Connected Living

GSMA Embedded SIM

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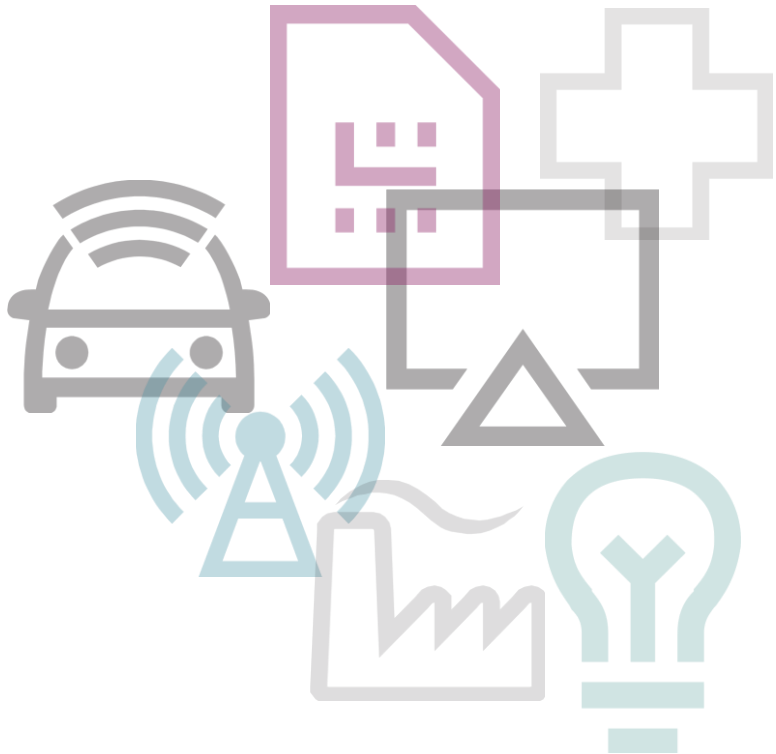
CONTENTS



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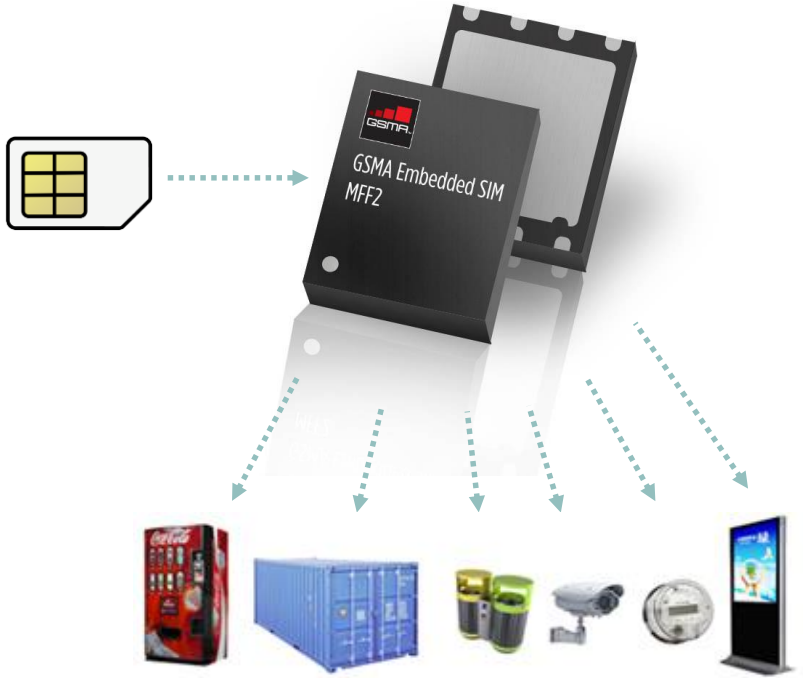
GSMA Embedded SIM at a Glance



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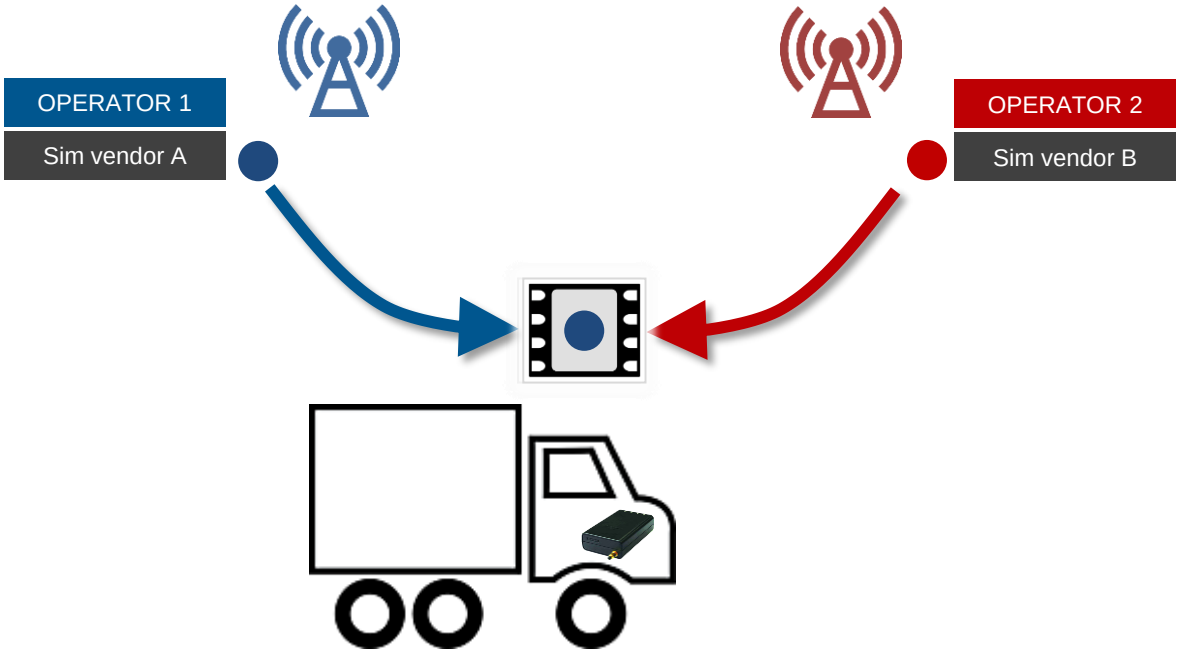
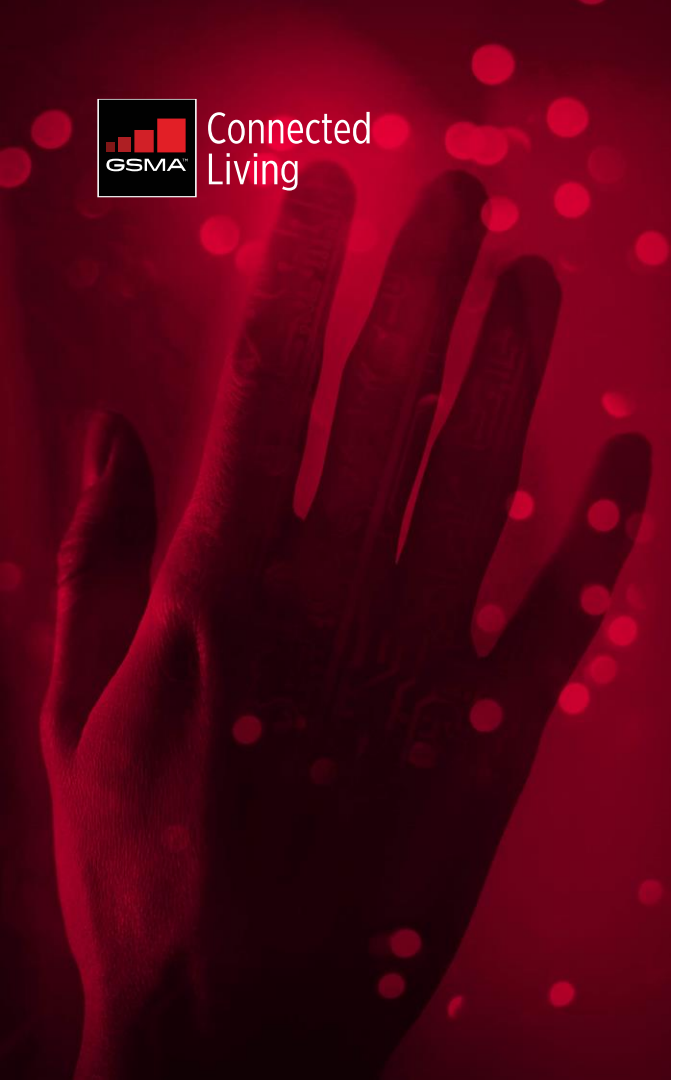
GSMA Embedded SIM at a Glance

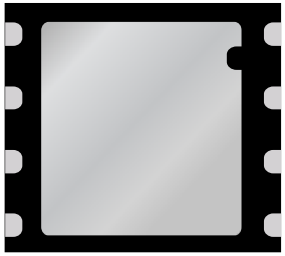
The GSMA Embedded SIM Specification



A SINGLE, COMMON AND GLOBAL SPECIFICATION TO ACCELERATE GROWTH IN M2M

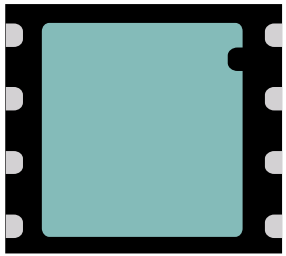


GSMA Embedded SIM at a Glance



V2.0

AVAILABLE SINCE OCT 2014
Products available now



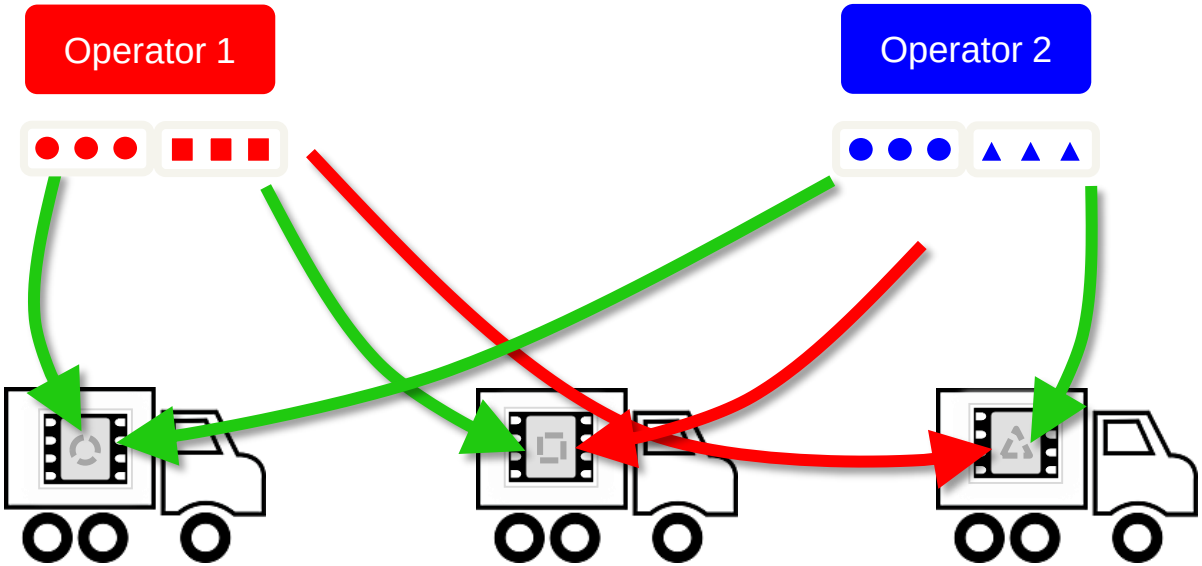
V3.0

DELIVERS PROFILE INTEROPERABILITY
AVAILABLE OCT 2015
Products available 2016

A SINGLE, COMMON AND GLOBAL SPECIFICATION TO ACCELERATE GROWTH IN M2M

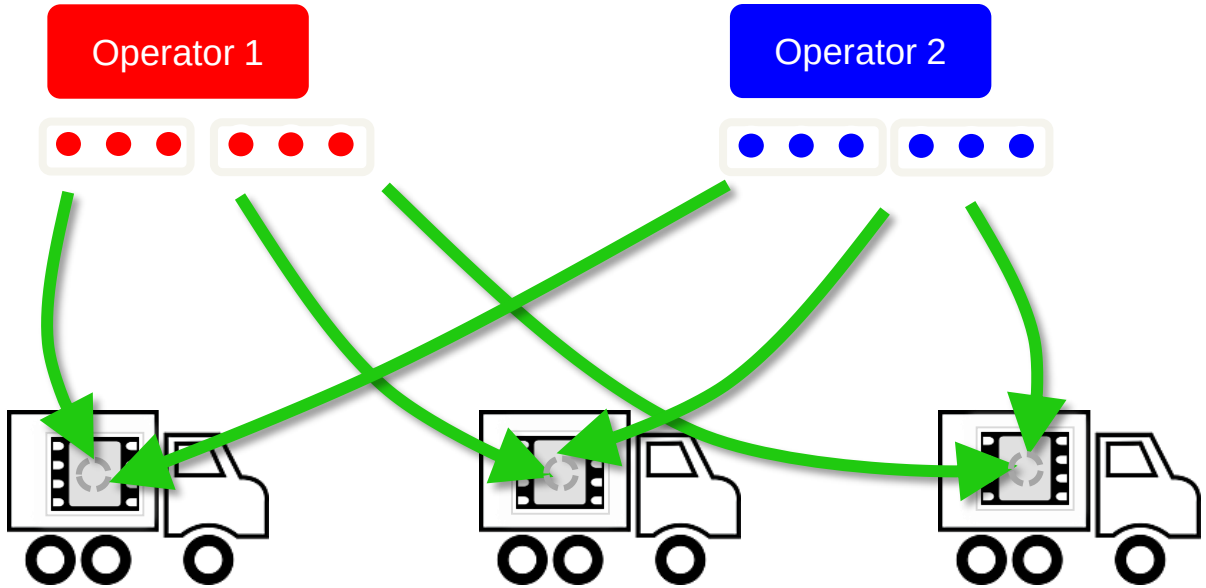
GSMA Embedded SIM – Essential attributes for Operators

V3.0: Profile interoperability



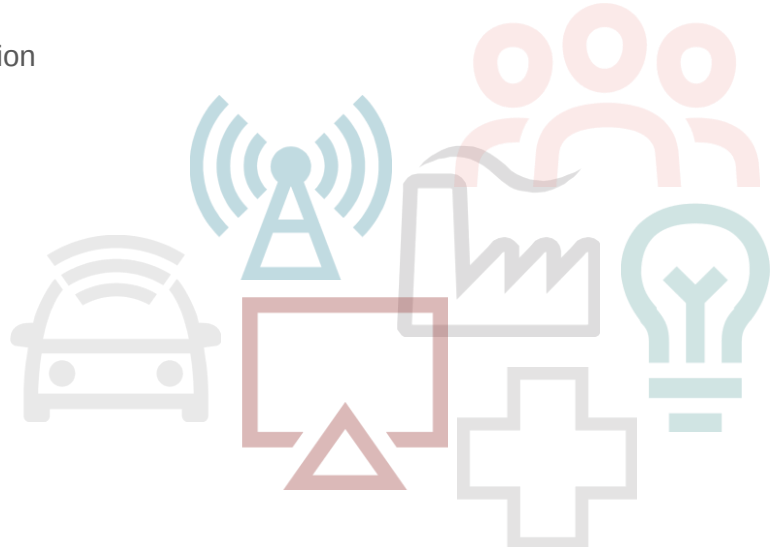
GSMA Embedded SIM – Essential attributes for Operators

V3.0: Profile interoperability



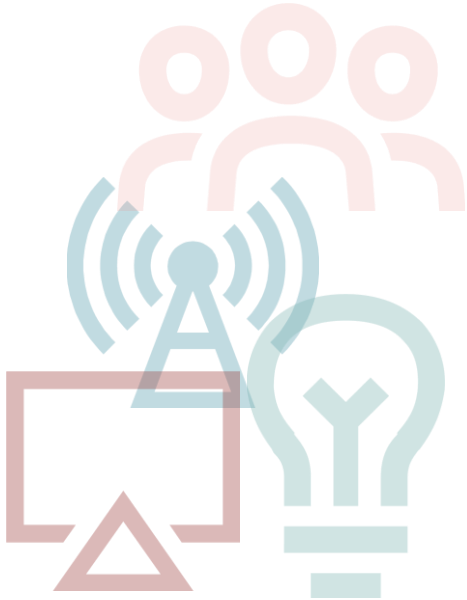
GSMA Embedded SIM – Essential attributes for Operators

- Accelerates the market growth of M2M
- Allows new business opportunities
- Proposing to mobile industry a scalable and interoperable solution
- Minimal impact on existing systems and network infrastructure
  - Reliability
  - Cost savings
  - Security



GSMA Embedded SIM – Essential attributes for Service Providers

- Ability to switch network operator at the end of contract
- Cost savings
- Space savings
- Late Product personalisation – unique product reference
- Improved customer experience
- “Scalability”: Allows for an increasing number of valuable connected services



Car makers Testimonials from MWC 2016

Why is it important to standardize the M2M embedded SIM

- Ensure interoperability across MNOs and SIM vendors
- Drive solution cost down
- Forward and backward compatibility
- Improved product reliability through standardised testing/certification

Attributes of embedded SIM

- Decoupling hardware from the services provisioning
- Managing provisioning of a SIM-profile for the local market
- Securing a long-term working product

GSMA Embedded SIM – Why launch ?

- GSMA Embedded SIM technology is fully specified and usable
- 22 Operators Committed to launching GSMA Embedded SIM Solutions in 2016 during MWC
- Many Operators have already launched GSMA Embedded SIM solutions such as AT&T, NTT Docomo, Etisalat, Telefonica and Vodafone
- You can be confident that launched solutions are compliant with the GSMA specifications via:
  - Test specification (V2.0 available since Oct 2014, V3.0 available Oct 2015)
  - Global Platform certification through test fests
- V3.0 of the GSMA specifications brings Profile Interoperability

Mobile World Congress 2016

GSMA Embedded SIM 22 Operator Launches

AUTOMOTIVE INDUSTRY ADOPTS GSMA EMBEDDED SIM SPECIFICATION TO ACCELERATE CONNECTED CAR MARKET

February 10, 2016 | Press Release

General Motors, Jaguar Land Rover, Renault Nissan, Scania and Volvo Cars Support Specification for Delivery of Range of Connected Vehicle Services; 22 Live Operator Solutions Now Commercially Available

Ability to switching – GSMA relevant global positions

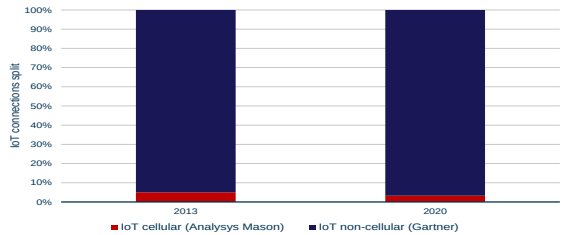
From GSMA input to BEREC consultation – enabling the IoT

Three general considerations on switching provider in an IoT context

1. Would the end- user of a glucose reader care about the underlying connectivity provider?

2. B2B2C means Business users are in control of their connectivity providers as much as any other supplier

3. Cellular IoT expected to represent only 3% of total IoT connections.



E.164 -exceptions for IoT connected services

- Some of the requirements associated with the use of E.164 ranges are inappropriate for the large majority of IoT connected services and should not apply.
- For instance, for an electricity smart meter or an asset-tracking tool, some or all of the following requirements are neither required nor relevant:

  - Reachable from any device on any other network
  - Integration in public national numbering plans with associated pricing transparency rules
  - Number portability
  - Possibility to call emergency services
  - Calling Line Identification (CLI) rules

- Regulators should link any requirement to the nature of the service offered independently of the chosen numbering range.

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Questions?