Annex C

April 2015

FACTSHEET

Technical Reference for Sensor Networks

Background

Singapore's journey to be the world's leading Smart Nation will improve the quality of life for individuals and business productivity of enterprises by tapping on the potential of infocomm and media (ICM). A key requisite to achieve this vision is pervasive connectivity, which IDA refers to as "Everyone, Everything, Everywhere, All the Time" (E3A) connectivity.

Connected devices such as fitness trackers, smartphones and more continue to grow explosively as the Internet of Things (IoT) connects ever more devices. Cisco projects some 50 billion devices will be connected via IoT by 2020. As these numbers climb, different devices, systems and services from various companies must have some manner of interoperability between themselves for a true IoT to occur. As such, standards will be critical to enable interconnectivity and interoperability of devices and systems. It will also be necessary as an assist to drive innovation and increase productivity of applications utilizing sensor data.

IDA, together with the IT Standards Committee (ITSC), formed a Technical Committee made up of participants from industry, research institutes, universities and government agencies to develop and work on Technical References for IoT and sensor network standards. The first batch of IoT standards have been developed and are now available.

About IoT Standard Technical References

The first batch of IoT standards for the Smart Nation sensor networks in the form of Technical References (TR) are now available in hard and soft copy for purchase.

- TR38 Technical Reference for sensor network for smart nation (public areas) and
- TR40 Technical Reference for sensor networks for smart nation (homes)

IDA developed these TR's to address the absence of any coherent sensor networks standards, with a focus on interface interoperability. While there are no lack of IoT-related standards or interoperable sensor network systems and services globally, there is a lack of a blueprint on how various disparate standards can be combined to enable an eco-system of interoperable sensor network devices and systems. These TRs focus on open standard interfaces between the devices and systems, and should help to reduce cost of deploying, operating and maintaining sensor applications.

Several other IoT-related standards to complement the sensor network TRs such as IoT Information and Services are currently being developed as of April 2015. This will eventually create a full-bodied series of IoT standards which would allow for seamless information sharing across devices and systems. More information on them will be released at a later date.

The key benefits of publishing the first sets of Internet of Things standards are:

Efficiency and Heterogeneous

By providing "blueprint" guidance on a minimum set of existing international- or industry-interface standards to adopt, interoperability of sensor networks and support for a variety of sensor network applications can be enabled.

The open standards indicate which interfaces between devices and systems are defined, thus making it possible for heterogeneous sensor networks to interoperate seamlessly and for agencies, companies or users to share sensing data and sensor network infrastructures.

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