Overview and Concept for IOT Models

G.Mamatha

Asst. Professor, Dept. of CSE, CBIT, Hyderabad, Telangana, India

ABSTRACT: The internet of things Internet of things to indicate the common things, mainly everyday objects, that is legible, considerable and manageable via the internet. TheIoT will improve all ways which are public safety, carrying and health care with betterinformation and faster communication of this information. Internet of things many ways impact in society. At least three major benefits of IoT that will impact every field. Theyare communication, control and cost savings. This paper gives just overview of the internet of things.

KEYWORDS: Internet of things

I.INTRODUCTION

The Internet of Things is a rising topic in present world. Many definitions are given many people. The internet of things, also called the internet of objects, refers to a wireless network between objects, usually the network will be wireless and self -configuring, such as house hold application.

The internet of things is the network of physical objects or things embedded with electronics, software, sensors and network connectivity which enables these objects to collect and exchange data ---Wikipedia

Internet of things refers to the concept that the internet is no longer just a global network for people to communicate with one another using computers, but it is also a platform for devices to communicate electronically with the world around them.   --Center for Data and Innovation

The first time internet of things word used is KEVINASHTON he is father of IOT. In present some anticipating as many as 100 billion connected IoT devices and a global economic impact of more than $11 trillion by 2025.

 The internet of things (Iot) is a system of interconnected computing mechanism likeembedded with sensors, mechanical and digital machines, objects, animals or people that are provided with particular attribute and perform to transfer data over a network without involving HUMAN TO HUMAN or human to computer interaction.

CISCO'S prevision about the internet of things the number of things connected to the internet was larger than the people living on earth in 2008.the number of things connected to the internet will be about 50 billion within 2020.
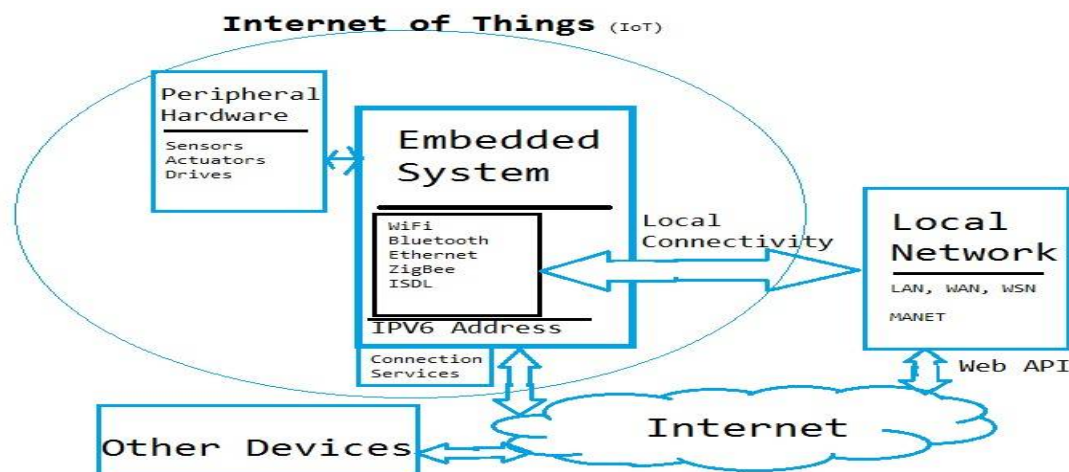
This diagram explain what is IoT?Most attractively, these devices must be uniquely discovered. For unique discovery of the devices in a Network, they need to have unique IP address. As number of IoT devices online is expected to suppress 20 billion mark and that IPv4 can only support upto 4Billion unique addresses, IoT devices essentially have IPv6 addressing scheme. All these devices have either fixed or Subnet masked IP addresses of type v6.Unique IP addresses makes IoT devices discoverable in the internet as independent node. This is the most important concept to have in mind to understand IoT.

Why did Internet of Things grow?theIoT will develop all ways which are public safety, carrying and health care with betterinformation and faster communication of this information. Internet of things many ways impact in population. Majoradvantages of Iot in every area are communication, control and cost savings.

What are the applications of Iot ?

In daily life we are using iot in many ways like smart home, wearbles, smart city, smart grid, industrial internet, smart car, connected health, smart retail, smart supply chain and smart forming these 10 applications are most used . In these smart home applications we are using 100% but smart forming is only 1%. Every time we are using smart. What is SMART?

 Smart defined by S for SpecificM for MeasurableA for AchievableR for RealisticT for Time Bound.

The given table is iot applications with examples

S.No	Application	examples	Overall popularity (%)
1	Smart home	Smart doors, smart fridge	100
2	wearbles	Smart glass, smart watch, activity tracker	63
3	Smart city	Smart parking, street lights	34
4	Smart grid	Smart metering	28
5	Industrial internet	Remote asset control	25
6	Smart car	Remote car control	19
7	health	Future Path Medical's UroSense ,Philips' Medication Dispensing Service	6
8	Smart retail	Smart retail solution	2
9	Smart agriculture	Automatic motor	1

II.LITERATURE SURVEY

In this paper overall introduce what is iot? And communication models describe. How iot used in research work. What are the issue in iot[2].in [4] gives the overview of iot and communication models of iot ,what are the challenges of iot in developers, what is future of iot for smartworld.in[3] the the main communication models and use of iot.

## III. INTERNET OF THINGS CONNECTIVITY MODELS

How to connect various devices and sensors to the internet so, the Internet Architecture Board in March 2015 released a document for IOT networking. Iot devices used mainly four communication models.

A. DEVICE TO DEVICE COMMUNICATIONS: This model serves communication between two or more than two devices through and intermediate application server. These devices communicate many types of networks like IP networks or internet. These devices use protocols to build communication like Bluetooth, Zigbee ,Z-wave etc. This communication model is normally used in small applications like home automation system in home automation scenario the residential iot devices like bulbs, switches, thermostats, and door locks normally send small amount of information to each other which typically use small data packets of information to communicate between devices with small data rate requirements.
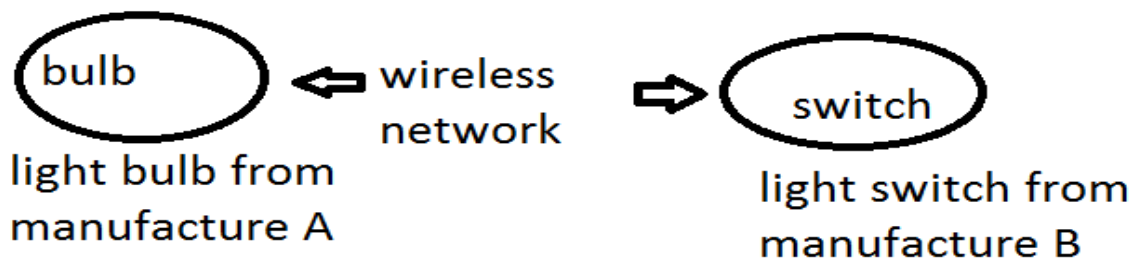
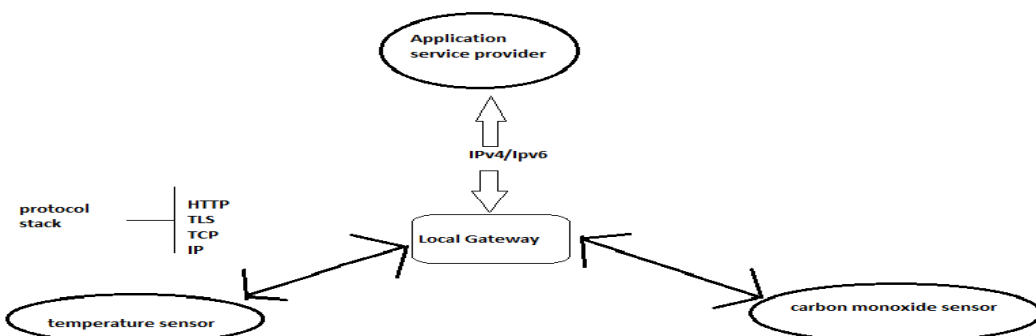### B. DEVICE-TO-CLOUD

In a device to cloud communication model IoT device directly communicate to an internet cloud Service to exchange data like from traditional wired Ethernet or Wi-Fi connections to establishConnection between device and IP network which connects to the cloud service. This communication model is applied by some iot devices like the nest labs learning thermostat and the Samsung smart TV.
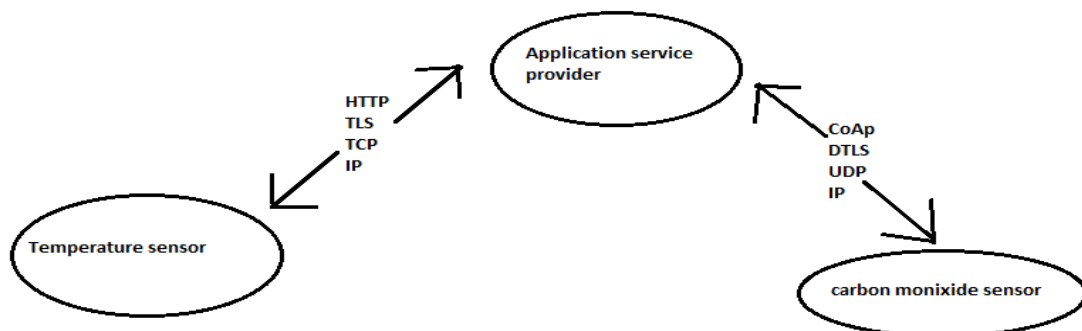
C. DEVICE TO GATEWAY MODEL

In this model, the device is associated to local gateway which is connected to the cloud service. Here local gateway is considered as an intermediate server between devices to the cloud. The intermediate gateway is usually smart phone which has an app to communicate with device to cloud service. Gateway devices can also potentially bridge the interoperability gap between devices that communicate on different standards. For instance, SmartThings' Z-Wave and Zigbee transceivers can interact with both families of devices.
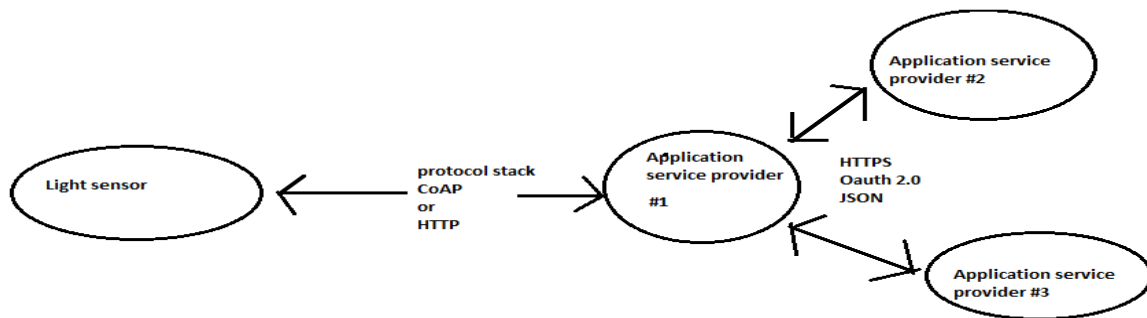
D. BACKEND DATA SHARING

This model refers to export evaluate smart object data from cloud service in combination of data with other service providers means third parties. The other service providers access the uploaded sensor data it is user allows. This model is single device to cloud communication model extension

IV.GENERAL ISSUES IN IOT

Many challenges and issues IOT. Main issues are Cost is very important for user's low cost high permanence. Security and privacy is another important issue. It is biggest challenge for IOT. Next issue is environmental aspects it is important because resource capability, pollution, disaster preventing. Present total world the major research and development is running, but network insecurities threats most monitor and control.

V.CONCLUSION

Internet of things is become reality. In future our life style will change. In present world many fields depends on the Iot devices. ButUsing of iot technology very challenge of implementation. In future it will be very benefit for real world.

REFERENCES

[1].http://www.internetsociety.org/doc/iot-overview
[2]. AnupamaKaushik "IOT-An Overview" International Journal of Advanced Research in Computer and Communication Engineering Vol. 5, Issue 3, March 2016.
[3]. www.toptal.com/it/are-we-creating-an-insecure-internet-of-things
[4]. Sidra Ali "SPECTRUM OF THE SMART WORLD: IoT OVERVIEW AND COMMUINCATION MODELS"
[5].http://www.thewhir.com/web-hosting-news/the-four-internet-of-things-connectivity-models-explained
[6].VandanaSharma , Ravi Tiwari, "A review paper on "IOT" &It"s Smart Applications", IJSETR, Volume 5, Issue 2, February 2016
[7].Understanding the Internet of Things (IoT) ", July 2014.
[8]. Saminath.V, Jung Su, "Understanding of Internet of Things (IoT) and Experimental Approach using WICED Sense in Android Platform" International Journal of Scientific and Research Publications, Volume 5, Issue 7, July 2015 1 ISSN 2250-3153
[9].Marco Centenaro, Lorenzo Vangelista, Andrea Zanella, and Michele Zorzi "Long-Range Communications inUnlicensed Bands: The Rising Stars in theIoT and Smart City Scenarios" IEEE Wireless Communications • October 2016.
[10]. Won-jun Lee"Satisfiers and Dissatisfies of Smart IoT Service and Customer Attitude"Advanced Science and Technology Vol.126 .
[11]. Pooja Kanase1, SnehaGaikwad, " Smart Hospitals Using Internet of Things(IoT)"International Research Journal of Engineering and Technology (IRJET), Volume: 03 Issue: 03 | Mar-2016.
[12].Ms.ShwetaPrakashChavan, Research Directions for the Internet of Things: Use of Sensors in Smart Cities, IJARIIE-ISSN(O)-2395-4396, Vol-2 Issue-3 2016