

Internet of Things Technology Future and Problem Facing Its Implementation

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Abstract: Human being in 21st century requires everything faster; they don't have time and patience to wait for anything. Internet of things (IOT) technology provides smarter life through mobile phones, laptops, tablets and many more. Internet of things makes our life smoother and faster by connecting real world objects easily accessible through internet via physical connections or wireless connections. Many sensors plays important role to connect real world objects with the internet such as wi-fi, Bluetooth, RFID connections. Internet of things (IOT) allows larger area connectivity using many technologies such as 4G, 3G, LTE, GPRS, GPS, and GSM.

IOT provides smartness in human's life by means of smart transportation, smart education, smart shopping, smart healthcare, smart homes, smart waste management and monitoring and many more.

In this paper we will discuss about Internet of things (IOT) future and problem facing its implementation.

I. INTRODUCTION

Nowadays internet plays vital role in our daily life. It has most powerful and important impact on our transportation, education, business, healthcare, way of communicating people and many more.

Internet of Things (IOT) is a larger network which communicate between machine to machine, machines to human and human to machines by providing unique identity to each and every thing.

IOT is basically physical objects embedded with sensors and actuators like RFID, wi-fi, Bluetooth through wired or wireless network. When physical object can communicate and sense the environment, they become device for understanding and responding to it quickly and most advantageous talk is that we don't need human interference to communicate and respond.

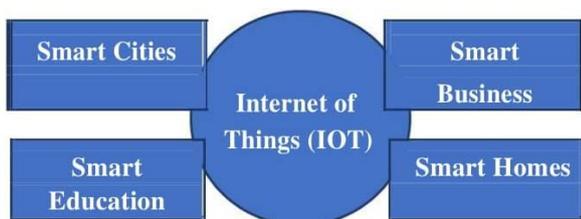


Fig.1 Basics of Internet of Things

II. APPLICATIONS

IOT has many applications in human's daily life to make it smoother and faster. There are many applications like smart transportation, smart education, smart cities, smart homes, business etc. *Smart Cities:*

IOT helps to build up smart cities .smart cities means city well equipped with facilities which requires support of government, support of people living there to implement the internet of things (IOT) technology in various ways and the most important thing is useful and careful planning to implement in different stages of development. Cities can be improved in many ways:

- Use of technology to improve health issues of citizen.
- Making transportation of cities easier by reducing traffics and reducing number of road accidents.
- By improving infrastructure of city.
- By improving security level to reduce crime.

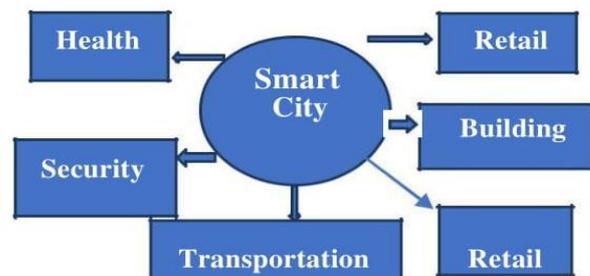


Fig. 2. Smart City Concept

Smart Health:

Internet of things technology helps via its device in monitoring physical & psychological behaviour of patient so that required actions could be taken faster regarding their health issues. It reduces the workload of doctors and their supporting professionals by continuous monitor health record and make able to take action. This technology also improves quality and care of patient.

There are many people suffering from bad health due less effective equipment's and the decision taken by professionals at right time which can be overcome by using internet of things technology as it helps to analyse the data of patients and care and right decisions can be given to the patients.

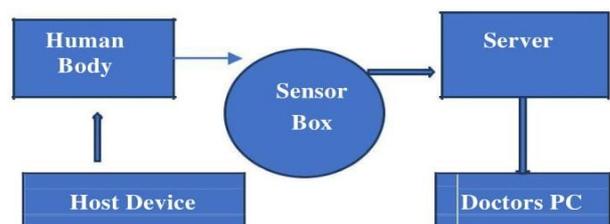


Fig. 3. Smart Health Concepts

Smart Transportation:

Development of transportation somewhere represents development of that city. A road condition monitoring and to reduce the traffic by sending signals and controlling is one of the most important application of internet of things technology^[3].this technology helps to track the shortest and better path to reach destination.

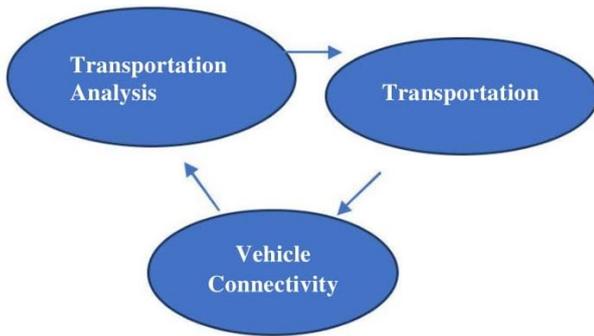


Fig. 4. Smart Transportation Concepts

III. FACING PROBLEMS

Data Interpretation: It needs to interpret the data very accurately from the sensors to take further needed actions.

Software Complexity: Software with enhanced functions needed on the server and on the network both which makes its complex.

Automatic Action: To take right decisions at right time it is needed to service automatically identification and actions.

Security and Privacy: Message integrity, authentication and truthiness are also important in addition with security which needs smarter object to protect and to prevent from piracy.

IV. CONCLUSION

There is lots of technology developed in internet of things to make our life smoother, faster and comfortable. Although IOT technology has many uses in every field of our daily life but still it needs further more technology to overcome some problems to make system more easily understandable and easy to handle.

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