IOT and Its Application in cloud

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Abstract we are living in an era of technology i.e. (IOT) internet of things and cloud .IOT is system that allow users to interrelate there computing devices .They can be an object, animals, digital and mechanical machines or people that have unique identifiers and have the ability to transfer data over a network . IOT connect devices brilliantly and smartly, one machine is connected to another machine and each machine communicates with other machine, environments so that they will meet new challenges. Consequence of this technology is, a gigantic amount of data is generated, stored. After that this generated data is being processed in a useful manner that can "control and command "the things to make people life easier and safer and this will reduce its impact on environment. Every Consortium such as associations and government institution need up-on information about people. As regards, most institution either used website, emails, and display board. In spite of this access of internet is available at anytime, anywhere or any device i.e. (either systems or mobile phones). So that the transferring of information can be much easier and less expensive by the use of internet.

Keywords: Web servers, information dissemination, smart devices.

I. INTRODUCTION

As a matter of fact Internet of things (IOT) is simple concept that means taking all the things in the real world and connecting them to internet. It is referred to a network encompass of physical object which is capable of sharing and gathering information. Internet of things is a heterogeneous collection of "smart devices", they track information about human body with the help of industrial machine that is in which production process transmits data to sensor and the sensor will track the information. Usually these devices use internet protocol and these protocols identify our computer in the World Wide Web and allow the user to communicate to one another. The idea behind internet of things is that in real time condition devices have self report, improved efficiency etc.

The caption "internet of things" introduced by Kevin Aston of Procter and Gamble. In 1999 article used idiom to describe the role of RFID tags to make supply chain more efficient. Today here and there like at railway station, shopping malls, in colleges an information desk is mandatory that provides information about the train schedule, promotional offers and important notice immediately.

The main idea of the Internet of Things (IOT) approximately around two decades and it has attracted many researchers and industries because of its great assessment impact improving in our daily activity and community. When things like household appliances are connected to a network, they can work together in cooperation to provide the ideal service as a whole, not as a collection of independently working devices. This is useful for many real-world applications and services. For example apply it to build a smart residence; windows can be closed automatically when the air conditioner is turned on, or can be opened for oxygen when the gas oven is turned on. The idea of IOT is especially valuable or persons with disabilities, as IOT technologies can support human activities at larger scale like building or society, as the devices can mutually cooperate to act as a total system.

II. LITERATURE REVIEW

Every organization require information bureau that provide information, advertisement detail and many other important notification to their customer and staff members .The problem behind this is that it require some dedicated staff to provide up to date information about advertisement and organization .For creating a smart world we have new concept that is IOT .This will help users to connect system intelligently and this connected system deliver data or collect data from actuators , sensor devices and any other physical object .similar work has been already done by many researchers around the world .
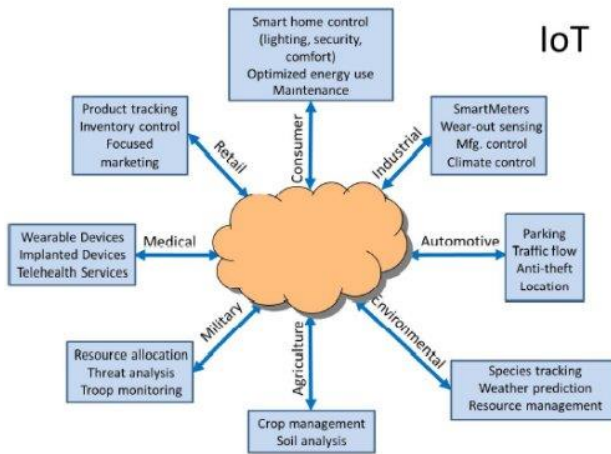
III. IOT APPLICATIONS

Figure: IOT Application

i. In medical Area:

- **Telehealth services:**- IOT concepts applied in telehealth care and enhance the use of existing technology by tracking patients, staff and inventory. It allow devices to rectify data and transfer that data to doctor for real time tracking, by dropping notifications with the help of any communication medium like android app or other linked in devices .so that initial treatment of patients will be started which improve the complete patient care delivery results.

- **Wearable devices:**- The technology has been changed drastically and every day knock the evolution of new technology wearable devices are example of it they are: iwatch app, Android app, google glassapp.

ii. In Agriculture Area:

- **Crop Management**: - Crop management is a type of IOT production in agriculture which improves the crop farming. For example weather report they collect specific data about field by continuously monitoring weather with the help of monitoring devices they calculate temperature, precipitation of leaves and overall crop health.

iii. In military Area:

- **Troop Monitoring:** - To identify the physical and mental state of solider biometric is not just a limited technology .IOT has given a sensor embedded in its helmets and uniform to send information to commando who will help them to survive in lethal enemy area.

- **Resource Allocation:** - For performing military operations resource allocation is obvious. IOT develop tools to perform resource allocation.

- **Threat Analysis:**-Threat analysis is an essential step in identifying probability of terrorist attack and results in threat assessment.

iv. In Automotive Area:

- **Parking, traffic flow and anti-theft location**: - IOT has given security to secure our parking system at any time and any place. For example:"car lock anti- theft".

Security levels of car locks anti –theft system:

a. **Work and sleep without worry:** - The car locks tracking and monitoring gives alert the user on your phone if its car is moved, engine gets started or even if unusual vibration is detected, or even device is disconnected.

b. **Monitor your teenager:-**We love our teens different people are sitting behind the wheel .Car locks detect drag racing, hard breaking and sharp cornering stunt driving.

c. **Virtual Mechanic:-**car locks actively monitor the health of your vehicle and alert you in advance if your car battery is dangerously running slow or experiencing high drain battery.

d. **Affordable:-**car locks uses cloud computing, GPS system, drive data storage, modern technologies (Android App & ios).

v. In industrial Area:

- **Smart Energy Meters:** smart metering is the first step for developing city wide smart grid systems that helps to search out challenges which encompassing water usage and energy consumption .contingent upon handling real time data on electricity and gas usage . IOT improves customer services .

- **Manufacturing control :** The Aim of manufacturing control is to provide a better process stability and data which can be used in decision support system .They keep overall equipment effectives (OEE) metric up. IOT help to build cloud based control loop system to take output of system which is nearest to control signal by correlate sensor measurement to references value. And belongs to control loop system which is just more than monitoring, communicating with factory equipments.

- **Climate control**: Energy consumption is the basic need for home appliance .IOT has given solution for energy consumption the solution is microchip which provide successful connectivity and partnership between products.

vi. In Retail Area:

- **Product Tracking**:-As we know tracking of a product mean checking the location of objects, goods, personnel within a building or facility with the help of GPS. These systems are not capable to show exact pinpointing location of object within a building or a particular floor. But now use of IOT make smart tracking system by rf

technology which show exact pinpointing location of objects within a particular area or a particular floor of a building .The tracking of IOT is handled by IOTGecko by rf circuits .

• **Inventory control**:- RFID (radio frequency identification) is fast antiquated way of technologies in asset tracking and inventory management system. These supply chains methods on old –school methods:-

(a).Accounting tools and systems: Manually entered details of individual items in spreadsheets.

(b).Manual systems: people sits down in front of every manual entry/exit points and write down details of it.

IV. CONCLUSION

The commencement of IOT is to deliver a "quality of life" and build enterprise productivity. This paper propose that we relate a IOT concept to cloud computing in the form of storage, tracking system, ECG analysis in Cloud, Satellite Communication and Social media so that user can access it anywhere any time by mobile network, monitor and improve quality of life .connecting those smart devices to the web started slower change in people life The pieces of the technology puzzle are coming together to accommodate the Internet of Things sooner than most people expect. Just as the Internet phenomenon happened not so long ago and caught like a wildfire, the Internet of Things will touch every aspect of our lives in less than a decade.

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