Chapter 23

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EMERGING DEVICES FOR APPLICATION IN IOT

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Abstract

The Internet of Things (IoT) is a modern model that has transformed the conventional way of doing things. Live a high-tech style of life. Smart cities, smart houses, regulation of pollution, electricity Saving, intelligent transportation, smart industries are such changes due to IoT. A lot, a lot, Major empirical studies and investigations have been carried out in order to strengthen the Via IoT, technology. Nonetheless, there are still a lot of difficulties and problems that involve To be dealt within order to meet the maximum capacity of the IoT. Such challenges and problems must be presented Different aspects of IoT, such as applications, problems, enabling, and Technology, environmental and social effects, etc.

IOT communication protocols

Centered on the OSI model (Open Systems Interconnection), Protocols for IoT communication can be broken down into applications Layer, layer of network and physical layer. In the application layer, like CoAP, the protocols Data definitions include ISA100.11a, MQTT, SOAP, Web Socket, etc. Logical frameworks and functions, and host-to - host provision of Products of contact for applications. Divided American Federal Communications Commission Four types of network IoT communication protocols: personal communication protocols PAN (Pan Area Network), LAN (Local Area Network), Big Area This architecture is a network (WAN) and a mobile network. The protocols have a simple classification. This, however, The division is not adequately accurate. It is a local area wireless network, (WLAN) and wide area wireless network (WWAN) that individuals use Currently, instead of wired use on a wide scale in IoT[2].

The basis of IoT architecture is created by three elements:

- (1) Hardware: This consists of sensor nodes and their embedded nodes. Connection and circuitry interfaces.
- (2) Middleware: This consists of the storage, processing and analysis of data. Resource handling.
- (3) Presentation layer: It consists of powerful visualization resources compatible with different frameworks for visualization. Various applications and present the details to an end-user in an Comprehensible type.