



SNS COLLEGE OF ENGINEERING

(Autonomous)

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



Impact of IOT on Society

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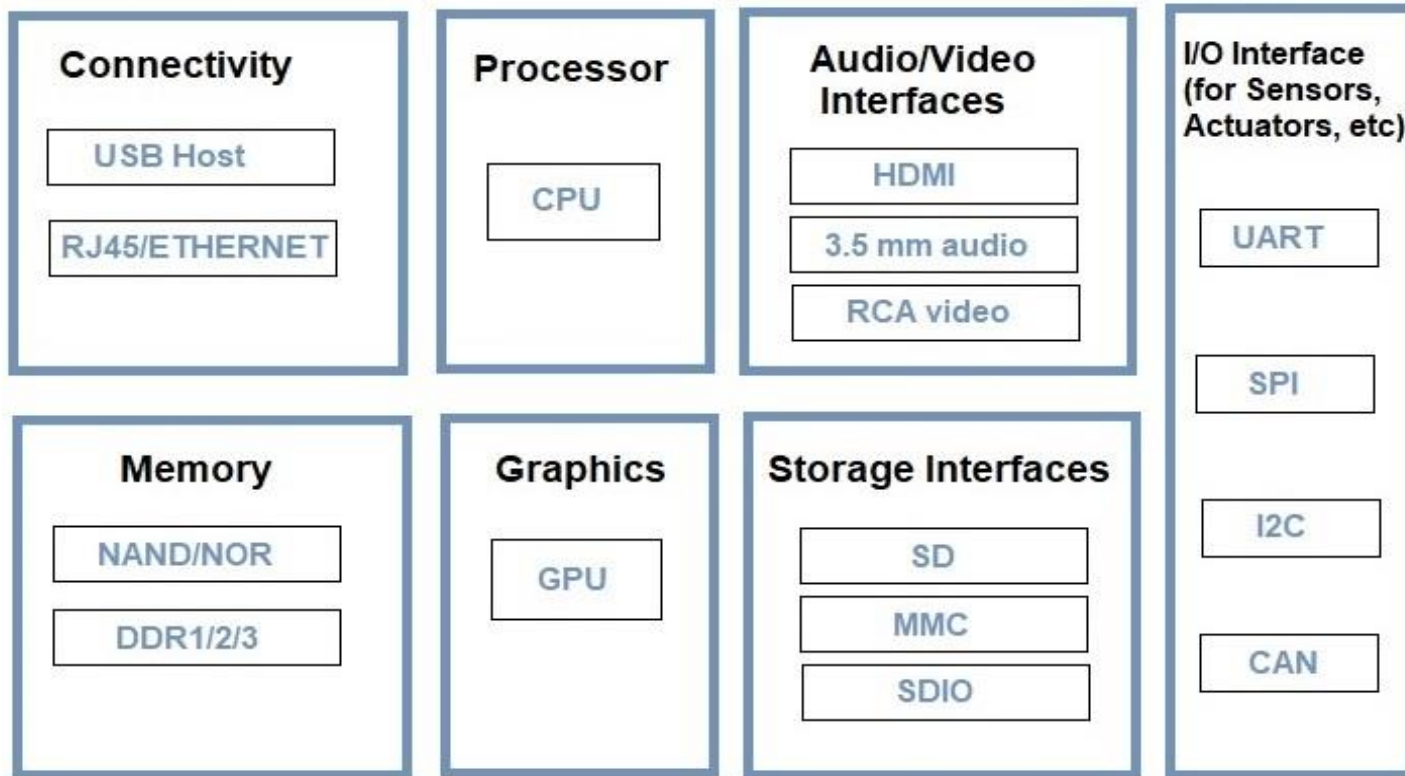


INTERNET OF THINGS

- Basically Things refers to IoT Devices which have unique identities and can perform remote sensing, actuating and monitoring capabilities.
- **Things** are is main part of IoT Application. IoT Devices can be various type, Sensing Devices, Smart Watches, Smart Electronics appliances, Wearable Sensors, Automobiles, and industrial machines.
- These devices generate data in some forms or the other which when processed by data analytics systems leads to useful information to guide further actions locally or remotely.



GENERIC BLOCK DIAGRAM OF IOT



Generic Block Diagram of IoT Devices



INTERNET OF THINGS

- For example, Temperature data generated by a Temperature Sensor in Home or other place, when processed can help in determining temperature and take action according to users.
- The generic block diagram of IoT device. It may consist of several interfaces for connections to other devices. IoT Device has I/O interface for Sensors, Similarly for Internet connectivity, Storage and Audio/Video.
- IoT Device collect data from on-board or attached Sensors and Sensed data communicated either to other device or Cloud based sever.

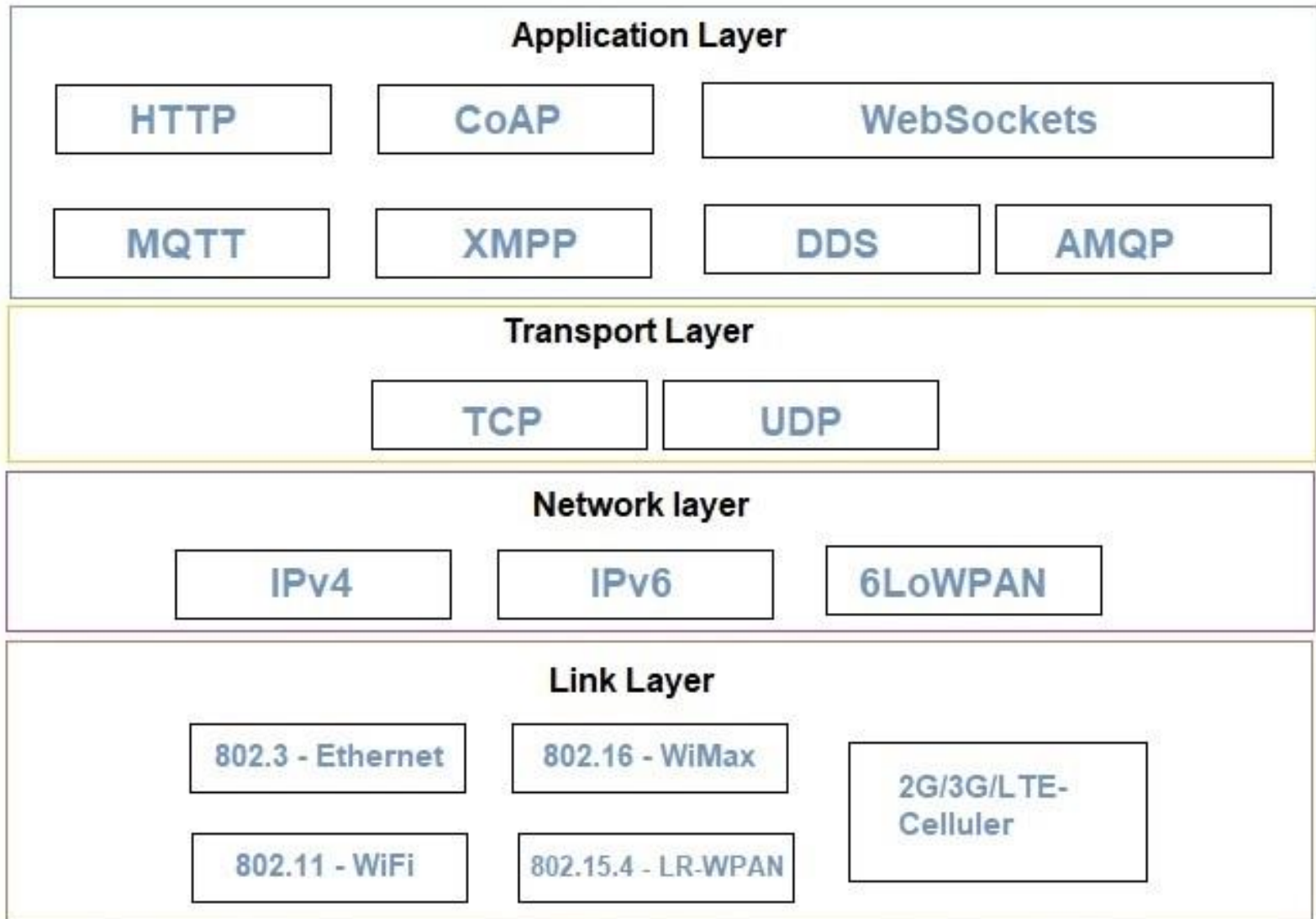


IOT CLOUD PLATFORMS

Today many cloud servers available for especially IoT System. These Platform known as IoT Platform. Actually these cloud especially design for IoT purpose. So here we can analysis and processed data easily.



IoT PROTOCOLS



IoT PROTOCOLS

IoT protocols help to establish Communication between IoT Device (Node Device) and Cloud based Server over the Internet. It help to sent commands to IoT Device and received data from an IoT device over the Internet.



HISTORY OF IOT

- 1970- The actual idea of connected devices was proposed
- 1990- John Romkey created a toaster which could be turned on/off over the Internet
- 1995- Siemens introduced the first cellular module built for M2M
- 1999- The term "Internet of Things" was used by Kevin Ashton during his work at P&G which became widely accepted
- 2004 - The term was mentioned in famous publications like the Guardian, Boston Globe, and Scientific American
- 2005-UN's International Telecommunications Union (ITU) published its first report on this topic.
- 2008- The Internet of Things was born
- 2011- Gartner, the market research company, include "The Internet of Things" technology in their research



CHALLENGES OF IOT

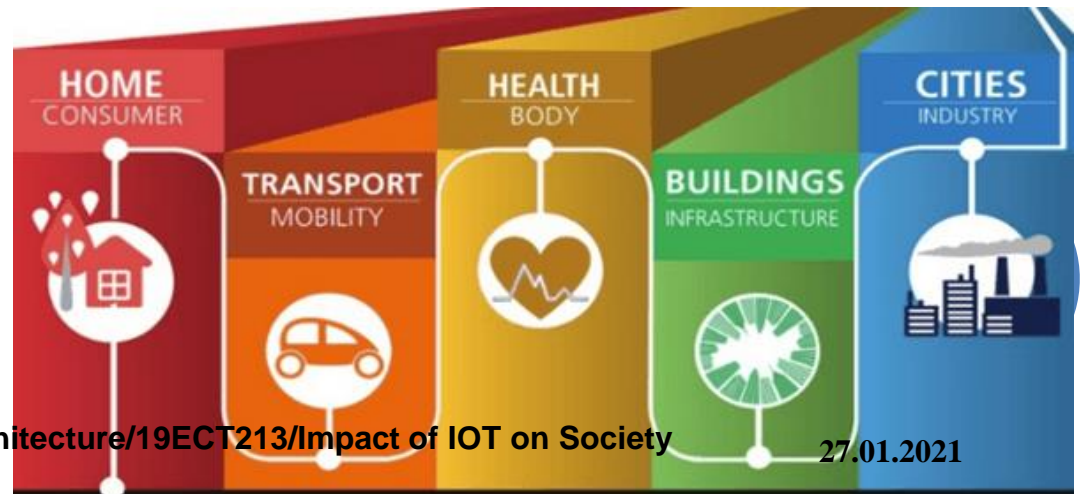
At present IoT is faced with many challenges, such as:

- Insufficient testing and updating
- Concern regarding data security and privacy
- Software complexity
- Data volumes and interpretation
- Integration with AI and automation
- Devices require a constant power supply which is difficult
- Interaction and short-range communication



MODERN APPLICATIONS

1. Smart Grids
2. Smart cities
3. Smart homes
4. Healthcare
5. Earthquake detection
6. Radiation detection/hazardous gas detection
7. Smartphone detection
8. Water flow monitoring



Thank you