
Foreword

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Biographical notes: Kuan-Ching Li received the PhD and MS degrees in Electrical Engineering and Licenciatura in Mathematics from the University of São Paulo, Brazil in 2001, 1996 and 1994, respectively. After he received his PhD, he had been a post-doc scholar in the Univ. of California – Irvine (UCI) and Univ. of Southern California (USC), USA. He is currently Associate Professor in the Department of Computer Science and Information Engineering, Providence University, Taiwan. He has served on the steering, organising, and program committees of several conferences and workshops. His main research interests include cluster and grid computing, parallel software design, and life science applications. He is a senior member of the IEEE.

Deqing Zou received his PhD degree in Huazhong University of Science and Technology (HUST), China in 2004. Since then he has been a researcher in Service Computing Technology and System Lab in HUST. His research interest includes virtualisation technology, trusted computing, system security, and security evaluation. He has published more than 50 papers in international journals and conferences, and served as Chairs or PC members in many international conferences or workshops.

Jong Hyuk Park received his PhD Degree in the Graduate School of Information Security from Korea University, Korea. He is now a Professor at the Department of Computer Science and Engineering, Seoul National University of Technology, Korea. He has published about 100 research papers in international journals and conferences. He has been served as Chairs, program committee or organising committee chair for many international conferences and workshops. He has won a Best Paper Award of the 2nd International Conference on Information Security and Assurance (ISA 2008).

Ubiquitous Computing (Ubi-comp) is emerging rapidly as an exciting paradigm to provide computing and communication services to anyone, anytime and anywhere. In order to realise advantages in such computing technology, it requires integrating issues as security, service and data management to make it adequate for Ubi-comp.

Welcome to this special issue on “Service, Security and Data management for Ubiquitous Computing” of the *International Journal of Ad Hoc and Ubiquitous Computing (IJAHUC)*.

We aim to gather reports on the state-of-the-art in security and intelligence integrating into Ubi-comp and data management technology, including:

- Context-Awareness and its Data mining for Ubi-comp service
- Human-Computer Interface and Interaction for Ubi-comp
- Smart Homes and its business model for Ubi-comp service

- Intelligent Multimedia Service and its Data management for Ubi-comp
- USN/RF-ID for Ubi-comp service
- Network security issues, protocols, data security in Ubi-comp
- Database protection for Ubi-comp
- Privacy Protection and Forensic in Ubi-comp
- Multimedia Security in Ubi-comp
- Authentication and Access control for data protection in Ubi-comp
- Service, Security and its Data management for U-commerce
- New novel mechanism and Applications for Ubi-comp.

Besides the extended version of papers published by SSDU07, we received 17 submissions from several countries in total. We had the arduous task of selecting no more than six papers out of these high-quality manuscripts. To this end, we implemented a strict peer review process, where no paper received less than three reviews, and co-guest editors carefully examined the reviews. As a result, we are proud to present to you the following six papers:

- Ching-Hsien Hsu, Shih-Chang Chen and Chia-Hao Yu, presented a priority based scheme aimed to coordinate simultaneous transmissions among multiple readers and to increase the overall read rate over wireless RFID system in paper entitled 'A Priority Based Transaction mechanism towards high reliable RFID services'. Through a contention-free scheduling, all reader-tag transmissions can be performed without collisions, even it is caused by hidden terminal. Experimental results show that the proposed technique provides superior performance in both static and dynamic environments.
- Jason C. Hung, Han-Bin Chang, Hsuan-Pu Chang, Yu-Hsin Cheng, and Kuo-Yen Lo, in 'Evolution of ubiquitous autonomous agents', propose a model like food web exists in natural words for minions of years and serves as a balancing algorithm among different types of species, based on concept called food web in ecosystem. The food web model is defined for autonomous entities and algorithms are proposed for formation and communication. The proposed model can be used to consider the development of intelligent strategies and the underlying communication topology such that ubiquitous intelligences can be evolved on the digital food web.
- Yunfa Li, Hai Jin, Zongfen Han and Sanmin Liu, proposed mechanisms for secured group communication based on the theories of threshold signature for pervasive grids in their paper entitled 'A secure mechanism of group communication for pervasive grid'. The proposed mechanism is validated by experiments, and experimental results show that the proposed mechanism is efficient to ensure the proposed secured communication in pervasive grids.
- Han-Bin Chang, Hsuan-Pu Chang, Hui-Huang Hsu, Louis R. Chao and Timothy K. Shih have proposed an efficient and intelligent travel book management system to help users to easily handle multimedia information captured in a journey and repackage them for further usage in 'An intelligent travel book management system'. Internet technologies like agent and mobile computing are used for the implementation of such framework.
- Xuanhua Shi and Jean-Louis Papat have presented an adaptive component-based infrastructure that provides high performance services for applications, handling the safety problems for high performance computing applications for Ubicomp environments based on the adaptive replication management in 'An adaptive and safe ubicomp for HPC applications'. Simulation and experiment evaluations performed demonstrate the effectiveness of this infrastructure to handle safety problems in Ubicomp.
- Geon Woo Kim, Deon Gyu Lee, Jong Wook Han and Sang Wook Kim authored 'Security policy specification for home network' in which they propose a new specification for security policy on home network, in order to guarantee reliability and availability issues in authentication, authorisation and security policy.

We believe you will find these papers useful to your own future work. Please join us in thanking the guest-Editorial Board who, through their hard working, made this Special Issue possible.