

Editorial

Location-Based Mobile Marketing Innovations 2018

Jaegel Yim ¹, **Subramaniam Ganesan** ², and **Byeong Ho Kang** ³

¹Professor Emeritus, Department of Computer Engineering, Dongguk University, Gyeongju, Republic of Korea

²Professor, Electrical and Computer Engineering, Oakland University, Rochester, USA

³Professor, School of Engineering and ICT, University of Tasmania, Hobart, Australia

Correspondence should be addressed to Jaegel Yim; yim@dongguk.ac.kr

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The increasing complexity of the industry means that marketers must now be experts not only in marketing, but also in people, data, delivery platforms, and mobile location-based marketing.

The objective of location-based marketing via mobile devices is to encourage those activities, as well as to drive foot traffic, share discounts, and build customer loyalty. The mobile devices are used to gather information about nearby businesses including reviews, directions, calling the business, and using the businesses' mobile app. With location-based mobile marketing, the business is easy to find and have skillfully combined location-based marketing with an overall targeted marketing approach that includes social media, push notifications, e-mail newsletters, and even offline marketing.

The objective of this special issue is to bring together research contributions of unpublished research on the recent development and innovations about the location-based service mobile marketing. This aims to facilitate and support research in the current e-commerce innovation that makes business easy, engaging, and at hand of the consumers.

The paper "The Identification of Marketing Performance Using Text Mining of Airline Review Data" aims to firstly extract major keywords using text mining method, secondly to identify prominent keyword from the keywords extracted from text mining analysis, and then to confirm differences in influences of the keywords which affect corporate performance.

In the paper "Dilemma and Solution of Traditional Feature Extraction Methods Based on Inertial Sensors," after analyzing the difference of these indistinguishable movements, the authors propose several new features to improve accuracy of recognition. They compare the traditional features and their custom features. In addition, they examined

whether the time domain features and frequency domain features based on acceleration and angular velocity are different.

In the paper "CEnsLoc: Infrastructure-Less Indoor Localization Methodology Using GMM Clustering-Based Classification Ensembles," the authors propose CEnsLoc, a new easy to train-and-deploy Wi-Fi localization methodology established on GMM clustering and random forest ensembles (RFE). Principal component analysis was applied for dimension reduction of raw data. Conducted experimentation demonstrates that it provides 97% accuracy for room prediction, whereas artificial neural networks, k -nearest neighbors, K^* , FURIA, and DeepLearning4J-based localization solutions provided mean 85%, 91%, 90%, 92%, and 73% accuracy on the collected real-world dataset, respectively. It delivers high room level accuracy with negligible response time, making it viable and befitted for real-time applications.

In "Location Privacy Protection Research Based on Querying Anonymous Region Construction for Smart Campus," the user's query range is introduced to present a novel anonymous region construction scheme. The anonymous server first generates the original anonymous sub-regions according to the user's privacy requirements and then merges them to construct the anonymity regions submitted to LSP based on the size of corresponding querying regions. The security and experiment analyses show that the proposed scheme not only protects the user's privacy effectively but also decreases the area of LSP querying regions and the region-constructing time, improving the quality of service for smart campus.

The paper "Consumers Team Detection Model Based on Trust for Multi-Level" proposes a novel local community detection model E-MLCD. It is jointly based on the multilevel

properties and the strength of similarity of multilevel social interaction among communities. By studying three real-world multilevel social networks and specific QQ zone marketing data, the model defines a new metric of similarity strength based on community structure similarity. Comparison with other state-of-the-art detection methods demonstrates E-MLCD's ability to detect communities more effectively.

In "RoC: Robust and Low-Complexity Wireless Indoor Positioning Systems for Multifloor Buildings Using Location Fingerprinting Techniques," the authors propose a novel integrated framework for wireless indoor positioning systems based on a location fingerprinting technique which is called the robust and low complexity indoor positioning systems framework (RoC framework). The proposed integrated framework consists of two essential indoor positioning processes: the system design process and the localization process. The RoC framework aims to achieve robustness in the system design structure and reliability of the target location during the online estimation phase either under a normal situation or when some reference nodes (RNs) have failed.

The paper "An Indoor Location-Based Positioning System Using Stereo Vision with the Drone Camera" proposes the indoor location-based drone controlling method that does not require the traditional remote controller and can be applied to various services such as a group flight.

In the paper "Research on Precision Marketing Model of Tourism Industry Based on User's Mobile Behavior Trajectory," data mining clustering technology is used to analyze the characteristics of user's mobile behavior trajectories, and the precise recommendation system of tourism is constructed to support for tourism decision making. It can target the tourist group for the precise marketing and make tourist travel smarter.

The paper "A Case Study Analysis of Clothing Shopping Mall for Customer Design Participation Service and Development of Customer Editing User Interface" discusses a service related to the convergence of the traditional clothing industry with IT and a service wherein CT is converged with systems that allow customers to participate in the design work and share the designs they have created. The results show that both production method and production capacity largely affect the user interface of apparel platform services, with customer freedom significantly correlated with their functional roles. Moreover, the lead index is shown to be one of the factors restraining customer freedom.

The paper "Malaria Vulnerability Map Mobile System Development Using GIS-Based Decision-Making Technique" aims to improve the lack of GIS information use and compatibility of multiplatform which represented limits that existing malaria risk analysis tools have. For this, the authors developed mobile web-based malaria vulnerability map system using GIS information. This system consists of system database construction, malaria risk calculation function, visual expression function, and website and mobile application.

In the paper "A Study on Removing Cloud Drift of Sky-Sea Infrared Image Based on Agent," a new shadow extraction

method is proposed. This method tests and removes cloud of infrared images based on cloud characteristics from infrared sky-sea images. Through grey value characteristics of cloud, we can find and use reactive agent layer structure and classify many agents used for local image cloud searching and manage agents used for coordinating many cloud searching agent.

The paper titled "From Reputation Perspective: A Hybrid Matrix Factorization for QoS Prediction in Location-Aware Mobile Service Recommendation System" proposes a hybrid matrix factorization method integrated location and reputation information (LRMF) to predict the unattainable QoS values. The proposed method effectively reduces the impact of unreliable users on QoS prediction and makes credible mobile service recommendation.

The paper "Location-Based Test Case Prioritization for Software Embedded in Mobile Devices Using the Law of Gravitation" uses a smart mall as a scenario to design a novel location-based test case prioritization (TCP) technique for software embedded in mobile devices using the law of gravitation. An empirical evaluation is presented by using one industrial project. The observation, underlying the experimental results, is that the proposed TCP approach performs better than traditional TCP techniques. In addition, besides location information, the level of devices is also an important factor which affects the prioritization efficiency.

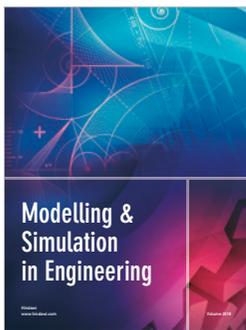
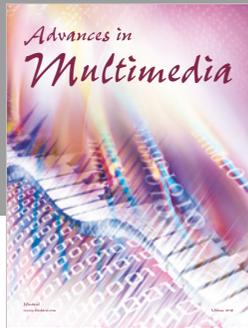
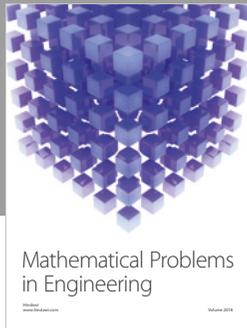
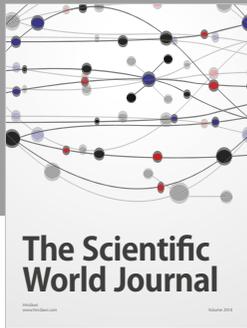
The paper "Profile-Based Ad Hoc Social Networking Using Wi-Fi Direct on the Top of Android" presents an architecture and implementation of social networks on commercially available mobile devices that allow broadcasting name and a limited number of keywords representing users' interests without any connection in a nearby region to facilitate matching of interests. The broadcasting region creates a digital aura and is limited by Wi-Fi region that is around 200 meters.

We are very happy to publish this special issue of the mobile information systems. This issue contains 14 articles. Achieving such a high quality of papers would have been impossible without the huge work that was undertaken by the Editorial Board members and External Reviewers. We take this opportunity to thank them for their great support and cooperation.

Conflicts of Interest

The editors declare that they have no conflicts of interest.

*Jaegool Yim
Subramaniam Ganesan
Byeong Ho Kang*




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