An Ontology for Semantic Enrichment of RFID Systems

Authors : Haitham S. Hamza, Mohamed Maher, Shourok Alaa, Aya Khattab, Hadeal Ismail, Kamilia Hosny

Abstract : Radio Frequency Identification (RFID) has become a key technology in the margining concept of Internet of Things (IoT). Naturally, business applications would require the deployment of various RFID systems that are developed by different vendors and use various data formats. This heterogeneity poses a real challenge in developing large-scale IoT systems with RFID as integration is becoming very complex and challenging. Semantic integration is a key approach to deal with this challenge. To do so, ontology for RFID systems need to be developed in order to annotated semantically RFID systems, and hence, facilitate their integration. Accordingly, in this paper, we propose ontology for RFID systems. The proposed ontology can be used to semantically enrich RFID systems, and hence, improve their usage and reasoning. The usage of the proposed ontology is explained through a simple scenario in the health care domain.