

In "Constraints in the IoT: the world in 2020 and beyond", Asma Harron and colleagues from the COMSATS Institute of Information Technology of Pakistan, listed the limitations of current IoT technology. Thereby proposing 6 main factors for successful IoT deployment in the future. At the same time, Harron predicts that the number of devices connected to the IoT network will increase rapidly, and as a result the number of IT jobs will decrease in the future.

To find the factors that effectively implement IoT, Harron has listed research papers on technical limitations of IoT that have been published in recent years. thereby providing an overview of IoT technology at the present time. The technological limitations of the IoT can be generalized in two aspects: hardware limitations and software limitations.

The hardware limitations occur because IoT devices have small memory and low energy, network infrastructure has not been upgraded, and the current internet network cannot meet the needs of large data exchange.

The software restrictions refer to the problem of addressing for IoT devices, the need to build a new routing and communication protocol for devices, congestion control and flow control, and issues related to privacy and security, ...

Based on the limitations outlined above, Harron gives 6 essential factors to be able to expand IoT: Smart Devices, Advanced Networks, Cloud Computing, Big Data Analytics, Security, and Standardization.

To make predictions about the world between 2020 and 2030, Harron first lists some of the achievements of IoT in the present such as eliminating space limitations, reducing costs, saving energy, and so on. Harron then listed the number of IoT devices in the years 2009 to 2020 to show their rapidly growing trend and made a prediction that the number of IoT devices could be 2000 billion by 2030.

Analyzing this information, Harron asserted that the IoT is important enough to change the way of life and even the world. The automation function of the IoT increases the ability to analyze big data. The industrial structure is creating new value by changing infrastructure and destroying the revenue of the traditional system. The number of IT jobs will decrease due to the advancement of intelligent machine technology.

Through the above results, Harron affirms that the concept of IoT is evolving rapidly, and we will soon see networks interconnecting around the world, where all physical devices are connected and communicated with each other.

The paper gives an overview of IoT, focuses primarily on technical barriers to successful IoT infrastructure deployment, addressing open issues that researchers and stakeholders need to address.

The predictions are made to help stakeholders get the necessary preparation for the coming IoT era.