



Observations

“Internet of Things is a twenty-first century phenomenon in which physical consumer products (meta products) connect to the web and start communicating with each other by means of sensors and actuators . . . ”

There will be a lot of variation in the computing power, available memory, and communications bandwidth between different types of devices, now migrating to the use of the Internet Protocol.

The M2M . . . term is used to refer to machine-to-machine communication, i.e., automated data exchange between machines.

(“Machine” may also refer to virtual machines such as software applications.) M2M concepts, meanwhile, use open protocols such as TCP/IP, which are also found on Internet and local company networks.

IoT spans a great range of applications. People bring varied assumptions about what devices are ‘things’.



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Information Communications Technology (ITC) evolution has led to wireless personal devices such as smart phones, personal computers and PDAs these devices have in common that they are designed to operate over IP networks. Hence, the number of devices that are connected to the Internet is growing exponentially. This has led to define a new concept of Internet, the commonly called Future Internet and Internet of Things (IoT).

The vision of the internet of things is to attach tiny devices to every single object to make it identifiable by its own unique IP address and these devices can then autonomously communicate with one another.

The success of the internet of things relies on overcoming the following technical challenges:

- (1) Providing IP addresses to devices.
- (2) The power behind the embedded chips on devices will need to be smaller and more efficient.
- (3) The software applications must be developed that can communicate with all interconnected non-computing devices that comprise a 'smart' system.



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Development of RFID (radio frequency identification) tags, sensors, actuators, mobile phones make it possible to development IoT which interact and co-operate each other.

In the IETF/IRTF perspective, one of our visions is to provide global interoperability via IP for making heterogeneous/ constraint objects very smart . . .

GSM Association (GSMA) - Embedded wireless - M2M describes devices that are connected to the Internet, using a variety of fixed and wireless networks ,where wireless cellular communication is used.