

Current Trends and Future Visions in Internet of Things

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Recently, IoT (Internet of Things) has attracted attention not only from the technical point of view but also from the business point of view. The notion of IoT is descended from ubiquitous computing, which aims to realize a smart environment by collecting various data in the real world and understanding the situation based on the analysis of the collected data. By the progress of AI (Artificial Intelligence), device, and network technologies, practical IoT services become to be feasible in the actual environment.

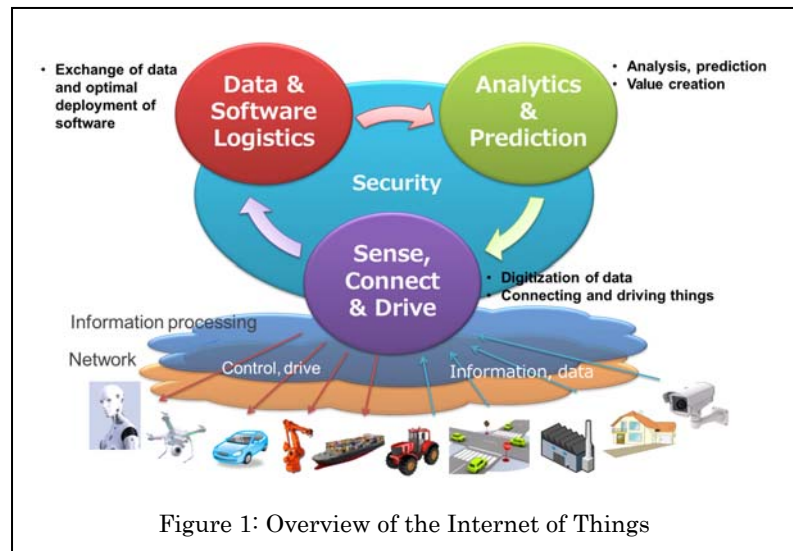


Figure 1: Overview of the Internet of Things

In order to implement an IoT service at low cost, the common infrastructure is indispensable. However, the requirements and the scale of IoT services are diverse, so designing and providing the infrastructure in advance is quite difficult. Therefore, NTT has performed research and development on the IoT platform technologies as illustrated in Fig. 1 by collaborating with varieties of partners from the different domains to extract the requirements and address the problems in the actual field. In this talk, these current trends of IoT, as well as the collaboration projects will be introduced.

Meanwhile, the recent commercial services on IoT are mainly on the stage of “Monitoring” capabilities [1], but the other capabilities, e.g., “Control,” “Optimization,” and “Autonomy,” will be required in the near future. Practically, many barriers hinder these steps. The detailed problems and the required technologies will be discussed in this talk as well.

References

- 1) M.E. Porter and J.E. Heppelmann: “How Smart, Connected Products Are Transforming Competition,” Harvard Business Review, 92(11), pp.64-88, Nov. 2014.