tutorial <i>Seminar Room 1</i> Chair: <i>Farookh K Hussain,</i> <i>Curtin University</i></p>	<p>Model based Software Development - past, present, and future Dr Richard Soley <i>Object Management Group, Inc. (OMG®).</i></p>
12:30 -1:30 pm	Lunch Break	
1:30 – 4:30 pm	<p>1.Special Session- 'Issues in ICT Education' <i>Seminar Room 3</i></p> <p>Chairs: <i>Tony Koppi,</i> <i>Fazel Naghdy and</i> <i>Joe Chicharo - University of Wollongong</i></p>	<p>ROUND TABLE DISCUSSION (2.5 hours) OPENING SPEECH (40min) Issues in Australian ICT Education <i>Tony Koppi, Fazel Naghdy, Joe Chicharo - University of Wollongong, Australia</i></p> <p>Issues and Challenges in Teaching SE, IT, IT and EC Courses <i>Kum Leng Chin - Curtin University of Technology, Perth, Australia</i></p> <p>ICT Profession and ICT Body of Knowledge <i>Bob Hart - ACS Professional Standard Board</i></p> <p>PANEL DISCUSSION (45 min) What are the Priority Issues Facing the ICT Sector?</p> <p>Panel Members: Joe Chicharo - ICT Council President Fazel Naghdy - Head of School and Carrick ICT Project Director Bob Hart - ACS perspective Kevin Vinsen – Thales Australia Brian von Kinsky – Vice Chair ACS Accreditation Geoff Roy, EA Bob Broadway, EA</p>
	<p>2.Special Session- 'Aerospace, Risk, and Real Time Issues' <i>Seminar Room 4</i></p> <p>Chairs: <i>Janice Hill and Daniel Victor - NASA, Kennedy Space Centre</i></p>	<p>Special Session 2.5 hours OPENING SPEECH (approx 40 min) The Product Engineering Class in the Software Safety Risk Taxonomy for Building Safety-Critical Systems <i>Janice Hill and Daniel Victor - NASA, Kennedy Space Centre, Florida, USA</i></p> <p>A Framework for Over the Air Provider-initiated Software Development on Mobile Devices <i>Chuong Cong Vo and Torab Torabi - La Trobe University, Victoria, Australia</i></p> <p>A Design Approach for Soft Error Protection in Real-Time Embedded Systems <i>Muhammad Sheikh Sadi - Curtin University of Technology, Australia</i></p> <p>Component Architecture and Modeling for Microkernel-Based Embedded System</p>

		<p>Development <i>Yan Liu and Ted Wong – NICTA, Australia</i></p> <p>Dynamic K-gram based Software Birthmark <i>Yameng Bai, Xingming Sun and Guang Sun - Hunan University, Hunan, China</i></p> <p>Open DISCUSSION (approx 45 min) Panel Members: <i>Janice Hill and Daniel Victor - NASA, Kennedy Space Centre, USA</i> <i>Max Noble - Group Manager, Thales</i> <i>Tharam S Dillon - DEBI Institute, Curtin University of Technology</i></p>
	<p>3.Special Session- Development Issues in Software Engineering <i>Seminar Room 5</i></p> <p>Chairs: <i>Jubair Jwamear A. S. Al-Jaafar</i></p> <p>and</p> <p><i>Etienne Schneider</i> <i>Universiti Teknologi Petronas</i></p>	<p>Special Session 2.5 hours OPENING SPEECH Wisdom of Applying Knowledge (40min) <i>Jubair Jwamear A. S. Al-Jaafar and Etienne Schneider - Universiti Teknologi Petronas, Malaysia</i></p> <p>A Method to Define an Object Oriented Software Process Architecture <i>Beatriz Terezinha Borsoi and Jorge Luis Risco Becerra - , Brazil</i></p> <p>RDP Technique: Take Different look at XP for Adoption <i>Mehdi Mirakhorli, Abdorrahman Khanipour Rad, Fereidoon Shams Aliee, Abbas Mirakhorli and Maryam Pazoki - , Iran</i></p> <p>Modelling Input Validation in UML <i>Pedram Hayati, Nastaran Jafari, S. Mohammad Rezaei and Saeed Sarenche - Institute for Advanced Studies in Basic Sciences, Zanjan, Iran</i> <i>Vidyasagar Potdar - DEBII, Curtin University of Technology, Australia</i></p> <p>A Behavioural Requirements Specification Approach for Interactive Multimedia Applications <i>Khairuddin Hashim and Johan Yousoff - Kuala Lumpur Metropolitan University, Malaysia</i></p> <p>Open DISCUSSION (approx 30 min) will be led by Session Chairs</p>
	<p>4.Application Development-II <i>(Joint Research and Industry Track)</i> <i>Seminar Room 6</i></p> <p>Chair: <i>Rodney Kirk - Motorola</i></p>	<p>This session runs 2.5 hours Indexing the Java API Using Source Code <i>Homan Ma, Robert Amor and Ewan Tempero - University of Auckland, New Zealand</i></p> <p>Choosing the “Right” Prioritisation Methods <i>Sarah Hatton -The University of Western Australia, Australia</i></p> <p>Agile Implementation Phase in Two Canadian Organisations <i>Jaana Nyfjord and Mira Kajko-Mattsson</i> <i>Stockholm University / Royal Institute of Technology Sweden</i></p> <p>Development of the BOVINE Browser: An Application Designed to Provide Access to the</p>

	<p>Internet for People with Low Vision (Experience Report) <i>Scott Hollier - Association for the Blind of Western Australia</i> <i>Iain Murray – Curtin University of Technology</i> <i>Chris Duane - Association for the Blind of Western Australia</i> <i>Ruchi Permvattana – Curtin University of Technology</i></p> <p>Implementing a Behaviour Tree Analysis Tool using Eclipse Development Frameworks (Experience Report) <i>Phillip Papacostantinou, Patrick Lee, Tuan Tran and Vincent Phillips - Raytheon Australia Pty Ltd</i></p>
4:30– 5:00pm	<p>Closing Speech Seminar Room 1</p> <p>Best Paper / Presentation Awards <i>Chair: Mohammed Bennamoun</i> <i>University of Western Australia</i></p> <p><i>Award Presentation:</i> <i>Brian Von Konsky and Ashley Aitken, Curtin University of Technology</i></p> <p><i>Steering Committee Remark: Paul Strooper</i></p> <p><i>Conclusion: Daniel Berinson, Systec IT and SC Comments</i></p>



Function Centre Here, Opposite Curtin Business School



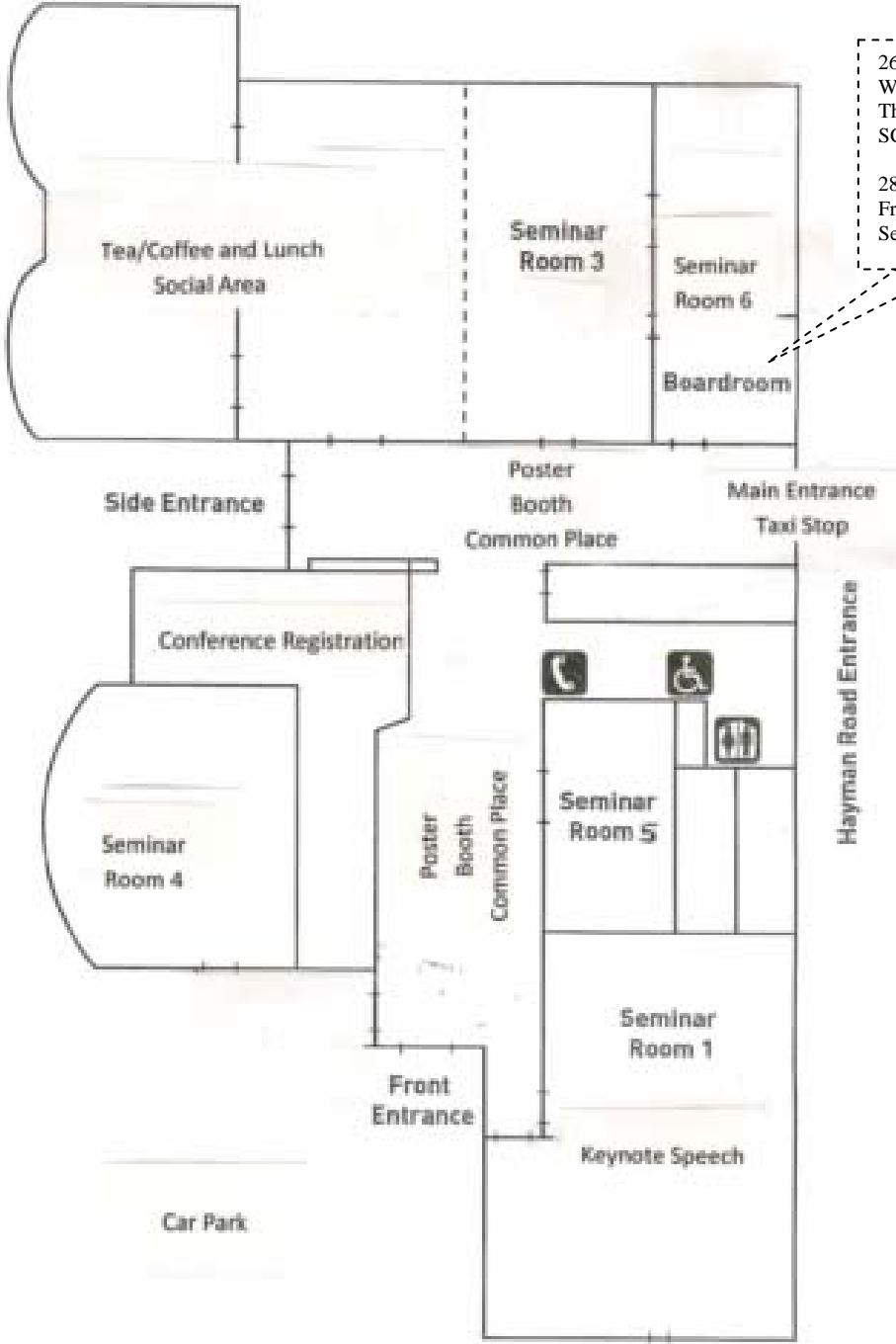
Tech Park Here

VC Chamber Here

Nearest Car park

ASWEC 2008 Conference Room Plan

FUNCTION CENTRE MAP



26/3/08-27/3/08
 Wednesday
 Thursday
 SC Meeting Room

28/3/08
 Friday, Special
 Session Room