Abstract

In this paper, we seek to highlight the concept of Internet of Things (IoT) in general, as well as reviewing the main challenges of the IoT environment by focusing on the recent research directions in this topic. Recently, IoT has emerged as a new technology that is used to express a modern wireless telecommunication network, and it can be defined as an intelligent and interoperability node interconnected in a dynamic global infrastructure network, also it seeks to implement the connectivity concept of anything from anywhere at anytime. Indeed, the IoT environment possesses a large spectrum of challenges has a broad impact on their performance, which can be divided into two categories, namely, i) General challenges: such as communication, heterogeneity, virtualization and security; and ii) Unique challenges: such as wireless sensor network (WSN), Radio Frequency Identification (RFID), and finally Quality of service (QoS) that is considered as a common factor between both general and special challenges. In addition, this paper highlights the main applications of the IoT.

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Index Terms

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Keywords

IoT; heterogeneity; virtualization; WSN; RFID; QoS.