Editorial

Context-Enriched and Location-Aware Services

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Context-enriched and location-aware services (CELAS) effect the current customer-facing mobile applications and web services in our daily lives such as Facebook, Google, and Twitter. This special issue on Context-Enriched and Location-Aware Services compiles 6 exciting papers among many well-written manuscripts, most of which are very carefully reviewed.

The paper titled "*A fusion approach of RSSI and LQI for indoor localization system using adaptive smoothers*" reviewed by Dr. Song introduces an indoor localization technique that exploits both Received Signal Strength Indicator (RSSI) and Link Quality Indicator (LQI) together in order to reduce location error.

Dr. Choi reviews "*A DHT-based discovery service for the Internet of Things*" which aims to design a novel discovery service for the Internet of Things for smart space. The work envisages the conception of novel services and implemented various prototype applications.

The paper titled "*Route anomaly detection using a linear route representation*" discusses a technique for detecting route anomaly which is a common problem in our daily lives. The proposed method is based on a linear route representation that finds the matched routes from a set of stored routes as the current route is entered location by location. An alert may be generated from the detected route anomaly, which is very practical in our daily lives.

Professor Marreiros reviews "*Context-aware adaptation of component-based systems: an active repository approach*" which proposes context-aware adaptation technique for component-based software (CBS) systems. In this paper, the authors propose an active component repository that is able to receive the current configuration and components from the context-aware system and the new architecture that better fits the given context. Considering the repository with a wide knowledge of available components, more suitable configuration for the current running system can be achievable.

Dr. Ko reviews "*Exploiting location and contextual information to develop a comprehensive framework for proactive handover in heterogeneous environments.*" This paper aims to explore the development of a comprehensive framework for achieving optimal communication in heterogeneous wireless environments using location and contextual information to provide efficient handover mechanisms. By using location-based techniques, they make it possible to demonstrate that the Time Before Vertical Handover as well as the Network Dwell Time can be accurately estimated including how location and context awareness can be used to estimate the best handover radius. The paper highlights the use of ontological techniques as a mechanism for specifying and prototyping such systems.

Dr. Song reviews "*Enhancing existing communication services with context awareness*" which introduces a context aware communication system that takes into account user's preferences, workload, and situation to deliver customized telephony services. The authors provide a reference implementation with IMS platform in which context awareness features such as incoming call management are able to be provided without modifying the user experience.

By compiling these papers, along with various topics in CELAS such as indoor localization, contextualized adaptation, and service/anomaly detection, we hope to enrich our

readers and researchers with respect to the most interesting field of research that is fruitful in both academic society and industrial society.

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