4. Technology Drivers and Research Challenges of Future e-Business

Speaker: Stuart Feldman

Affiliation: IBM T. J. Watson Research Center, USA

Abstract: The rapid growth of electronic commerce has resulted from a confluence of business social, and political drives and major progress in information technology. We expect continuing rapid changes in underlying hardware, and a growing need for new services and systems. E-Business systems have moved from a fringe activity to the core of modern business, with consequent requirements for reliability and trustworthiness, but must also change on “web time”. This talk will address some of the changes underway, and the great challenges these pose to the engineering of software, and the opportunities these present to the research community.

Session Chair: Mikio Aoyama, Niigata Institute of Technology (NIIT), Japan

5. Challenge of Keitai Software: Software Engineering for Next Generation Mobile Phone Systems

Speaker: Yoshiiku Hanai¹ and Mikio Aoyama²

Affiliation: ¹Fujitsu Limited and ²Niigata Institute of Technology, Japan

Abstract: Keitai, a tiny mobile phone, provides amazing functionality including Internet browser, music player, video communication, games, and running of Java. It becomes a ubiquitous user interface to the Internet. The development of mobile phone software is a new and big challenge of software engineering. It resembles a product-line of large-scale embedded real-time software with an extremely short development cycle-time. Thus, it requires new development techniques comprising agile software process, reuse along with a product-line, evolutionary-development, development management and high assurance.

This talk reports the current status and challenge of software development for mobile Internet phones.

Session Chair: Mikio Aoyama, Niigata Institute of Technology (NIIT), Japan

6. Web Services and Software Engineering: Challenges and Opportunities

Speakers: Sanjiva Weerawarana

Affiliation: IBM T.J. Watson Research Center, USA

Abstract: Web services are an evolving new platform for distributed computing. The components of the Web services stack include SOAP, WSDL, UDDI and XML Schema. The Web services stack can be compared to the CORBA stack to illustrate its features.

Authoring, debugging, testing, deploying and managing of Web Services provide a new set of challenges for the software engineering community. Innovative software engineering solutions will be critical to the success of the Web services platform.

In this talk we will present the Web services platform and discuss some of the opportunities open to the software engineering community in helping shape its success.

Session Chair: Mikio Aoyama, Niigata Institute of Technology (NIIT), Japan

7. Enterprise Methodology /= Software Development Methodology

Speaker: Jim Q. Ning

Affiliation: Accenture (formerly known as Andersen Consulting), USA

Abstract: Many researchers and practitioners in the software engineering community consider methodologies as processes and guidelines that support software development and project management activities. What we may have overlooked is that software applications never exist in vacuum; they are used to solve business problems and create value for the businesses. This presentation will focus on non-application elements of a methodology.

At a high level, an enterprise methodology must include:
- A Planning Component for business planners and architects to define corporate strategies, understand stakeholder requirements, identify value creating opportunities, create business cases, and define enterprise architectures;
- A Development Component for designers and developers to analyze, design, build, and implement applications and associated business processes,