Foreword

We are pleased to publish this special issue of the International Journal on Smart Homes (IJSH). The aim of this special issue is to present new advances from theory and practice in smart home as well as to state problems and new research challenges to be focused by the research community in the near future. Technologies for smart home (SH) have emerged as new paradigms that include ubiquitous, grid, and peer-to-peer computing to provide computing and communication services anytime and anywhere. Rapid advances are being reported by many researchers and forums as regards understanding numerous issues and challenges in such paradigms, from theoretic to application aspects. Moreover, the continuous development of Internet and the construction of new computing and middleware are making possible the development of large scale applications from many fields of science and engineering.

We believe that the selected papers make a significant contribution to all readers; researchers, practitioners, and students working in the areas of the smart living world. We would like to appreciate authors for their research contributions in this special issue. We are grateful to Prof. Jong Hyuk Park, Managing Editor of IJSH for his great supports to this publication process. Finally, we are grateful to all reviewers who have generously given their time to review the papers submitted to this special issue.

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Journal Introduction

Smart Home Environments (SHE) are emerging rapidly as an exciting new paradigm including ubiquitous, grid, and peer-to-peer computing to provide computing and communication services any time and anywhere. But in order to realize their advantages, it requires the security services and applications to be suitable for SHE.

If they are realized, a user will be able to remotely access and control all information appliances in the workplace as well as at home, and easily and conveniently use various services to enable working from home, remote education, remote diagnosis, virtual shopping, network gaming, and portal & high quality VOD with no limitations on space and time.

Our Journal is intended to foster the dissemination of state-of-the-art research in the area of SHE including business models, security services, and novel applications associated with its utilization. In this Journal, we plan to publish high quality papers, which cover the various theories and practical applications related smart home. The published papers are expected to present the high level results to solve the application services and various problems in the various SH fields. In addition, we expect they will trigger further related research and technology improvements for SH.

The goal of this Journal is to bring together the researchers from academia and industry as well as practitioners to share ideas, problems and solutions relating to the multifaceted aspects of Information Technology.

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Journal Topics

The Journal invites new and original submissions addressing theoretical and practical topics in information technology and intelligent computing fields including (but not limited to these topics):

SH Applications:

- Smart home (Building) applications and services
- Smart home network middleware and protocols
- Commercial and industrial application for SH
- Context awareness model for smart home services
- Wireless sensor networks (WSN) / RFID application for SH
- Semantic Technologies for SH
- Semantic Knowledge Management and Services in SH

SH Security:

- Multimedia Security and Services in SH
- Smart home security issues and model
- Access control and privacy protection in SH
- Forensics and Security Policy in SH
- WSN / RFID Security in SH
- Security Protocol for smart home service

SH Embedded Hardware and Software:

- Embedded Hardware Support for SH
- Embedded Software for SH
- Embedded System Architecture for SH
- Real-time OS for SH
- Smart and Personal Devices for SH
- Power-Aware Computing for SH
- Middleware for SH
- Specification, Validation and Verification of Embedded Software

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