Abstract—MTECS 2009 workshop Proceedings publish the state-of-the-art investigation from international researchers in pursuing and discovering new knowledge on how mobile technologies are applied in mobile enterprise computing systems. The proceedings start with a brief explanation of the motivation for the workshop and subsequently a short description of the peer-reviewed papers and a brief introduction to the workshop discussion session. We conclude with special acknowledgment to the participating authors and MTECS 2009 Program Committee members.

Keywords: mobile enterprise; mobile technologies; mobile systems

I. INTRODUCTION

With the proliferation of wireless infrastructure, mobile devices and platforms, enterprise Information systems are becoming pervasive in nature. The ability to capture and access enterprise information anytime and anywhere and support mobile services is becoming critical to the success of the organizations and its users. Various traditional enterprise systems are now integrated with mobile modules for example OneBridge™, M-Business Anywhere™, System Center Mobile Device Manager™, Mobile Enterprise Platform (MEP)™ and many more. Other mobile initiatives such as the mobile information delivery research of W3C Ubiquitous Web Applications (UWA) focuses strongly on enabling value-added services and business models for ubiquitous networked devices, based on declarative representations. Another W3C activity is Mobile Web Initiative (MWI). MWI focuses on best practices for creating mobile-friendly content and applications, enabling easy access to device descriptions, and setting up test suites. The issues with interoperability of mobile browsers and ways to use the Web on mobile devices are crucial to mobile enterprise information systems. These are some of the initiatives focusing on capturing and delivering of information to mobile devices and platforms.

In addition, some societal and technological trends are worthy of note. The growing popularity of social networking tools like Facebook, MySpace, Twitter etc, as well as private enterprise-specific social networks, has far-reaching implications for enterprises. Social networks now form an alternate information source for enterprise users, and often users reach out to their social networks to seek solutions for their problems rather than utilize enterprise knowledge bases. One of the challenges enterprises face is to devise mechanisms that integrate social networks into the day-to-day working of enterprise workers. Secondly, mobile devices form a rich source of information about customers and employees that can be leveraged by enterprises to better understand their behaviours, preferences, needs, etc. Such information can be utilized for increasing sales, improving productivity, and improving personalization of user experience. Thus enterprise analytics frameworks are increasingly integrating mobile information sources, an example of this being IBM’s System S™.

These initiatives and trends will likely to shape the future and standards of enterprise computing and information delivery through mobile platforms. Hence the program committees believe that it is timely to organize MTECS workshop to bring together researchers, IT decision makers, system architects, solution designers and engineers and practitioners interested in enterprise information systems and its applications in the context of mobile technologies.

II. PEER-REVIEWED PAPERS

MTECS 2009 workshop represents the first initiative to extend to coverage of EDOC to mobile domain. With flu pandemics still the main concern of every individual, MTECS 2009 workshop is held at a very challenging time. Nevertheless three high quality papers have been accepted and authors have agreed to present their papers. Each MTECS accepted papers went through three peer reviews. Only highly qualified papers were accepted. The first full paper “Towards Automatic Behaviour Synthesis of a Coordinator Component for Context-Aware Mobile Applications” written by Laura M. Daniele, Luis Ferreira Pires, and Marten van Sinderen from the Centre for Telematics and Information Technology, University of Twente, Enschede, The Netherlands. The paper addresses the problem of behaviour modelling and how it should play in MDA model transformations to support application development. The authors suggest an MDA-based approach...
that incorporates behaviour modelling at the PIM level in context-aware mobile applications. The approach utilizes a transformation with a state machines-based approach to synthesis the structured behaviour of the individual architecture components and the behaviour of a coordinator component that orchestrates the interactions between all the other components. The paper contributes to the knowledge of applying model transformations in addressing behaviour correctness issues and the design process from the abstract layer to the implementation that have the potential for a formalism based on LTS, MTS and safety properties.

The second full paper “Approaches for Optimizing the Performance of a Mobile SAML-based Emergency Response System” is written by Thang Tran and Christian Wietfeld from the Communication Networks Institute (CNI) Faculty of Electrical Engineering and Information Technology Dortmund University of Technology, Germany. The paper addresses effective emergency information signaling requirements for the fast access of essential and critical information from anytime and anywhere with the emphasis on high performance, secured access and simplicity. The authors derived a solution based on the Security Assertion Markup Language (SAML) that enhanced the system performance and validated through simulation. This paper contributes to the knowledge of SAML based approaches for the realization of RB-SSO system that lower the load on the mobile communication channel between the incident scene and the emergency response system.

The third full paper “Mobile Marketing Evolution: Systematic Literature Review on Multi-Channel Communication and Multi-Characteristics Campaign” written by Raymond Yiwen Huang and Judith Symonds of Auckland University of Technology, New Zealand. The paper addresses the linkage between Mobile technologies and marketing operations. As mobile services are recognized as powerful and innovative tools for delivering marketing messages the authors were motivated to conduct a three steps systematic literature review covering 230 academic journal papers in the mobile marketing area. Three specific characteristics for mobile services were identified followed by a meta-analysis to evaluate the relationship between mobile technology generation and mobile marketing evolution. The paper further contributes to the understanding of mobile marketing and provides a roadmap of current trends and gaps in the literature.

The final discussion session that concludes MTECS workshop is on privacy and security in mobile (enterprise) systems. The discussion session is jointly organized by MTECS and InSPEC. As enterprise computing systems become mobile, we will need the mechanisms to develop secured applications. What should the development framework for a secured mobile enterprise computing system? With the proliferation of new generation of mobile phones such as iPhone and Android OS phones, what are the experiences in building secured applications in these mobile devices? It is hoped that the discussion will address some of these issues.

III. CONCLUDING REMARKS

Lastly, we appreciate the participation of all authors and the help of EDOC workshop chair to allow MTECS to be organized within EDOC. We sincerely hope that the papers, presentations, and discussions at MTECS 2009 workshop are fruitful and further research and development in mobile enterprise technologies will inspire more research in this area. While the timing is challenging, it is hope that future MTECS will continue to attract more participants.

IV. MEMBERS OF THE PROGRAM COMMITTEE

We appreciate the help from colleagues and members of program committee for their excellent reviews, comments and suggestions.

Dr Tiong-Thye Goh (chair) – Victoria University of Wellington, New Zealand
Siddhartha Bose (co-chair) – Motorola Applied Research & Technology Centre, Bangalore, India
Professor Wee Keong Ng (co-chair) – Nanyang Technological University, Singapore
Professor Vincent C S Lee (co-chair) – Monash University, Australia
Professor Longbing Cao (co-chair) – University of Technology Sydney, Australia
Dr Minoru Nakayama – Tokyo Institute of Technology, Japan
Shrikant Naidu – Motorola Applied Research & Technology Centre, Bangalore, India
Vicky Liu – Queensland University of Technology, Australia
Floriano Scioscia – Politecnico Di Bari, Italy
Dr David Parsons – Massey University, New Zealand
Eusebio Scornavacca – Victoria University of Wellington, New Zealand
Professor Hans Lehmann – Victoria University of Wellington, New Zealand
Nitendra Rajput – IBM Research, India