Editorial

Welcome to *Mobile Information Systems: An International Journal!*

Recent advances in wireless technology have led to mobile computing, a new dimension in data communication and processing. The era of mobile technology has enabled information and application sharing through wireless networks. Due to the fact that mobile computing and networks have inherent constraints not found in other technologies, coupled with a large number of users, and the complexity of the application and information types have introduced new areas whereby these issues are explored and addressed. Many of the existing information techniques and methods for wired data access, sharing, modeling, and system implementation are no longer effective and therefore need major adjustment. This has stimulated the emergence of mobile information systems.

Mobile Information Systems: An International Journal presents visionary concepts and stimulating ideas in mobile information systems at both the theory and application levels. The objectives of the journal are to be a source for mobile information systems research and development, and to serve as an outlet for facilitating communication and networking among mobile information systems researchers, practitioners, and professionals across academics, government, industry, researchers, and students. It is published four times a year, with the purpose of providing a forum for state-of-the-art development and research, as well as current innovative activities in mobile information systems. The main goal will be to provide timely dissemination of information.

Mobile Information Systems: An International Journal covers a broad range of topics, including, but not be limited to:

a) Mobile commerce
b) Mobile software development life cycle
c) User interface and interaction models
d) Workflow management and business processing for m-commerce
e) Mobile web enterprise systems and services
f) Mobile agents
g) Mobile computer-supported cooperative work
h) Mobile data management and mining
i) Context and location awareness
j) Ubiquitous and pervasive computing
k) Mobile operating systems and protocols
l) Mobile devices and networks
m) Security, privacy, authentication
n) Social and economic aspects of mobility
o) Mobile computing applications

The journal editorial board members are responsible for reviewing manuscripts. The members not only come from four different continents: Asia, Australia, Europe, and America, but also cover a broad range of expertise in mobile information systems.

Following up a Call-For-Paper in early 2004, we have received numerous responses and submissions. Each paper was carefully reviewed, and eventually, three papers were accepted for inclusion in this inaugural issue of the journal.

The first paper written by Abondo and Pierre focuses on mobility or roaming management – a mechanism to locate mobile user under the network's area. The paper highlights the limitation of existing standards (i.e. IS-41 and GSM), particularly in location update and search procedures, whereby it is always necessary to relay back to the home base, regardless its inefficiency. The paper then proposes a method for reducing processing load and signalization traffic by taking into account specific traffic characteristics in the mobile networks, and introduces a semi-dynamic approach based on a mixture of centralized/decentralized architecture using forwarding pointers without the load related to the dynamic models. The proposed method is deemed to be ready for the next generation of mobile networks.

The second paper by Leong and Si focuses on document transmission in a mobile environment in which a framework covering both units within a document (*intra-document multi-resolution transmission*) and collection of documents (*inter-document multi-resolution transmission*) is proposed. The idea is to optimize document navigation and transmission in a mobile environment, so that mobile clients are able to do an early termination of useless documents (or parts of documents).

Finally, the last paper by Endres, Butz, and MacWilliams, presents a survey of 29 software infrastructures and frameworks for distributed interactive systems and ubiquitous computing. These range from small research prototypes to large scale research products. The survey groups the subjects into three categories: (i) *Augmented Reality* which by providing a virtual layer on top of the physical environment is able to make remote computing power appear as if it is locally available, (ii) *Intelligent Environments* which is able to achieve a certain behaviour of the environment through embedding sensors, actuators and/or processors into the environment, and (iii) *Distributed Mobile Systems* which covers ubiquitous and context-aware computing.

In closing, I would like to thank the IOS Press for making this journal possible. I would also like to welcome aboard all editorial board members and I particularly feel grateful for their enthusiasm in making this journey a joyful and rewarding experience. I would also like to thank the authors who have chosen this journal as a medium to publish their research results. I hope that readers will find these articles useful, informative, and innovative.

David Taniar
Editor-in-Chief