eSIM: a new generation of SIM

The SIM card, as THE secure element, has been a significant pillar of the success of the mobile handset market.

 # CONNECTIVITY

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The robust security provided by SIMs has been successfully and widely adopted for mobile systems and handsets. Now it is conquering the Internet of Things (IoT), as objects that connect to mobile networks, typically use a secure element containing a SIM. For this purpose a new generation of SIM had to be designed to address the special challenges of an environment where the SIM is not easily accessible, replaceable or removable. It needs to enable the secure and remote download, activation and potential changes of subscriptions. To deliver these benefits, a new secure element was created to remotely manage changes in the mobile network operator's subscription data: the embedded SIM also known as eSIM or eUICC. Historically a SIM is typically inserted into the mobile device after purchase, in the retail shop, or in the customers' home or office. In contrast, the eSIM is embedded into the printed cicruit board inside the device, in the device factory, at the point of manufacture.

> *Beyond the SIM itself, the most significant part of this evolution relates to the remote administration of the SIM card and provisioning, also called subscription management, and remote SIM provisioning. Morpho has already delivered several million units of embedded SIM cards for the M2M market, for which subscriptions are managed by us, supporting multiple needs such as optimization of roaming conditions dynamically, and remote activation of devices. The latest Remote SIM Provisioning specifications for M2M were agreed on in mid-2015 at GSMA, and our MorphoFlex solution already implements them. In addition we are currently developing a set of partnerships to provide a more comprehensive IoT offer, as we think it is critical to offer solutions that are easy to implement for our customers.*
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> *Yves Portalier, Vice President & General Manager for the Telecom Business Unit at Morpho*