

GRUPPO TELECOM ITALIA TIM

iUICC/PBL GSMA PoC

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The eSIM : a real disruptive opportunity

- The growth of the market is mainly dominated by new devices which will be interconnected to provide a better user experience and a full digital life.
- Just a small percentage of these devices will require traditional mobile connectivity (3G/4G/5G) but all of them will need a security element to authenticate themselves and protect by attacks.
- Traditionally the MNOs have always identified and authenticated their Customers on the networks with the SIM.
- The opportunity to extend the usage of the SIM in these new environments is a huge challenge which require additional improvements.
- The availability of a SIM in any integrated module which support connectivity is a great advantage as reduces the cost and provides the same security levels.
- The integration of the SIM in a module would also improve the power consumption and the efficiency of the component satisfying the basic requirements of these new devices.



TIM has promoted a PoC within the GSMA to target these requirements

The integrated eSIM PoC: a new challenge opportunity

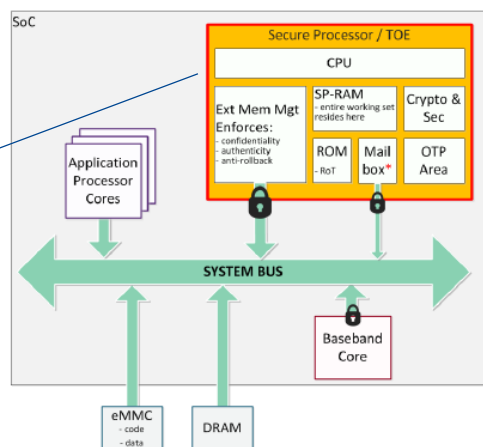
- **TIM Qualcomm and Gemalto** proposed in 2015 to **setup a Pilot in GSMA** with multiple MNOs and chip/SIM vendors in order to verify the feasibility of an integrated solution of UICC (*integrated UICC*) able to support a flexible personalization, as existing today, thanks to the *Primary Bootstrap Loader (PBL)*
- The final target of the PoC will be the optimization of a combined HW and SW management mechanism with the following goals:
 - Guarantee the same security levels as today;
 - Improve the performance;
 - Ensure the interoperability at all levels (from chipset multi-sourcing to card OS, personalization and subscription management features).
 - target an architecture for remote SIM application management (RAM)/remote SIM file management (RFM) on the UICC compliant with the majority of requirements expressed by GSMA, ETSI, SIM Alliance & Global Platform
- The PoC started in Oct 2015 and recently achieved the first prototyping phase results



iUICC/PBL Proof of Concept (PoC)

PoC consists of two propositions which combined together can improve the actual RSP features

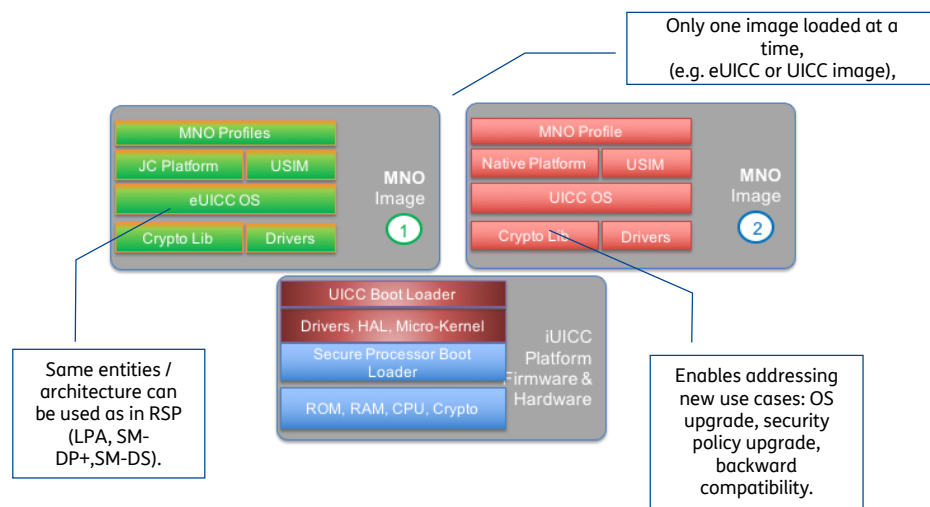
System on a chip instead of separate UICC Hardware



iUICC resides in reserved secure areas of SoC

New HW-based non-standardized eUICC form factor. This can operate complementary to GSMA Remote SIM Provisioning. It may also increase SIM performance and available memory. Functional, security and certification aspects will be demonstrated in the PoC

Primary Bootstrap Loader (PBL) to install complete SW image including UICC OS and MNO profile



The MNO remains in control of the entire image (as of today) that can be a GSMA Remote SIM Provisioning (eUICC) image and can evolve over time (future-proofness).



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