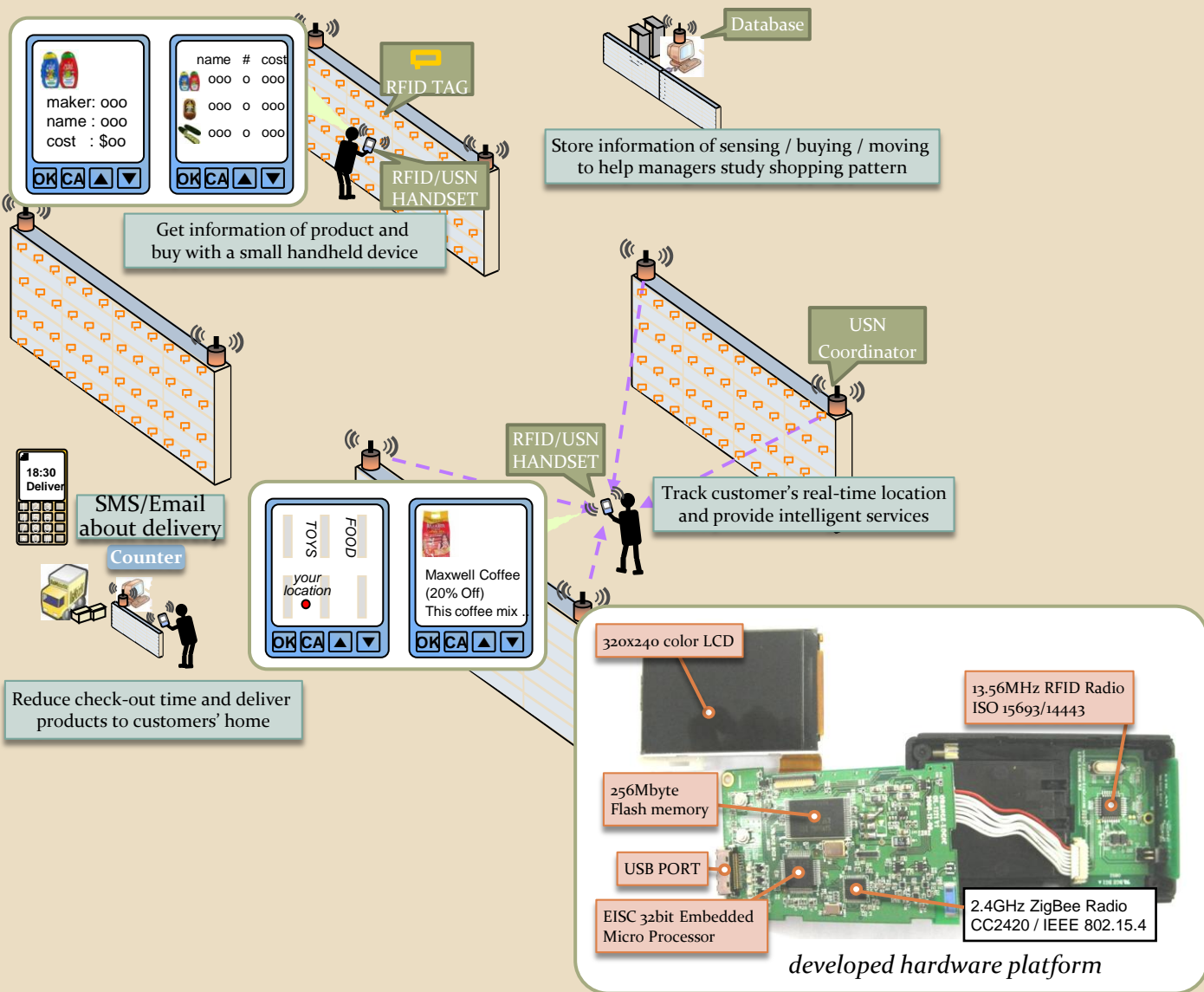


# Developing RFID/USN Integrated HW Platform for Intelligent Shopping System

Moving a shopping cart in a booming market is annoying job especially in weekends. Our goal is to develop a small handset with LCD screen and user interface in order to help customers buy products easily without heavy shopping cart. The hardware (HW) platform of handset has the radio frequency identification (RFID) and the ubiquitous sensor network (USN) modules to detect product codes and to get information of product from the data server respectively. Konkuk University and OrangeLogic Company cooperate each other with support of the small & medium business administration (SMBA) of South Korea government to develop this HW platform and the integrated system for intelligent shopping system. Konkuk University's roles are to develop device drivers to control RFID and USN modules, to enhance current ZigBee routing protocol to resolve the communication congest problem in large and extremely crowded market, and to develop a precise localization algorithm in order to provide location-based services to customers and to help market manager understand flow-path-pattern of customers. OrangeLogic Company's roles are to develop HW platform with LCD, user interface, RFID and USN modules, to build a RFID database server and USN based wireless networks to enable customers to get information while they are moving, and to develop a virtual shopping cart system to help customers buy things with a handset.



Sponsor: Small & Medium Business Administration (SMBA), South Korea  
 Amount : 68,000,000 KW (\$56,666)  
 Period : 2008 / 7 / 1 - 2009 / 6 / 30  
 People : Konkuk University - Younggoo Kwon, Sookhyeon Chang, Junseok Kim  
 OrangeLogic Company - Hwangyoung Woo, Jaechan Cho