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A survey on the smart environment in a multimedia

Achal. S. Gundawar

achalgundawar1602@gmail.com

Shri Ramdeobaba College of
Engineering and Management,
Nagpur, Maharashtra

Insiya. Z. Hussain

insiyahussain12@gmail.com

Shri Ramdeobaba College of
Engineering and Management,
Nagpur, Maharashtra

Pranali R Dandekar

pranalimeahram@gmail.com

Shri Ramdeobaba College of
Engineering and Management,
Nagpur, Maharashtra

ABSTRACT

We can make multimedia environment smart by making devices used in multimedia to work smartly using IoT technology, in which internet enabled devices to communicate with each other. In this paper, we firstly describe IoT and its verticals along with its component; secondly we have described its technology and finally, we have a present survey on beacons.

Keywords: Internet of things, RFID, Beacons.

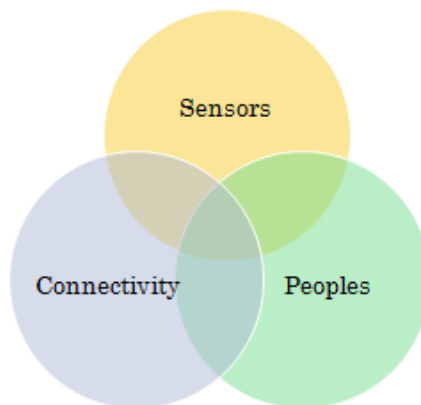
1. INTRODUCTION

The internet of things (IoT) is the network of physical devices, vehicles, home appliances and embedded with software, electronics, sensors, actuators, and connectivity which enable these objects to exchange data and to connect. IoT is a new technology used for telecommunication devices. One of the most research community to achieve a goal is the internet of things (IoT). Now the research in IoT depends on machine learning, security, real-time system, and big data. Given computing techniques used to develop smart environment involves various engineering fields i.e. computer, electrical etc to improve the progress of internet of things.

The objective of the IoT is to make the smart world, smart farm, smart transportation, smart industry, smart city, and smart home.

2. IoT COMPONENTS

Components of the internet of things are



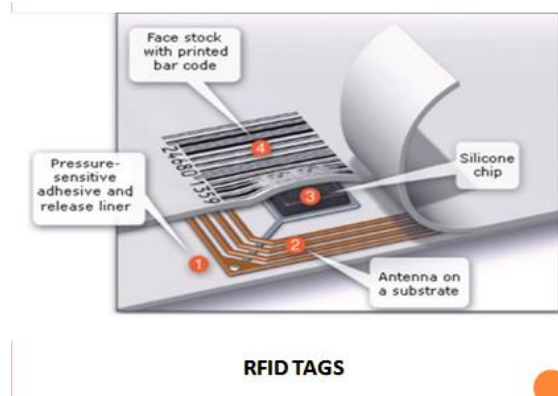
Sensors: sensors are the troops of the “internet of things”, the on-the-ground pieces of hardware doing the critical work of taking measurements, monitoring processes and collecting data. The decreasing price of these tiny devices is helping keep IoT deployment costs low and enabling a myriad of use cases. But not every sensor is made the same and every IoT installation requires a specific type of sensor. Types of sensors are temperature sensors, proximity sensors, pressure sensor etc

Connectivity: when it comes to the internet of things connectivity is crucial to keep in mind due to the fact that smart technology is completely reliant upon communication there are various communication protocols and network infrastructure that can alter the way iot technology is used as well as its level of operation. The common types of communication protocols include wifi, thread, ZigBee, Bluetooth, RFID, and NFC.

Peoples: the internet of things is a system of interrelated computing devices, mechanical, objects, animals or people that are provided with unique identifiers and ability to transfer data over a network without requiring human-to-human or human-to-computer

3. TECHNOLOGY in IoT

RFID is the technology used in IoT which is the acronym for radio frequency device which stores and retrieve data using RFID tag.



It is the technology that includes electromagnetic coupling in radio frequency portion of the electromagnetic spectrum. It consists of two types two types of RFID:

- i. Passive RFID
- ii. Active RFID.

Passive RFID requires no internal power supply while Active RFID uses battery attached to board with a battery life of 10 years.

RFID has been used in various domains like in library management system, in healthcare system etc.

4. BEACONS

Beacons are the devices used in iot application which emits a signal. It uses Bluetooth low energy or Bluetooth Smart. Bluetooth only pushes us with the notifications and not the complete information, the notification includes ID, hyperlink, and encrypted data. Beacons can be used in various IOT domains like in healthcare system, Home automation system etc.



Recent projects developed based on beacons are as follows:

- i. Chatrapati Shivaji International Airport (CSIA) in Mumbai launched an app which uses Beacons to give passengers with their flight details, gate no, about their durations and so on.
- ii. Also, Atlantis resort of Dubai makes use of beacons for providing interactive and personalized guest experience. They have placed Beacons throughout the property that interacts with guest as they cross particular points.

5. FUTURE SCOPE OF IoT

We want to make “Internet of Things” as “Internet of Everything”. The future of iot is vast for example: when your alarm wakes you up it simultaneously sends a signal to your water heater and your water heater is ready with the hot water. There is also some

future scope of beacons like by placing beacons in an amusement park you can navigate accordingly and enjoy the rides. Airports can also use beacons for providing further services like giving taxi details, hotel details to the passenger and so on.

6. CONCLUSION

The idea behind the IOT technology is to improve the standard of living by making our day to day devices connected over internet resulting in the exchange of information between two devices. This paper discussed IOT and its emerging technology along with the Beacons. Iot improves the quality of living by making smart devices communicate with each other.

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