

Annex A

FACTSHEET

Over-the-air Subscription Management for Embedded SIMs (eSIM)

As Singapore moves towards realising our Smart Nation vision, the deployment of sensors and other Machine-to-Machine (“M2M”) devices will increase exponentially. One of the approaches commonly adopted by industry players is to connect M2M devices to existing mobile networks using SIM cards, allowing the control and/or monitoring of these deployed devices.

However, based on current technology, every SIM card is tied to a Mobile Network Operator (“MNO”). Any change of MNO will require the SIM cards to be replaced. This makes it challenging for end users to change the SIM cards once they are deployed, especially for embedded SIM (“eSIM”) cards where the cards are permanently affixed to the equipment. Although there are commercially available solutions that allow sensor operators to switch MNOs without changing the SIM cards, these solutions today are based on proprietary technology.

The above-mentioned challenge faced by the end users could be overcome with the adoption of an open Over-The-Air (“OTA”) Subscription Management (“SM”) standard. The GSM Association (“GSMA”) had in June 2015 updated its Remote Provisioning Architecture for Embedded UICC Technical Specification for OTA SM technology (“GSMA Specifications”), which is widely supported by the industry. IDA plans to conduct a trial to better understand the newly developed GSMA Specifications capabilities and develop policy and regulatory frameworks that will facilitate a more competitive environment for the deployment of IOT devices.

The trial will allow IDA:

- To understand the technical capabilities and challenges of OTA SM (such as downloading, enabling, disabling, and deleting of MNOs’ profile on the eSIM);
- To provide opportunities for the participating MNOs to understand the requirements and challenges in provisioning OTA SM; and
- To identify the possible security challenges with OTA SM.

The trial will be conducted in partnership with the Public Utilities Board (“PUB”), using PUB’s M2M sensors, and will involve the MNOs in Singapore. The PUB’s M2M sensors will perform the daily routine operations of transmitting data or sending SMS via the connected mobile networks to PUB’s Operations / Data centre during the trial period, and will perform OTA switches amongst the participating mobile

networks. This trial will be conducted over a fully functional trial network that complies with the GSMA Specifications.

IDA intends to appoint a solution provider to lead this trial through a Request For Proposal.

For media clarification, please contact:

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