

# Review on Internet of Things: A Survey

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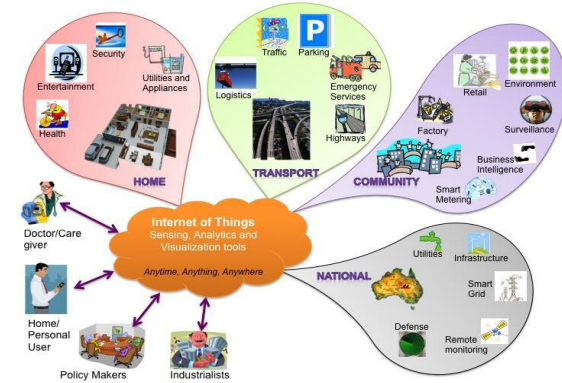
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**Abstract**—The internet of things which is based on wireless and wired network infrastructure, which interconnects all the things in whole world. Many technical committees covers in the IoT. This review paper explores application scenarios, characteristic and challenges in IoT. IoT which sensing actuating communicating between all things. This paper presents an technologies to IoT research in the near future.

**Index Terms**—Internet of Things, architecture, challenges.

## INTRODUCTION:

IOT is the wireless communication network like as RFID sensors, tags, actuators, mobile, phones etc in which has unique addresses and communicate all the network (1) IOT is also has unique address and connected all the things which is surrounding of us communicate to each other. In this world all things which is present in environment are larger than population. so question is arise how to communicate make. All the things which has identifiable and intelligent interface which connect and communicate with in social environmental [1-3]



The Iot which has divided in two parts that is things and internet. In this all computer connected in WWN (world wide network) are based on TCP/IP protocol which things are not identifiable (2-6). The united state national intelligence state that in 2025, everything which we use everyday life all are connected computer networks. In iot in which many challenging issues. The issues which are always are in iot that is the privacy and security. This survey which given the present picture of the iot that is

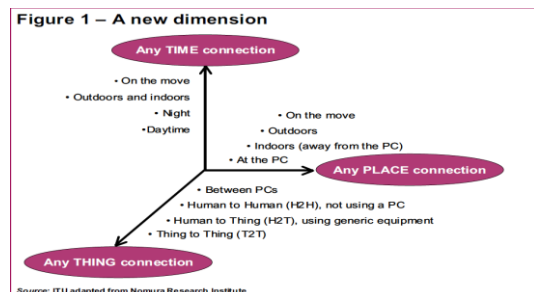
- (a) provides different visions in the internet of things
- (b) these technologies are major profit in everyday life
- (c) it has many major research which are come to face when the survey this paper

This paper which are described about the definition of IOT. Section 2 which are given about iot architecture. section 3 which are defined challenging and problems application. At last defined the future vision of the iot.

## INTERNET OF THINGS:

In these days internet which very useful in our life. all work which are not possible without internet. So the internet which are very important than other technology. So internet which connected all world and communicate with each other. Internet which involves all equipments, machines and all things which are surroundings us. All things which has unique identity that has all are connected and communicate to each other by internet then it is called internet of things(IOT).(8) From any time, any place connectivity for anyone, we will now have connectivity for anything.

- (1) The Internet of Things also called The Internet of Objects, refers to a wireless network between objects.
- (2) By embedding short-range mobile transceivers into a wide array of additional gadgets and everyday items, enabling new forms of communication between people and things, and between things themselves.
- (3) The term "Internet of Things" has come to describe a number of technologies and research disciplines that enable the Internet to reach out into the real world of physical objects.
- (4) "Things having identities and virtual personalities operating in smart spaces using intelligent interfaces to connect and communicate within social, environmental, and user context



## IOT ARCHITECTURE

IOT architecture in which includes two types of the architecture (9-12)

In 3 layer architecture in which has 3 layer that is perception layer, network and application. The perception layer which is gathering the information from all things which are surrounding of us that is sensors cameras, etc. and then the network layer which transmit the data from perception layer to the application layer.(9)

Perception layer
Network layer
Application layer

5 LAYER ARCHITECTURE

In 5 layer architecture in which used that business layer, application, processing, transport, perception layer.

In business layer which related to management and responsible the consumer privacy. And the 2<sup>nd</sup> layer is application layer which purpose to determine the all application and develop it for more intelligence and safety. Third layer is processing layer which are used handle all the information gathering by the perception layer and its main working for storing and analyzing. For working of storing and processing many techniques are used that is cloud ,ubiquities computing. Then the transport layer which are used for transmit and receive the information from the perception layer. It contains many technologies are Bluetooth and Wi-Fi. And the address of this layer are used that is IPV6. At last layer is perception layer which are used for the collect the data from all things which are surround of us and used the technologies are RFID ,GPRS etc. [11]

This layer are perfectly used in IOT.

Business layer
Application layer
Processing layer
Transport layer
Perception layer

CHALLANGES AND ISSUES:

It open issues which are included in this that is define following

- (1) Standards: In this many standardization efforts. But it not integrated in compressive work.
- (2) Mobility support: In this many proposals for addressing of object but no for mobility support in iot which present the many problems.
- (3) Transport protocol: In iot scenarios in which transport protocol are fail. And the connection and setup are useless. So it is require excessive buffering for objects implanted.
- (4) Authentication: it is very difficult in iot scenario because it is require authentication infrastructure and man attack is very serious problem.
- (5) Privacy : a lot of information about all tins and person can be collected without person aware. it is very difficult to all the data wit current techniques.In this iot many challenges are that is

Data gathering problems: these problems are divided in two parts

(1) Massive gathered information: In massive gathered information means that in internet of things in which millions of objects which has the itself information. When it is gathered a lot of problems are created means storing, processing and transmitting. It means that is not guaranteed that it required transmit all things information in real time[13,14] . it is the problem of bandwidth issues. The problems are created when All things data are backup and storing. All data are handled by IOT web applications[15].

Security and privacy: it is very important issues in the iot. For security tat is many cases are in it that is wireless hacker that is acquire information from medium before it reach at the destination.[16,17,18,19] . and low self defense means that IOT devices have not ability to accept the security.[20,21,22] The privacy is also problem in the iot So all data which are collected by authorized person ,server, clients.[23,24,25]

Billions of things: In billions of things are communication are main problem. Many issues are created storing and what hardware are used and massive number of things and what protocol are used. All questions answer are IPV6. But all these problems are many attempts.[26,27,28,29,30,31,32]

APPLICATIONS:

IoT is having a variety of applications. Some of the applications of IoT are:

- (i) Smart Home
- (ii) Smart Buildings
- (iii) Intelligent transportation Systems
- (iv) Smart Healthcare
- (v) Industrial automation
- (vi) Smart city
- (vii) Smart grid

CONCLUSION

In this paper represented iot definitions challenges and and iot issues which are common in internet of things so its conclude that presents that what is the iot and what are challenges and issues are in it.

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