Connected Living

How Mobile Operators support deployment of eCall

Remote SIM provisioning and the lifecycle of eCall

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Agenda

- GSMA participation to eCall task forces:
  - Periodic Technical Inspection
  - Life Cycle Management / End of Life
- How does the GSMA remote SIM Provisioning support eCall?
- Discover more & Q&A

GSMA participation to the European Commission work on eCall

- GSMA is actively contributing to the EeIP (European eCall Implementation Platform):

  - **Task Force for Periodic Technical Inspections**: investigated several options for performing the test of eCall in the in-vehicle system.
  - **Task Force for Life Cycle Management**: investigated the start of life, end of life of the eCall service and numbering aspects.

Work is still in progress

Periodic Technical Inspection task force proposal

- The Task Force produced a report that evaluates several options for car inspections
- Options differ by an increasing level of complexity and cost
- Two preferred options have been proposed to EeIP:
  a) Diagnostic interface of vehicle only
  b) Establishing connection to a test PSAP via long number stored on the USIM for this purpose.

Life Cycle Management Task force – Scope

Working on a report that focuses on two key lifetime events in the eCall service life cycle:

- Assignment of a public numbering resources to the eCall SIM and its activation on a mobile networks
- Identification of a trigger defining the end-of-life of the vehicle and its corresponding eCall SIM

Life Cycle Management Task force - Scope

The Task Force also looked into:

- The need to optimise the use of numbering and addressing resources
- The need to determine triggers that define the end-of-life of the SIM
- The entities involved and the process required to support the eCall end-of-life
- The viability of any recommendations made in this report considering the mandated timeframe for implementation

Vehicle life-cycle and stakeholders involved

Vehicle Life-cycle

Stakeholders

Vehicle Manufacturer

SIM/module Manufacturer

MNO

National vehicle authority

End-of-Life proposals

The LCM Task Force has evaluated three options for the end-of-life:

- Define a set duration, renewal before expiration
- Renew duration at regular vehicle testing: good fit with PTI Task Force proposal
- Synchronize with the actual vehicle life time, by mean of a suitable and standard EU process to be defined

GSMA preferred solutions to End-of-life

The GSMA and their members are supportive for the first two solutions:

- Define a set duration, with possible renewal before expiration
- Renew duration at regular vehicle testing, solution that utilises the proposal from the PTI Task Force.
- Synchronize with the actual vehicle life time, by mean of a suitable harmonised process definition.

Reasons – Both solutions are:

- **Simple**: easy to implement with the current infrastructure available by the mobile industry
- **Fast:** can be implemented in a **timely manner** and be ready for the required deployment date
- **Flexible:** can be developed/refined in the future
- **Global:** can be implemented by any EU member state/ do not create a EU specific configuration which may raise costs and increase complexity for manufacturers
- **Independent:** from any numbering scheme/ arrangement

GSMA approach : suggested principles and criteria

- Promotes potential future **innovation**, by creating the base for future services.
- **Interoperable solutions** reduce **deployment costs** and facilitate scalability.
- GSMA Remote SIM provisioning initiative is an example of a **flexible solution**, specifically tailored to IoT service providers needs.
- Support **global models** rather than local/regional solutions.

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Remote provisioning of the embedded SIM

Why GSMA Remote SIM Provisioning?

The IoT is fundamentally different from traditional telecom services

Distinct elements of the value chain will be performed in different geographies

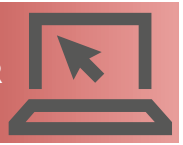
Example: Automotive

Connected cars manufactured in one location

Distributed globally with installed sensors, seamless connectivity, data and analytics

What is a SIM? The Basics:

IT'S LIKE A COMPUTER



ENSURES CONNECTIVITY & SECURITY FOR USERS

SECURITY

Stores secret keys and information for securing communications.

IDENTITY

It's the key to for the device to access the communication network.

TAMPER PROOF!

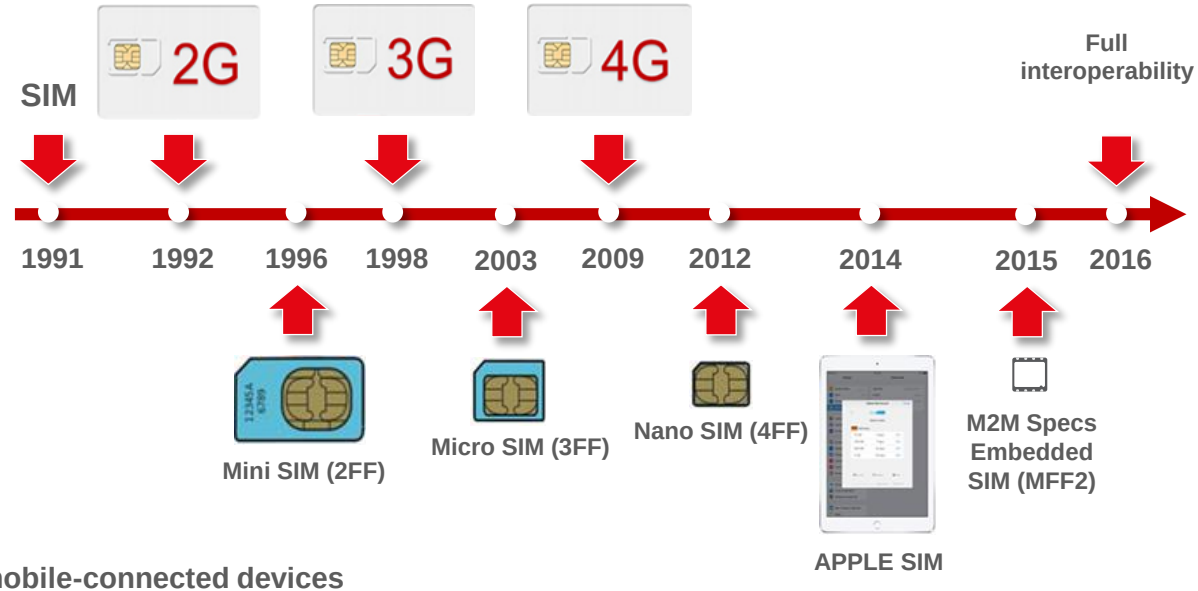
Built to be tamper proof. Information inside cannot be accessed without the right credentials.

The Evolution Of The SIM Card

DRIVING INNOVATION

90%

SIM SPACE REDUCTION



A new generation of smaller, lighter, mobile-connected devices

The Different SIMs

DRIVING INNOVATION

PHYSICAL TO DIGITAL

Traditional SIMs

Physical hardware (UICC) + hardcoded logical profile

Performs authentication and uses cryptography to authenticate

Predominantly single operator profile per SIM

User has to physically remove/swap SIMs to change service.

Takes up more room in device & adds logistics costs

Embedded SIMs

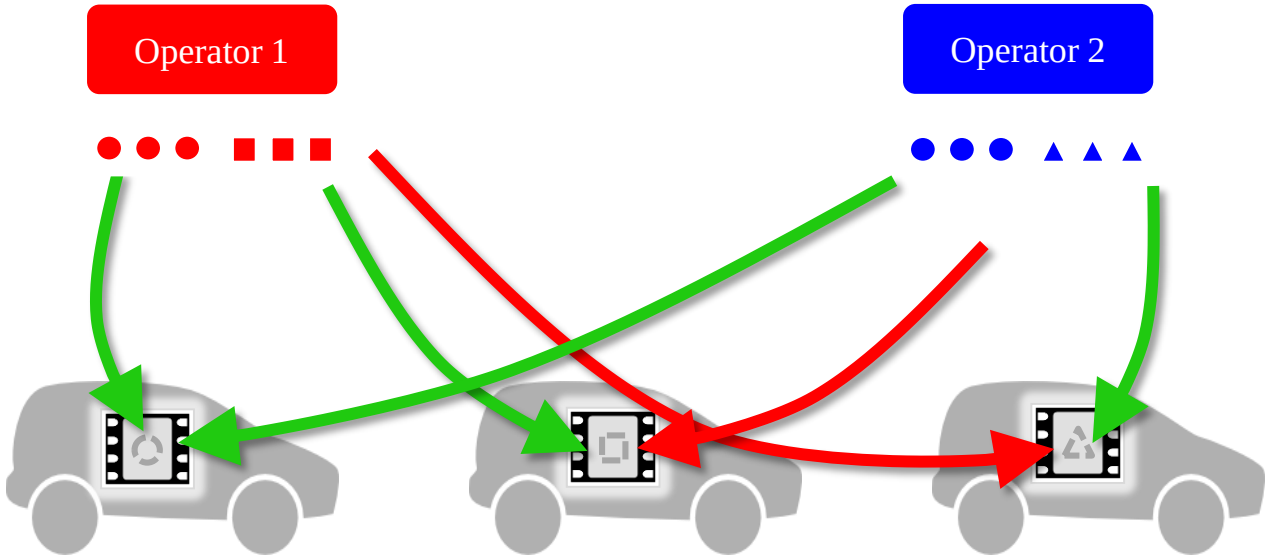
Physical hardware (eUICC) Hardware permanently integrated into device

Same security as regular removable SIM

Operator subscription provisioned remotely

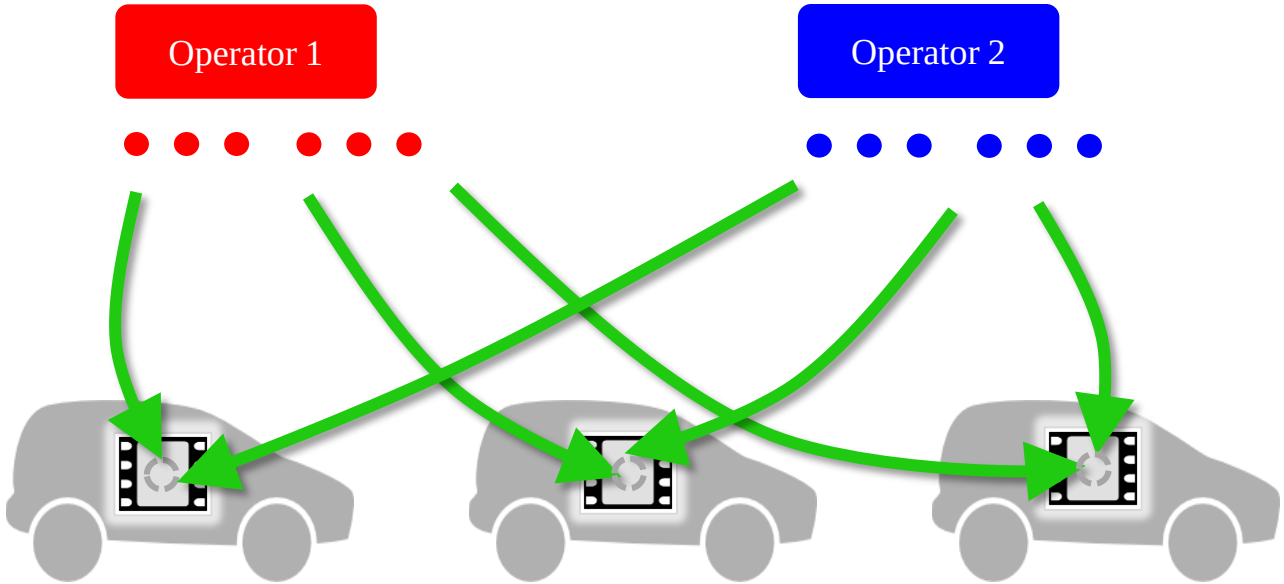
Enables flexibility for customer/ proliferation of new devices / lowers cost

The GSMA Remote SIM Provisioning - Essential attributes for Operators



The GSMA Remote SIM Provisioning - Essential attributes for Operators

Profile interoperability



Conclusions

- GSMA is supportive of the ongoing work within the eCall task forces
- '*The perfect is enemy of the good*': a simple, fast, flexible, globally robust and numbering-scheme independent solution can be implemented within the initial eCall time frame
- The Remote provisioning of the Embedded SIM is a tool that aim at accelerating IoT deployments and supports all the above points.

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Thank you

http://www.gsma.com/connectedliving/

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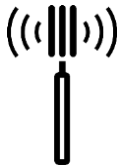
GSMA Resources



Mobile IoT

IoT Big Data

Remote SIM Provisioning

Smart Cities

Policy & Regulation

IoT Security & Connection Efficiency Guidelines

About the GSMA