Editorial

David Taniar

Faculty of Information Technology,
Monash University,
Clayton, VIC 3800, Australia
E-mail: David.Taniar@infotech.monash.edu.au

Eric Pardede

Department of Computer Science and Computer Engineering,
La Trobe University,
Bundoora, VIC 3083, Australia
E-mail: E.Pardede@latrobe.edu.au

Ismail Khalil Ibrahim

Institute of Telecooperation,
Johannes Kepler University Linz,
Altenberger Strasse 69, A-4040 Linz, Austria
E-mail: ismail.khalil-ibrahim@jku.ac.at

Biographical notes: David Taniar holds Bachelors (Honours), Masters, and PhD Degrees in Computer Science/Information Technology, with a particular specialty in Databases. His research now expands to Data Mining, Mobile Information Systems, and Web Technology. He publishes extensively every year. He works at Monash University, Australia. He is a founding Editor-in-Chief of a number of international journals, including *Int. J. Data Warehousing and Mining*, *Int. J. Business Intelligence and Data Mining*, *Mobile Information Systems*, *Journal of Mobile Multimedia*, *Int. J. Web Information Systems*, and *Int. J. Web and Grid Services*. He is also an editorial board member of numerous international journals.

Eric Pardede lectures at the Department of Computer Science and Computer Engineering, La Trobe University, Australia. In the same institution he has received his PhD and Master Degrees. He has published a book and several research papers in international journals and conference proceedings. He has chaired several international conferences and workshops. His current research areas are in XML database, data modelling and query optimisation.

Ismail Khalil Ibrahim is a Senior Researcher and Lecturer at the Institute of Telecooperation at Johannes Kepler University, Linz, Austria. He currently teaches, consults, and conducts research in mobile multimedia, supply chain management, agent technologies, and semantic web. He holds a BSc in Electrical Engineering from the University of Technology, Baghdad, Iraq (1985) and an MSc and PhD (cum laude) in Computer Engineering and Information Systems from Gadjah Mada University, Indonesia (1998 and 2001, respectively).

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This issue consists of some extended papers from three international conferences: the *2nd International Conference on Advances in Mobile Multimedia* (MoMM, 2004) the *3rd International Conference on Advances in Mobile Multimedia* (MoMM, 2005) and the *7th International Conference on Information Integration and Web Based Applications and Services* (iiWAS, 2005).

Among the accepted papers we have invited few authors to submit their extended versions for the special issue in the *International Journal of Virtual Technology and Multimedia*. Submitted papers are reviewed by at least two reviewers and based on the reviews, three papers were accepted in the special issue.

In addition to the three papers, we also invited additional authors to submit their latest research in this area. The papers were also reviewed and based on the reviews, we accepted two additional papers.

In the first paper, Butyka et al. extend their MoMM 2005 paper, which proposed new charging solution for mobile multimedia streams. They propose a QOS-based charging system in 3G networks using a new streaming proxy based charging architecture. They propose several methods that comply with *3rd Generation Partnership Project* (*3GPP*) billing recommendation. The solutions are available for online and offline charging.

Video delivery by video streaming can solve many problems that are encountered in video download. The goal of video streaming is to design a system that can reliably deliver high-quality video over the internet when dealing with unknown and dynamic bandwidth, delay jitter and loss rate. In their extended MoMM 2004 paper, Ashraf and Lee propose a framework to solve this problem by using object based streaming system. They propose an object detection and extraction scheme suitable for object based video streaming.

In the next paper, Al-Haj and Al Aghbari extend their iiWAS 2005 work to tackle the image segmentation problem. Image segmentation is a process of decomposing an image into coherent regions. The results of segmentation however, may not be meaningful to users or the underlying application. To solve the problem, the authors propose segmentation based on the semantic region. They present an image segmentation algorithm that generates visually coherent segments and a new *Semantic Segmentation Tree* (*SSeg-tree*) to represent the content of an image.

In the next paper, Leung and Leung discuss the mobile multimedia object retrieval. With the increase usage of mobile devices, the task of managing the variety of mobile multimedia objects has become important as well as complex. To assist with this problem, the authors categorise the content requirement of different mobile multimedia objects. They also present a data architecture of the mobile multimedia object management system.

In the last paper, Sugita et al. implement a conference system that can transfer multimedia, in terms of voice and video, for the purpose of supporting remote mental health care education. This work is motivated by the mental health care problem in Japan. This system aims to enable communication between mental health care specialists and their students as well as the communication among the mental health care specialists, the patients and their families. In this paper, the authors describe the operations of the system, the implementation and the performance evaluation of the prototype.