Overview ASWEC 2008 Special Session

**Issues in ICT Education**

This session is concerned with ICT education from the holistic perspective of preparation in high schools, the university experience, 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 leaded and chaired by the project team from Wollongong University with invited participants to report on findings from consultations and research. Attendees will be invited to respond and to contribute their issues and challenges that are of particular concern to the software engineering community.

Professor Joe Chicharo

Professor Fazel Naghdy

Dr Tony Koppi

Project Director

Project Director

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.
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 widespread 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.
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 in a long round table discussion lasting 30 minutes.

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

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