

BASIC CHARACTERISTIC OF INTERNET OF THINGS

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ABSTRACT:

Now a day IOT is more developing technology in the overall world because it is very efficient and it is minimizing the manual work for human. And the internet of things is explaining how the sense is made.

In a busy world IOT is very use-full to minimize the man power and in many place (like hotels, cinema-theatres, shopping-moles, ext.) are implemented with IOT and makes it is smart, as well as more efficient. Internet of thing is used to connecting everything within a network. IOT is used to Transfer data over a network, Internet of things is a system inter- related computer device that is surly save our time in daily life. And it reduces the men power IOT interact about the inter-connected network. Internet of things can explain about the interaction between the digital and physical world it is all so represent as internet of everything (or) industrial of internet. The internet of things is connected to the both the thing's and network to perform within the sensor.

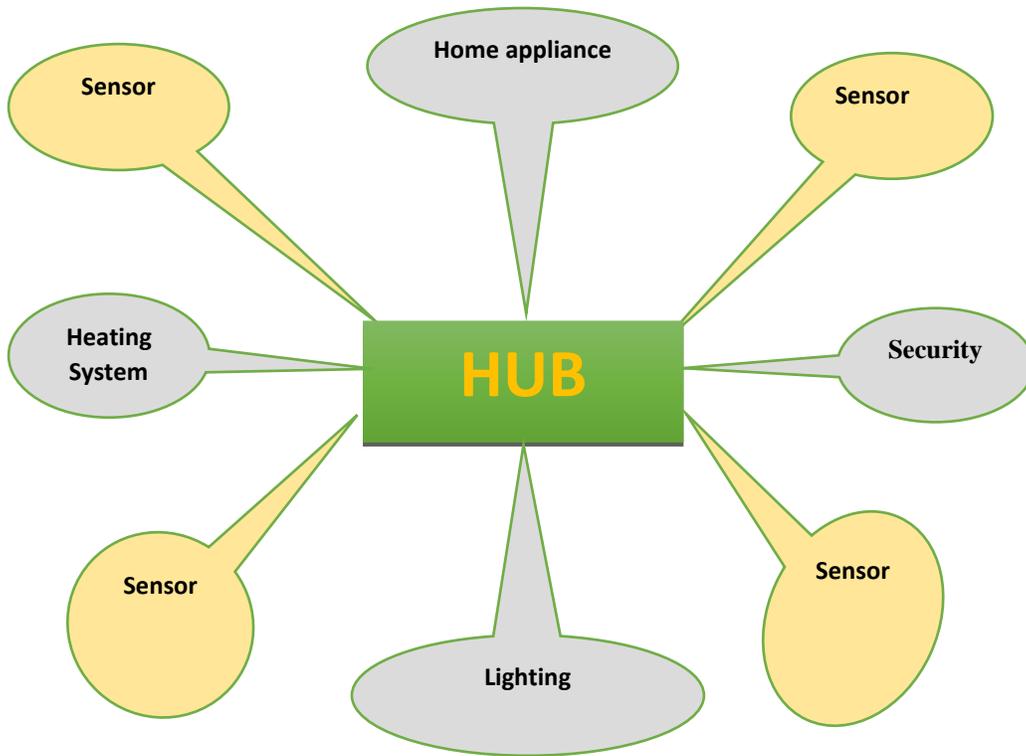
In this article we have seen about where the IOT are Implemented and we can see about the basics of internet of things. All so we can learn about basic of IOT like introduction about IOT and history of iot, when the IOT is found and who is the founder of IOT development of IOT and advantages of iot, dis-advantages of iot and as well as characters of iot and last applications of IOT (like agriculture, environment).

INTRODUCTION:

The internet of things is used to transfer data over a network without requiring human-to-human or human-to-computer interaction. IOT interconnected computing devices, objects, animals (or) people that are provide unique address. Internet of things is a network of physical object that contains electronics that are affect within their architecture in order to communicate and respect to external environment(or) interactions among each other user's. A

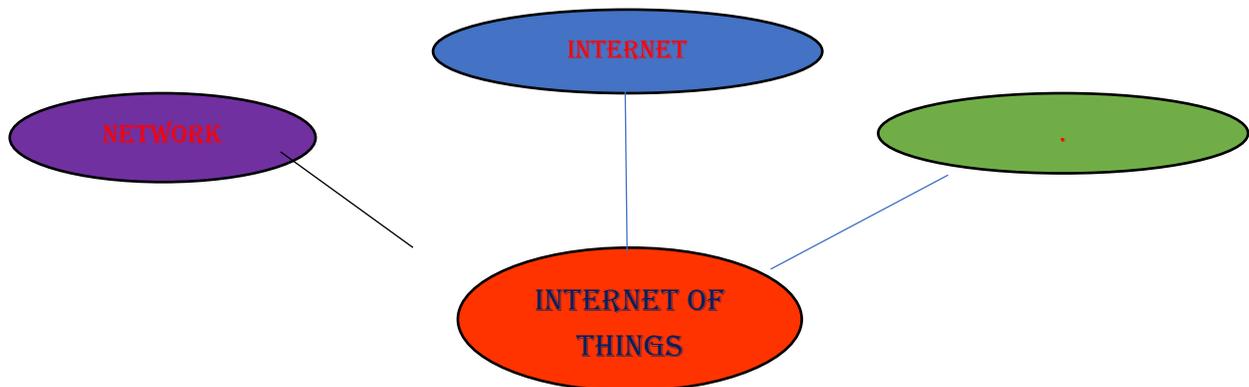
one or more embedded computers, electronics, sensors, actuators are connected into the internet and they are exchange data with each other.

Internet of things is divided into two parts the first part is internet that is connected with the billons of user within a standard network. Several devices like laptop, mobile phone and computer system that are connect to the network.



Internet oh things

PEOPLE



The second part is things this part is mean by a devise or object which are turn's smart object. It is also a part all object in this real world. The IOT it is an interaction between the digital and physical world and the digital interact to the physical using the plethora of the actuator.

BASICS structure OF IOT.

HISTORY OF IOT:

Kevin Ashton is founder of the Internet of things and it was found in 1999. During that period, he was work at Gamble & Procter.

Kevin Ashton he was work in the supply chain optimization and ha create a new prevailing technology called RFID because of he wants to charm his senior manager.

The internet of things is shown that how the sense is made and that he called his performance of internet of things. Because it creates a new trend in 1999.

In 2000the LG Inaugurate the internet of refrigerator plans in first time.

The internet of things is only 16 years old back then, it is also represented as embedded internet (or) pervasive computing.

US department of protection is deployed it RFID in 2003.

The first report on the internet of things is published in 2005 and it was published by UN's International telecommunication union (ITU).

While using the IOT system the first IOT conference is held on Europe by the European's and Acknowledgement by the EU in 2008, and also the white space spectrum was opening it was approved by the FCC voted 5-0. In the year 2009 the IOT was born affording to the cisco's business solution group.

The Chinese premier and wen Jiabao calls are have a plane to making a major investment in IOT and Key industry for china in 2010.

In 2011 IPV6 published a new protocol to agree the 282,211, 340, 374,431, 463, 607, 768, 920, 938, 456 identifiers.

Characteristic OF IOT:

In IOT there are many characteristics but I have explained only five characteristics of IOT in this paper.

Intelligence:

It is embedded of a computation and algorithm that makes the software and hardware to smart. It works like a human. A machine work as a human that is called intelligence.

It is communication between the human and device during this communication is completed by average input method (or) GUI Graphical User Interface.

Connectivity:

Connectivity in the IOT by connecting internet to every day things related working process. It is things are linking simple things interaction between the intelligence in IOT network.

Connecting in internet of things is created by the smart appliances and smart object.

Sensing:

IOT devise without sensor is not process. It will measure and detect the changes in the environment works.

Sensing technologies one of the technologies. It is create enabling that reaction to physical world people in it iot devise.

Sensing the sensor provide information about the natural input from the physical world. It can reach to understand the complex world.

Safety:

Safety in IOT devise are implementing in the safe for the both side in creator and recipients of the IOT. We must design from the safety.

It is stored personal details are safety in our physical world well-being. IOT is safe in the end points network and data are moved in the creating safe diagram that mean scalability.

Energy:

Energy in devise working power .it is important in the IOT devise. It's cannot create the billions of objects is run on batteries power.

Power efficient, energy harvesting and charging power structure are important smart power real system are must deciding the energy.

Advantages:

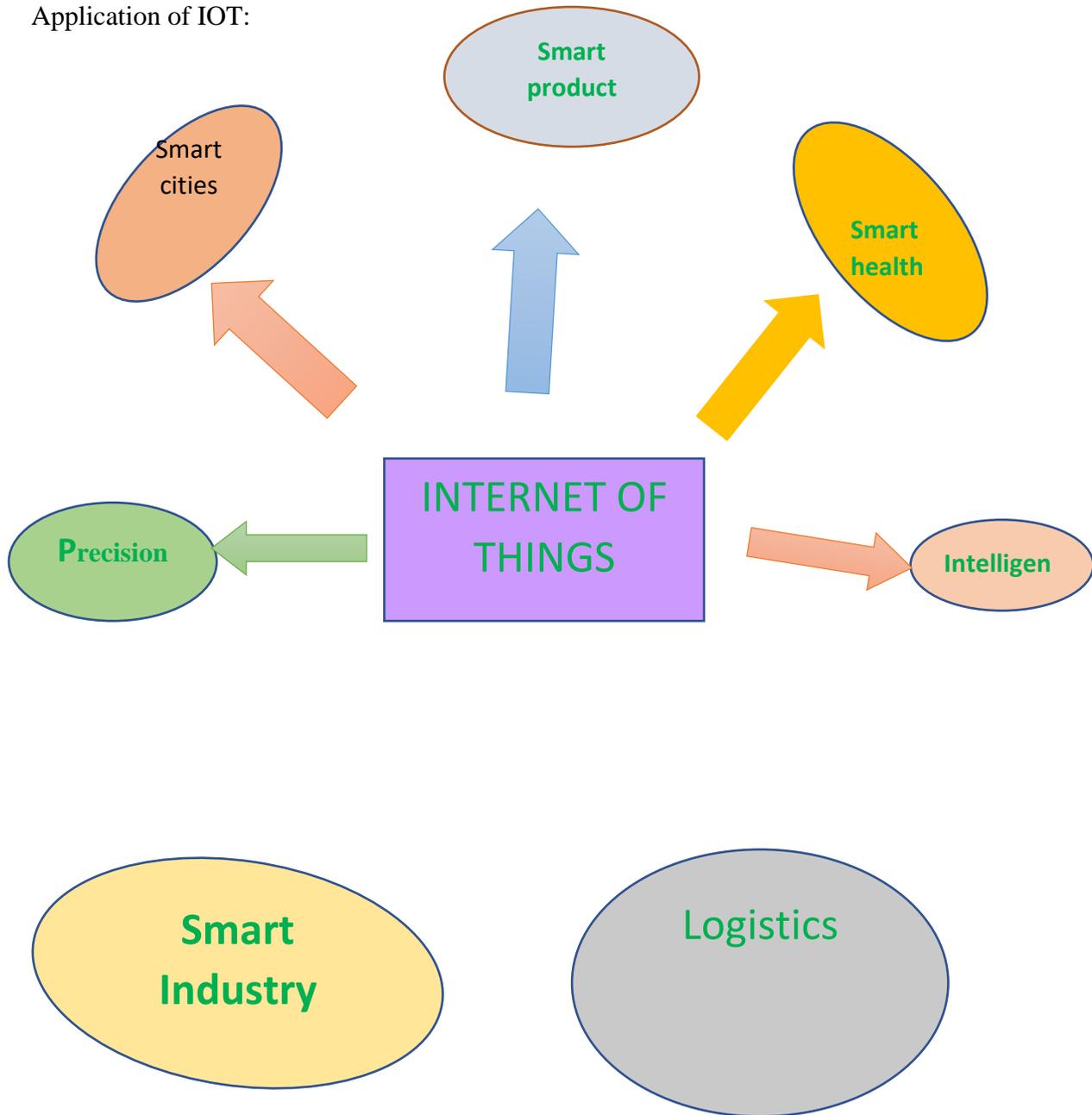
I can explain only some advantages of IOT they are:

- SAVE TIME: It is definitely SAVE our time in daily life.as it **reduces** our home effort, the IOT platform is main factor which can save our time.
- MINIMIZE HUMAN EFFECT: As the devices IOT minimize the human effort and IOT interact and communicate with each other and do lot of thing for user's
- Improve security: One are more systems are interconnected and we make the computers are more efficient and secure.

Dis-advantages:

- Privacy: The IOT devices (or) system is activate without participation on the users. The system is registering the maximum personal data on the IOT devices.
- Security: The IOT devices are inter- connected and communicate in the networks. IOT devices is the less security and lead to various kinds of network hacking
- Complexity: IOT technology is designing, developing and maintenance and activate (or) enabled the technology to IOT system
Implement is difficult.

Application of IOT:



Agriculture:

- Smart irrigation
- Green house control in IOT agriculture

Smart irrigation:

Smart irrigation system is improved on the forming the agriculture fields is saving the water.

It is use of IOT devise monitor the soil moister sensor to dedicate the level of soil moister in the soil.

The soil moister is low level water observing is the automatically release the flow of water through the irrigation pipes are soil moister levels go and predefine origin.

Smart irrigation system is collecting the soil moisture data is stored the server or cloud server are collect the data can analysed the scheduling the water planning the smart irrigation.

Smart irrigation is used the cultivar's rain cloud technology. The technology is used devise are water values, soil server and WIFI activate the programming system.

Green house in iot agriculture:

Green house structure is glass and plastic roofs. It provides environment for growth plants. It is

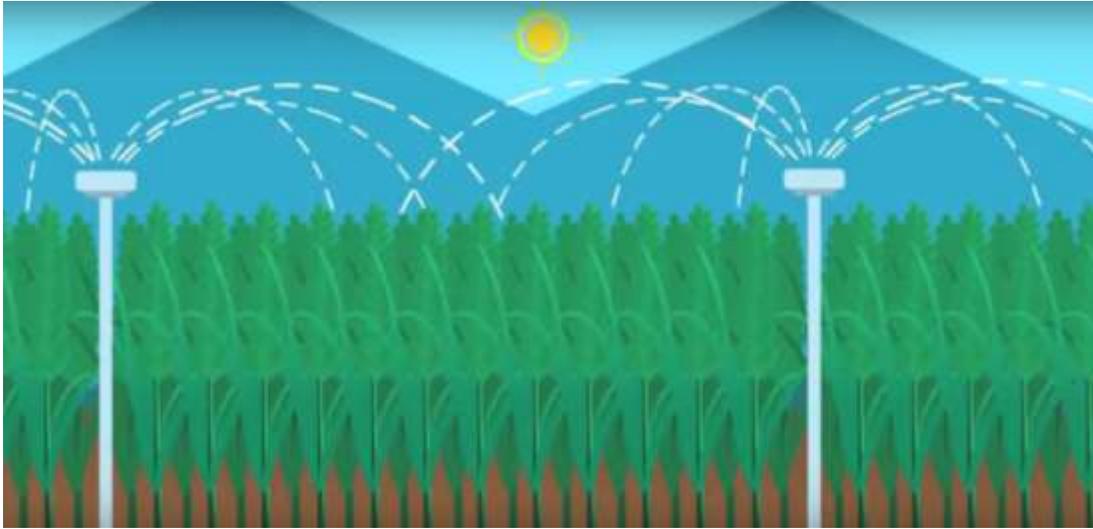
Weather condition is implemented in the inside the green house can be monitored and control the condition for growth of plants in the green house.

The temperature, soil moister, carbon dioxide and humidity, light ae monitored the sensor using the weather condition is used to control the automatically in the greenhouse actuation devise.

Green house productivity maintaining condition data is collected from the various sensors are storing on cloud server (or) server.

It is used to the wireless sensor network to monitoring and control the agriculture arguments (or)

Components like humidity, temperature in real-time for maintenance the agriculture production.



Environment:

- IOT System Weather monitoring
- IOT System Air pollution monitoring
- IOT System Forest Fire detection
- IOT System River Floods detection

IOT system weather monitoring:

IOT based weather monitoring devices are collected the data from more than one sensor attached to the IOT devices.

It is collected the data stored in the cloud-based application and storage the back-end server.

Weather alert are sent to the cloud -based application subscribed users only sent the alert message.

Air pressure is the kit for weather and quality monitoring from the record and uploading information. About the air pressure, light levels, temperature, carbon monoxide, nitrogen dioxide, and humidity, smoke level to the network.

The weather monitoring system on wireless sensor network is describing the weather monitoring system

IOT system air pollution monitoring:

Air pollution monitoring system is monitor of harmful gases in carbon- dioxide, nitrogen release by the factories and automobiles used gases in sensing the sensor.

The data is collecting to the data is analysing the information the pollution control section. In real-time air pollution monitoring is the comprising each monitoring station that communicate between the wireless back-end server is used to the M2M communication. [M2M-Machine to Machine].

It is integrated a micro-chip controller, air pollution sensor, GPS, GPRS are used in IOT air pollution monitoring system.

IOT system forest fire detection:

IOT implement forest fire detection is causes of the (pre-alert) cause of forest fires in damage to natural resources.

There are different causes of forest fires including lightening, alarm to the stored details in fire station. The devices are alert the message in authorised users in reduce the damage.

Everything nodes are measuring the weather condition it is used in the more detection criteria is implemented by the Artificial Neural Network (ANN). ANN is sensing data is detect the forest fires.

CONCLUSION:

In this paper we have seen about the basic concepts of internet of things. The internet of things is newly technologically advanced technology in the modern World.

Also, we can discuss about the history and developments of internet of things in this paper

The iot is most developing new technology it was developing day by day more features are including in the internet of things.

In feature all so we can see more and more development is waiting for IOT. Iot is mean by connecting every-thing within a sensor.

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