

Applications of internet of things

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Abstract

The Internet of things is a system presently used by maximum applications in various sectors of business government and many other applications. The IoT is the network of physical devices, vehicles, home appliances, and other items embedded with electronics, software, sensors, actuators and connectivity which enables these things to connect and exchange data. The term “Thing” in “Internet of Things” is used quite broadly. For example, a thing within the IoT could be a person with a heart monitor implant, a pet with a biochip transponder, a vehicle that has built-in sensors to alert the driver when tire pressure is low — or any other natural or man-made object that an IP address can be assigned to, thus gaining the ability to transfer data over a network. As a result, it is becoming increasingly easy to create opportunities to directly integrate the physical world into computer-based systems which results in improvements, efficiency, economic benefits and reduced human exertion.

Keywords: internet, software, hardware, computer architecture, network, thing

Introduction

With increase in ICT [Information and Communications Technology] to a much more natural way of interacting and using the power of networked computing systems which will be connected not just to the internet or other computers, but to places, people, everyday objects and things in the world around us.”

The Internet of things is a system presently used by maximum applications in various sectors of business government and many other applications which are discussed in brief below by the authors’ to know the basic ideas about the IOT and its applications to the readers. The present technology in Computer applications area and Internet is having applications which are interdisciplinary

History of iot

The IOT has a history of not so long period but the milestones are Idea of smart devices, in 1982 by a coke machine In 1999, introduction of RFID and sensor technologies. 2017, drop in the price of wireless cellular devices.

Building Blocks of Iot

- Radio Frequency Identification
- Uses electromagnetic fields to automatically identify and track tags attached to objects.
- He tags contain electronic information.
- Used for communication
- Between two devices.

NAS: Network attached storage

- Network Attached Storage
- I/P based, high performance, storage device
- Low cost
- A single SD card slot
- Two gigabit ethernet ports

Applications of Iot To different sectors

Wide range of applications in every field, creates multiple business opportunities and seamless sharing of data

Smart Homes

- Devices having capability to communicate with intangible environment
- Increased security
- You can instruct the splinter in your garden to start, open the window and so on.
- Example, Philips Hue

Philps Hue

Gives 600 to 800 colour lumens which means there is a light for every mood of yours Compatible with smart home platforms like Amazon echo

Wearables

- Devices that can be carried by a person anywhere.
- A famous trend in IoT
- Companies like Apple, Samsung, Jawbone are facing a tough competition
- Most popular example,
- Fit-Bit.

Fit: Bit

- A high performance portable device
- Can be worn on the wrist
- Tracks heart rate, workouts
- Monitors sleeping pattern
- Gets call notifications

Smart Cities

- The upcoming trend of smart cities
- Useful for smart surveillance, safer and automated

Transportation

- Smarter energy management systems and environmental monitoring
- Most widely used equipment,
- is Smart street lightening.

Smart Street Lightening

- Wireless outdoor lightening control system
- Helps in saving electricity
- Adjusts brightness of the light according to the crowd.

Healthcare

- Highly boosted sector due to IOT
- Used for recording temperatures, electrocardiogram, etc
- One such major application is Medication Dispensing Machine

Medication Dispensing Machine

- Useful for old patients.
- MDS dispenses pre-filled cups as per the scheduled dosage
- Notifies automatically when it's time to take medicine, refill, and Malfunctioning.

Agricultural Sector

- Has been proved efficient for the farmers
- Provides information to the farmers about crop yields, rainfall and soil nutrition.
- The device used in this sector is phenonet.

Problems in Iot

Following are some of the concerns of the IOT

- Security concerns
- Communication amongst devices
- Should work as one entire system
- Updates should be automatic
- People should be made aware
- Unnecessary services should be disabled

Conclusion

The IOT is the technology of future and it will create lot of applications useful to the spciety and reduce the efforts of the human beings. Although IoT seems like an extremely attractive concept in theory, we need to consider ways to improve upon the technology in order to ensure the safety of data and privacy. A glaring hole concerning IoT is the fact that there is not a comprehensive means of managing all of an individual's IoT devices. If on the other hand, we are able to fix those issues, it will certainly be interesting to witness how exactly people's behavior would change. In future this technology will be widely used for various applications in business and social/

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