Abstract

As computing technology is becoming more tightly coupled into dynamic and mobile world of the Internet of Things (IoT), security mechanism is more stringent, flexible and less intrusive. Scalability issue in IoT makes identity management (IdM) of ubiquitous objects more challenging, and there is a need of context-aware access control solution for IdM. Confronting uncertainty of different types of objects in IoT is not easy. This paper presents the logical framework for object classification in context aware IoT, as richer contextual information creates an impact on the access control. This paper proposes decision theory based object classification to provide contextual information and context management. Simulation results show that the proposed object classification is useful to improve network lifetime. Results also give motivation of object classification in terms of energy consumption. This paper also presents proof of concept and time analysis of the proposed decision theory based object classification.
Object Classification based Context Management for Identity Management in Internet of Things

- Parikshit N. Mahalle, Neeli R. Prasad and Ramjee Prasad, "Decision theory based object classification for the Internet of Things." Presentation at CMI International conference on Internet of Things (IoT) - our environment becomes intelligent, 24-25 November 2014, AAU Copenhagen, Denmark.

Index Terms

- Computer Science
- Software Engineering

Keywords
- Decision theory
- Identity Management
- Internet of Things
- Object Classification