

Personalized Service Provision in a Context-aware Shopping Environment

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Abstract

With the advance and pervasion of mobile devices and fast growth of high speed Internet connections, our life is inevitable to be changed. These devices are combined with sensors such as Radio Frequency Identification (RFID) operating on wireless infrastructure to form a wireless sensor networks (WSN) which could facilitate our life in many ways. We would expect a shopping experience in which customers use their mobile device to query and select products, locate items in store, and then check out. In addition, each customer would prefer to receive the customized services according to the surrounding condition. In this paper, we adopt RFID technology, personalized recommendation strategy, and Web services to develop a context-aware shopping environment in which personalized services are provided. The experiment results show the system is useful and could enhance customers' shopping experience.

Keyword : Context-awareness, Recommender system, RFID, Service computing, Ubiquitous Commerce, Web services