

Implementation of a smartphone sensing system with social networks: a location-aware mobile application

Pei-Jung Lin · Sheng-Chang Chen · Chuan-Heng Yeh ·
Wei-Cheng Chang

© Springer Science+Business Media New York 2013

Abstract This study designed a web-integrated, cross-platform communications interface based on smartphone technology to overcome many of the difficulties inherent in visiting crowded public spaces, events, or exhibitions. The goal was to provide an alternative to the standard tour itinerary with a location-specific, customized tour guide system that also makes use of social networks to locate friends. The proposed mobile application features are a photo sharing platform, a friend-finder radar system (linked to Facebook), an interactive game, and a location-based services (LBS) mobile advertising filter. The Taipei International Flora Exposition was used as an example of a public space to evaluate the proposed system.

Keywords Location-aware service · Mobile social networks · Smart phone · Social game

1 Introduction

Developments in smart phone technology [1, 4, 10] have enabled the development of a wide range of novel applications. This study proposes a cross-platform communications interface with full web-integration and real-time functionality to augment services in large, high-traffic venues. Detailed mobile information services are often required by visitors to international exhibitions, most often in the form of tour guides or visitor maps. Unfortunately, traditional

P.-J. Lin

Department of Computer Science and Information Engineering, Hungkuang University,
Taichung City, Taiwan
e-mail: pjlin@sunrise.hk.edu.tw

S.-C. Chen (✉)

Ursa Pictor Co., Taichung, Taiwan
e-mail: jack.scchen@gmail.com

C.-H. Yeh · W.-C. Chang

RAI Co., Taichung, Taiwan

C.-H. Yeh

e-mail: adam@rai.dscloud.me

W.-C. Chang

e-mail: bang@rai.dscloud.me