How IOT changes our Life

HardeepKaur[1], HarjotKaur[2]

Department of Computer Applications, C.T. University, Ferozepur Road, Ludhiana (Punjab) (India)

ABSTARCT

In these days everything changes from traditional into modern with inventions of different technologies where IOT plays a very important role .IOT effects our daily routine life with the advancement of new things which are very helpful for day to day tasks with easily. It becomes mandatory to use the IOT things because of its uses, with amazing advantages.

In this paper we will discuss, how IOT affects our daily routine and new advancements of technologies to convert this era through technics for easy life .This will include also working on different fields and why it is important to adopt it. It describes the knowledge about technics which are used for build-up IOT such as sensors, wireless technologies using network.

Keyword:Internetof things, Technology,Sensors.

I. INTRODUCTION

Internet is globally provided network for accessing any type of data any time and from anywhere.It is generally known as "the net".Exchangeof data is possible only when you are connected through some connections such as Wi-Fi, ethernet and data usage.

Things in IOT is an embedded system that transfers and receives information over a network for the purpose of controlling another device or interacting with a user. A Thing is also a microcontroller—or microprocessorbased device.[1]

In IOT, Smart devices are designed in such a way that they capture and utilize every bit of data which you share or use in everyday life. And these devices will use this data to interact with you on daily basis and complete tasks.[2]It includes Internet-based cameras that allow you to post pictures online with a single click; Home automation systems that turn on your front porch light when you leave work during the day. According to a report, till 2020, there will be 50 billion connected devices using IOT.
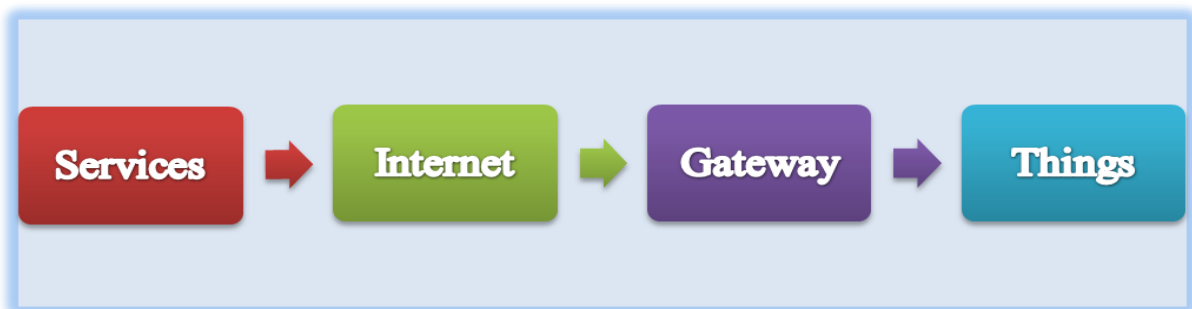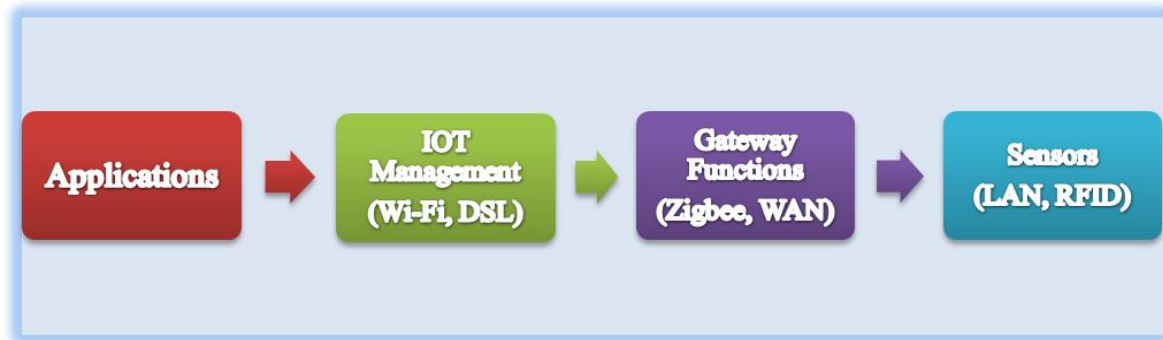

Fig 1.IOT Structure

Fig 2.IOT Technologies

IOT Architecture:IOT structure defined using various terms such as: Sensors, Network(LAN, MAN, WAN),Gateway Interfaces.

▪ **Sensors:** As its name implifies any device that senses or detects a physical attribute and response it.

▪ **Gateway:**a device used to connect two different networks, especially a connection to the Internet.

▪ **Management:**handle the storage, retrieval, and update of elementary data items, records and files.

Different Categories of Internet Of Things: We can divide IOT into **two** types: People to things referred as Customer to Business(C2B), Things to Things generally denoted as Machine to Machine(M2M).[3]
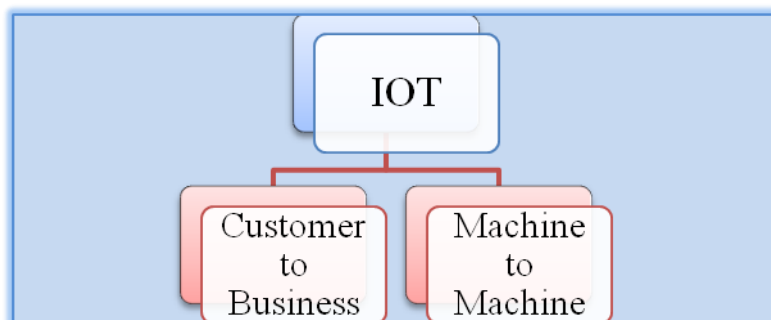

Fig 3. IOT Classifications

IOT Trending technologies: The concept of IoT refers to the technology that enables the communication between different devices such as smart phones, IP(internet protocol) cameras, IP television, connected cars or personal health devices without or with limited user intervention .The Internet of Things is set to disrupt the way we live and work[4]. Different technologies are used IOT such as: **Smart Home, Smart Wearables**, **Smart City**,etc.

Smart Home: Smart homes filled with connected products are loaded with possibilities to make our lives easier, more convenient, and more comfortable. BI Intelligence, Business Insider's premium research service, expects the number of smart home devices shipped will grow from 83 million in 2015 to 193 million in 2020. This includes all smart appliances (washers, dryers, refrigerators, etc.), smart home safety and security systems (sensors, monitors, cameras, and alarm systems), and smart home energy equipment, like smart thermostats and smart lighting. The first and most obvious benefit to smart homes is convenience, as more connected devices

can handle more operations (lighting, temperature, etc.) and frees up the resident to perform other tasks. But beyond this, smart home IoT devices can help reduce costs and conserve energy.[5]
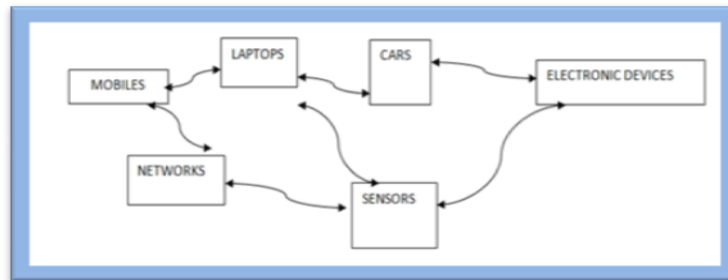

Fig 3. Smart Home all connected devices

Smart Wearables: Smart Wearables are smartdevices that are connected to internet and we have to wore these devices on our body for sharing of information. "Activity Tracker" is good example of Internet of Things. These devices does not required human intervention.[6]
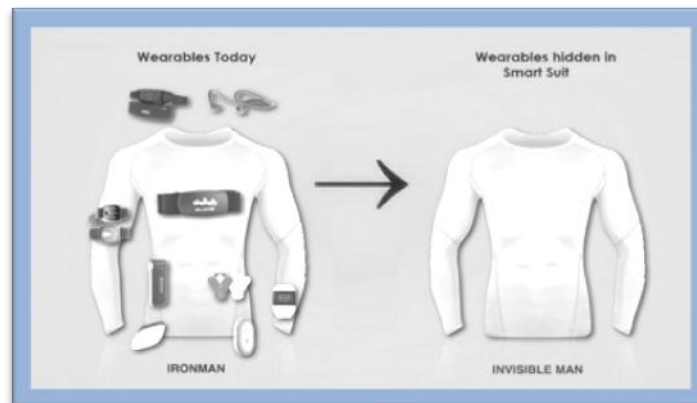

Fig. 5. Activity/ Fitness Tracker device[7]

Smart City : To integrate information and communication technology (ICT) and Internet of things (IoT) technology in a secure manner to arrange a city's assets. ICT allows city officials to interact directly with the society and the city infrastructure and to monitor what is happening in the city, how the city is evolving, and how to enable a better quality of life. [8]

Fig 6. Smart city[7]

International Journal of Advance Research in Science and Engineering
Volume No.06, Issue No. 10, October 2017
www.ijarse.com

IJARSE
ISSN: 2319-8354

Why we need to adopt IOT?

Whether for personal or business use, IOT is used everywhere :- As a fashion statement,As a fitness tracker,As a treatment for hearing impairments,For remote treatment of speech and voice disorders such as those in patients with Parkinson's diseases,As a sport tracker,To synchronize data and communication from other gadgets,For specific health issue monitoring, for example stress management ,As a gauge for alertness and energy levels,As navigation tools,As media devices,As communication gadgets, IOT is used.[6]IoT devices are transformative – sensors, local computationand filtering, and integration with cloud computing services foradditional analysis, computation, and response can transformdomains.[13]

These are a few interesting examples of how the Internet of Things could change our daily lives:[10]

- Imagine you woke up in the morning by dismissing your alarm, immediately the alarm send signal to water heater to warm up water.

- Imagine if your fridge could analyse what is in it, and then build you a shopping list based on your previous food-buying habits.

- Smart toothbrushes are another item that already exists, but they are still in their early stages. Currently they can detect when you haven't properly brushed certain areas of your mouth.

- It's 2025 and you're stepping out of the office to hail a cab to your important business meeting. Of course, your Google Calendar automatically scanned your Gmail and uploaded an entry for your meeting to your phone.

- Your bed has an in-built sleep cycle monitor. Your new neighbours decided Thursday night was a great time to have a housewarming and play some obnoxious music until 3am. Your sleep was heavily interrupted. Your bed tells your alarm to give you an extra hour of sleep. Your alarm checks your schedule to see if you have any appointments first thing in the morning. You don't, so it lets you sleep.

- Monitoring your baby: Through their smartphones, parents will monitor their baby's breathing, temperature and activity. Babies will don connected onesies that will send an alert when there is anything abnormal.[11]

II. CONCLUSION

In this paperwe discussed, How Internet of Things (IOT) will affect our daily routine with the advancement of new inventions and what are the different things or devices which are used to make our life easy by putting less efforts and more technology.In developing countries, IOT is the most important aspect for adopting new era.We cannot imagine future without Internet although it becomes an issue due to some limitations.

III. ACKNOWLEDGEMENTS

AUTHORS

HardeepKaur, she is a M.Phil(computer applications) student at CT University, Ludhiana (Punjab). Contact her at harryhardeep12@gmail.com. She received the B.C.A and M.C.A in Computer Science from PanjabUniversity,Chandigarh and Punjab Technical University, Jalandhar in 2015, and 2017, respectively. Her research area includes Networking, Cloud computing, information retrieval and data mining.

HarjotKaur, she is a M.Phil(computer applications) student at CT University, Ludhiana (Punjab). Contact her at jassaljot94@gmail.com. She received the B.C.A and M.C.A in Computer Science from PanjabUniversity,Chandigarh and Punjab Technical University, Jalandhar in 2015, and 2017, respectively. Her research area includes Networking, Cloud computing, Big Data and Artificial Intelligence.

REFERENCES

[1]. https://inventrom.wordpress.com/2014/11/27/the-thing-in-internet-of-things

[2]. https://www.analyticsvidhya.com/blog/2016/08/10-youtube-videos-explaining-the-real-world-applications-of-internet-of-things-iot

[3]. http://www.rfwireless-world.com/IoT/IoT-architecture.html

[4]. http://dx.doi.org/10.14257/ijsh.2016.10.1.02

[5].http://www.businessinsider.com/internet-of-things-smart-home-automation-2016-8?IR=T

[6].https://en.wikipedia.org/wiki/Wearable_technology

[7]. http://sec4app.blogspot.in/2015/06/smart-wearables-design-and-future-of.html

[8]. https://en.wikipedia.org/wiki/Smart_city

[9].https://readwrite.com/2016/12/14/3-benefits-cities-can-gain-smart-infrastructures-dl4/

[10].http://www.attinadsoftware.com/blog/jacob-babu/how-iot-going-change-your-everyday-life%E2%80%A6

[11]. https://www.entrepreneur.com/article/230975

[12].Deming Chen, Jason Cong, SwathiGurumani, Wen-meiHwu, Kyle Rupnow, Zhiru Zhang, *System Synthesis and Automated Verification: Design Demands for IoT Device*