Development of Application Architecture for RFID Based Indoor Tracking Using Passive RFID Tag

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Abstract : Abstract The location tracking and positioning systems have technologically grown exponentially in recent decade. In particular, Global Position system (GPS) has become a universal norm to be a part of almost every software application directly or indirectly for the location based modules. However major drawback of GPS based system is their inability of working in indoor environments. Researchers are thus focused on the alternative technologies which can be used in indoor environments for a vast range of application domains which require indoor location tracking. One of the most popular technology used for indoor tracking is radio frequency identification (RFID). Due to its numerous advantages, including its cost effectiveness, it is considered as a technology of choice in indoor location tracking systems. To contribute to the emerging trend of the research, this paper proposes an application architecture of passive RFID tag based indoor location tracking system. For the proof of concept, a test bed will be developed to in this study. In addition, various indoor location tracking algorithms will be used to assess their appropriateness in the proposed application architecture.

Keywords : RFID, GPS, indoor location tracking, application architecture, passive RFID tag
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