Keynote: Crowd-Powered Mobile Computing: Mobility Meets Collective Computing

Seng W. Loke
Department of Computer Science and Information Technology
La Trobe University
Melbourne, Australia
s.loke@latrobe.edu.au

Abstract—A recent paper by Abowd proposed collective computing, that integrates the cloud, the crowd and the shroud, defining a new era of “cooperation between humans and computing that enhances both computational capabilities and the human experience.” Mobile computing in its current and future states presents interesting developments where tens to thousands of mobile nodes can cooperate in new ways, in order to provide new capabilities and applications, from scalable context-awareness to new distributed computational platforms. Mobile crowdsourcing, crowdsensing, crowd-steering, participatory social systems, mobile device clouds, and cooperative Intelligent Transport Systems are examples.

This talk will explore several ideas in crowd-powered mobile computing, including crowd machines, scalable context-awareness, extreme cooperation, and drone services for mobile crowds.

I. BIOGRAPHY

Seng W. Loke is Reader and Associate Professor in the Department of Computer Science and Information Technology at La Trobe University. He leads the Pervasive Computing Lab at La Trobe, and has authored 'Context-Aware Pervasive Systems: Architectures for a New Breed of Applications' published by Auerbach (CRC Press), Dec 2006. His research has mainly been in pervasive (ubiquitous) computing and mobile computing, focusing on issues concerning systems and information, with current emphases on crowd-powered mobile computing, Intelligent Transport Systems, scalable context-awareness, activity recognition, intelligent environments, computational social systems, and the social impact of mobile technology innovation. His homepage has more details: http://homepage.cs.latrobe.edu.au/sloke