OBJECTIVES

- The proposed system brings new opportunities to different stakeholders in the Exhibition and Convention Industry.
- The buyers and exhibitors will have their matchmaking costs reduced and thus their levels of satisfaction increased.
- The exhibition organizers, with the collected movement data stored at the backend analytics server, are provided with decision support for better booth arrangement of exhibitors as well as supportive information for promoting exhibitors at sub-optimal booth areas.

HIGHLIGHTS

Background

Hong Kong has been a unique convention and exhibition centre in the region. Different exhibition venues in particular the Hong Kong Convention and Exhibition Centre (HKCEC) and others, contribute altogether 160,663 square meters of exhibition space.

With the increasing demand, challenges of “limited space” and “tight schedule” are faced. To maximize the use of the available space of the exhibition halls, effective ways to

- Assign the booths in an exhibition hall to different exhibitors so as to increase the flow of potential visitors at different booths
- Direct potential visitors explicitly to the relevant booths for better matchmaking are both desirable for service enhancement

The key underlining information needed is the knowledge about the detailed flow of the visitors. This project proposes to address the challenges by developing an indoor location analytics system (ILAS) that

- Track the movement of the visitors via the WiFi and/or Femtocell technologies (location-based system), and
- Analyze the movement data for computing the visitors’ preference profiles and recommending them relevant booths (location analytics)

System Architecture and the Functions of the Recommendation System for ILAS

- Identify moving patterns of people, as well as their profiles
- Provide value-added services via location analytics
  - Buyers/Visitors
    - Personalized recommendation and guiding services
  - Exhibitors
    - Statistics on booths visiting rate
    - Dynamic promotion plans for booths at sub-optimal locations
    - Targeted promotion to potential visitors
  - Exhibition Organizers
    - Monitoring visitor flow within the exhibition hall
    - Targeted advertisement services
    - Decision support for assigning booths to exhibitors based on flow info

SELECTED PUBLICATIONS

1. Kai Liu, Hao Zhang; Kai Liu; Feiyu Jin; Liang Feng; Victor Lee; and Joseph Ng, “A Scalable Indoor Localization Algorithm based on Distance Fitting and Fingerprint Mapping in Wi-Fi Environments” to appear in Neural Computing and Applications.