

BEREC Report “Enabling the Internet of Things”

Cara Schwarz-Schilling(BNetzA)/
Francesco Sciacchitano (AGCOM)
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Overview

- I. Introduction
- II. Summary of BEREC's considerations
- III. Selected Topics of the BEREC IoT Report
- IV. Conclusion / Q&A

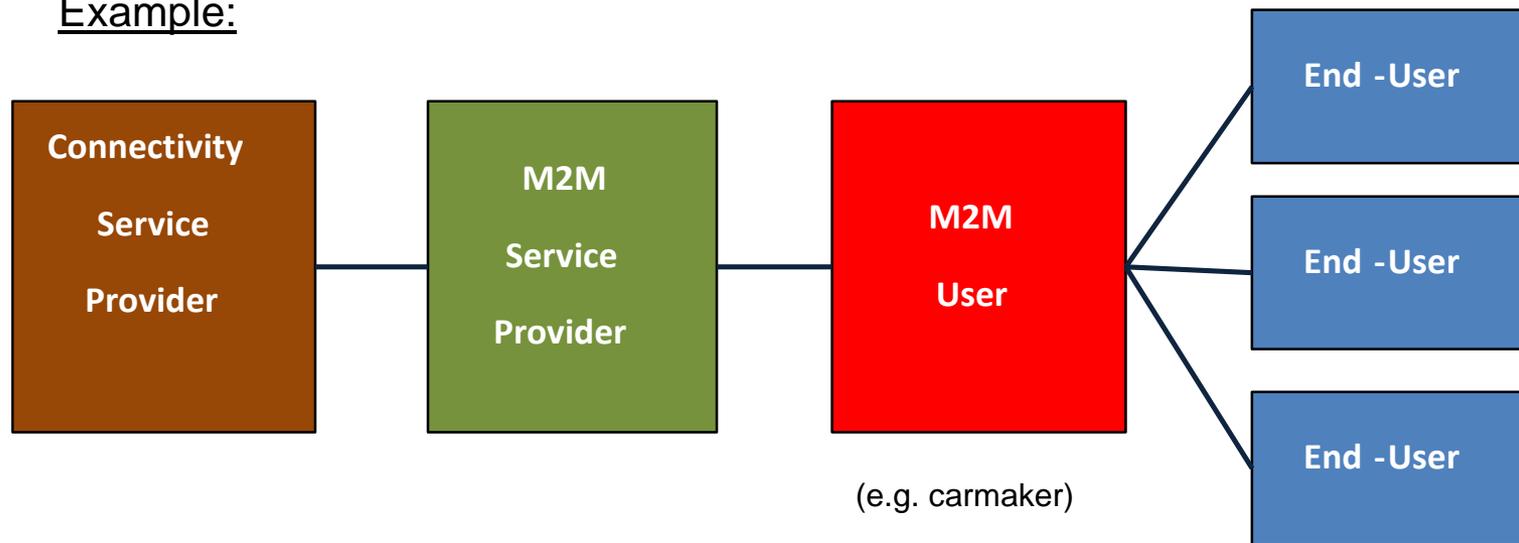
I. Introduction : Scope of the Report

- Focus on mobile connectivity:
 - NRAs have primarily been contacted by stakeholders on issues regarding mobile network based IoT solutions (e.g. numbering, roaming and switching).
 - However, only a minor fraction of M2M connections based on mobile technologies.
 - Hence, many IoT services exist or may be developed which are based on another kind of connectivity than mobile connectivity.
 - Any possible regulation with regard to mobile connectivity would only apply to a small subset of the market.

- Pro-competitive approach:
 - Sufficient resources in order to support the service – Section 2
 - Legal framework fit for IoT – Section 3
 - Consumers' acceptance of IoT services – Sections 3.4 and 4

I. Introduction: IoT value chain

Example:



- Connectivity service provider = ECS
(who provides connectivity for remuneration over a public network)
- IoT/M2M-user = typically no ECS, unless reseller
- However, careful case-by-case approach necessary, since there are so many different types of packages including connectivity and since business models are just beginning to evolve.

II. Summary of BEREC's considerations

- No special treatment of IoT services and/or M2M communication appears necessary or appropriate, except for the following areas:
 - Roaming
 - Switching
 - Number portability

- Privacy: careful evolution – but not an entire overhaul – of the existing EU data protection rules.

- No need for a European numbering scheme
 - In its Draft EEEEC, Commission does not pursue this concept (similar ETNS) any longer.
 - Instead, MS shall determine a national numbering range that may be used throughout the territory of the EU for non-interpersonal communication services.

III. Selected Topics of the BEREC IoT Report

1. Privacy / Network security
2. Standards / Switching
3. Scarce resources

 Relevance for sessions of BEREC IoT Workshop

1. Privacy / Network security

Privacy:

- Personal data may be collected by a number of connected devices.
- BEREC input to review process:
 - No need for special treatment with regard to principles
 - Principles like consent-based data collection and processing also apply in IoT context.
 - However, careful adaption to / evolution for the IoT-context
 - User-friendly information and consent procedures (example: smart home area)
- Revision of EU data protection framework:
 - Regulation (EU) 2016/678 (General Data Protection Regulation) adopted.
 - Review ePrivacy Directive (clarification that applicable to connectivity underlying IoT, cf. recital 12 of Draft ePrivacy Directive)

Network security:

- All obligations apply also to IoT industry provided that services are considered ECS or to the ECS which is underlying any IoT service.
- NIS-Directive (July 2016, adopted after BEREC Report)
- BEREC input to review process: No need for special treatment

2. Standardisation / Switching

- Standards play a significant role in the development of M2M technologies as they define openness, interoperability and ultimately competitiveness in the M2M environment.
- Standardisation bodies are already addressing the issue of standardisation in the M2M environment in a significant manner.
- Switching connectivity provider is an enabler for competition.
- BEREC input to review process:
 - With regard to standardisation, no need for special treatment.
 - Statutory obligation to introduce OTA provisioning at a certain point in time, or at least regulatory mechanisms or incentives to foster OTA provisioning.
 - A new approach might be appropriate in view of number portability.
- Review Process:
 - Draft EECC includes provision on OTA (cf. Article 87(6)).

3. Scarce resources: Spectrum

- A range of technology options are likely to be used to deploy M2M services.
- Given the variation in maturity in the evolution of the M2M market across Member States, NRAs should monitor market developments and spectrum use.
- For the benefit of harmonization, industry is invited to make use of the established processes via ETSI and CEPT if it identifies the demand for additional spectrum.
- Based on these harmonized European Standards and frequencies, NRAs are invited, where appropriate, to make spectrum available to support these applications.
- BEREC input to review process: No need for special treatment

3. Scarce resources: Numbering

- Numbering issues are primarily dealt with by CEPT and/or ITU on an international level.
- Global marketing of connected devices (which rely on numbers as identifiers)
 - Use of existing numbering resources seems to be a reasonable approach.
 - The following aspects appear to be key for IoT services to be economically viable:
 - Permissibility of extra-territorial use of national E. 164 and E.212 numbers (an internationally harmonised approach is desirable).
 - Actual possibility to develop IoT solutions based on global ITU resources (development: increased assignment of ITU resources + roaming “footprint” based on ITU resources)

Thank you for your attention!