Every other technology oriented website talk about Internet of Things (IoT). This is understandable as IoT, given its boundless possibilities, is said to be one of the most disruptive technology next to the Internet. According to the **IDC (International Data Corporation)**, 26.6 billion IoT devices are now active worldwide, and this number is expected to rise to 41.6 billion devices by 2025. Meanwhile, total spending on IoT tech reached a whopping $742 billion in 2020.

But what is the Internet of Things? How did it start and what are the examples of applications of IoT?

Definition

The internet of things (IoT) refers to a “system of interrelated, **internet**-connected **objects** that are able to collect and transfer data over a wireless network without human intervention”. It is an umbrella group of physical objects –“things”—that use sensors, software and other technologies to connect and exchange data over the internet. Simply put, it is a giant network of any “thing” that connects to Internet. Early IoT applications

History

The term Internet of Things was introduced by Kevin Ashton, co-founder and Executive Director of Auto-ID Center, on a presentation he made for Procter and Gamble in 1999 about a project that improved supply chain management by linking RFID data to Internet. However, the concept of ubiquitous computing has been around as early as the ‘80s when a Coke machine at Carnegie Mellon University was connected to the internet. In 1989, Tim Berners-Lee proposed the concept of World Wide Web which is pivotal to the success of IoT. At around the same time, governmental and private satellite systems grew robustly that laid the basic communication needed for IoT. In 1990, John Romkey, an Internet pioneer and co-author of the first set of communication protocols for IBM, invented a toaster that is connected to the internet which is considered to be the first IoT device. In 1993, Xcoffee, the first ever webcam pointed to a coffee pot was introduced in Cambridge University. Steve Mann in 1994 invented the first wearable Internet-connected webcam. One of the most important turning point for IoT was in 1998 when the Internet Engineering Task Force released IPv6, the protocol that enabled IoT. Ipv6 can run end-to-end encryption that added security to IoT. Ipv6 is also scalable which is very important for IoT to meet the required unique identifier with its massive growth. Most importantly, Ipv6 allows connectivity for IoT devices without having to work with Network Address Translation and Firewall issues. In 2000, LG released the world’s first internet-enable refrigerator. This product was not warmly received by consumers due to its price. By the year 2004, the term Internet of Things was so popular that it was published in various book titles. In 2008, the 1st International Conference on the Internet of Things (IoT 2008) was held in Zurich, Switzerland. From then on, IoT has exponentially expanded in various industries including healthcare, transportation, home improvement among others.

<https://www.analyticsinsight.net/why-is-the-internet-of-things-such-a-big-deal/>

<https://us.acrofan.com/detail.php?number=384516>

<http://www.itrco.jp/libraries/RFIDjournal-That%20Internet%20of%20Things%20Thing.pdf>

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