IoT, Enabling Technologies, and Sensor Node Deployment Pattern in WSN

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Abstract

In Internet of Things (IoT), various computing devices and mechanical and digital machines are interconnected. These devices have unique identifiers (UIDs) and transmit the information on the network with no human interaction. Sensors are the integrated part in IoT as these are used to collect the data. The IoT technologies have a lot of issues like addressing problems, scalability problems, security, and standardization issues that required to be solved. In this paper, the authors facilitate the reader to have necessary understanding of IoT, importance on protocols, technologies, application related issues, various types of sensors used in IoT, new generation of alternative sensors for IoT, and the issues which needs to resolved for the future. A depth overview of 5G IoT systems is also given. The five layers in 5G IoT systems and empowering technologies associated with it are discussed. A comparative analysis of QC-PC-MCSC for strip based deployment pattern and for random deployment is given. This paper provides a support to academician about the working of diverse protocols, relation between IoT and other emergent technologies together with big data and cloud, energy efficiency based on sensor node deployment pattern, etc.