Overview of the Internet of Things

Short Range Communication Technologies

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Abstract

Based on the Internet of Things new services our lives of everyday changed a lot over the past few years. Smart cities, smart homes, e-health are not only exist in our imagination, but they are a reality now. These new solutions are using hundreds or thousands of sensor devices which are collecting data. This huge amount of data needs to be stored for future processing and usage by intelligent IoT services. [1]

Sensors and actuators have to use adequate network connection for the data transmission. These new sensor and actuator devices imply development of new communication technologies. Depending on the usage environment these technologies have not only advantages but disadvantages, as well. Really important aspect is that these types of communication technologies are required to be interoperable with the well-known Internet network standards like IPv4, IPv6.

In the paper we give an overview and profound comparison of the most popular short range communication technologies (e.g. NFC, ZigBee, BT LE, 6LowPAN, RPL, CoAP, IEEE 1902.1, etc.) applied for IoT services and we identify the constraint aspects of the real time Machine to Machine (M2M) communication based on the Internet technologies existing currently. [2]

Keywords: IoT, sensor networks, M2M communication, IPv4/IPv6

MSC: -

References

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