BEREC guidelines on common criteria for the assessment of the ability to manage numbering resources by undertakings other than providers of electronic communications networks or services and of the risk of exhaustion of numbering resources if numbers are assigned to such undertakings

6 March 2020

Table of Contents

1 Introduction

This document sets out guidelines to assist Member States (MS) in case they decide to assign numbering resources to undertakings other than providers of electronic communications networks or services (non-ECN/ECS entities), in line with article 93(2) of Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code (EECC).

This newly introduced piece of legislation is intended to take account of recent trends and address the potential demand for numbering resources from non-ECN/ECS entities.

The demand for numbering resources has been dramatically increasing, mainly through the spread of Machine-to-Machine (M2M)[1] services and the development of connected devices and products equipping wearables, cars, homes, buildings, etc. The intensity of such growth is so significant that it could lead, in the medium term, to the scarcity of some numbering resources. A key feature of this high demand for numbers for the M2M service providers is that a significant proportion of connected devices and products should be able to freely circulate, and hence be able to connect locally to public electronic communications networks with suitable identifiers, such as numbering resources. The growth and innovative potential of M2M services relies on the setting of competitive market entry conditions, associated with the granting of numbering resources at consistent conditions throughout the Union.

1.1 Legal framework

The EECC aims at:

i) allowing the possibility to assign numbers to undertakings other than providers of electronic communications networks or services (Article 93(2));

ii) enabling an extraterritorial use of non-geographic numbers within the EU for the provision of non-interpersonal communications services (Article 93(4));

iii) promoting, where technically feasible, the over-the-air (OTA) provisioning of numbers for easier switching (Article 93(6));

iv) ensuring the efficient use of numbering resources (Article 93(4), 94(1), 94(5) and Annex 1(E(2))).

Article 93(2) of the EECC lays down the possibility for MS to grant rights of use for numbering resources on a non-discriminatory basis to non-ECN/ECS entities, if adequate numbering resources are available to satisfy current and foreseeable future demand. This possibility of assignment is also to support the development of cross-border services in the case of non-interpersonal communications services (Recital 246 and Article 93(4)).

The provisions of Article 93(2) also imply that some National Regulatory Authorities or other Competent Authorities (NRAs/CAs) may decide *not* to assign any numbering resources to non-ECN/ECS entities, whereas others may decide to assign numbering resources to non-ECN/ECS entities but limit the assignment to specific types of numbering resources.

---

[1] M2M might include also the Internet of Things (IoT).

Consequently, BEREC considers that each MS should decide which types of numbering resources, if any, may be assigned to the non-ECN/ECS entities on the basis of their needs.

Where a MS opts for the assignment of numbering resources to non-ECN/ECS entities, these latter shall demonstrate their ability to manage the numbering resources and to comply with any relevant requirements set out pursuant to Article 94. These conditions are, in fact, pre-conditions that non-ECN/ECS entities have to meet in order to be eligible to receive the right to use numbering resources.

This will allow non-ECN/ECS entities (e.g. providers of connected homes services, e-Health services, truck fleets or connected cars services, i.e. with potentially a huge customer base) to be assigned numbering resources directly by the NRAs/CAs independently of any ECN/ECS providers and thus support the general objective of contributing to the development of the internal market as set out in Article 3(2.c). MS should decide what type of numbering resources may be assigned. NRAs/CAs have to evaluate if it is necessary to grant individual rights of use for numbering resources, in accordance with Article 94(1), and may also suspend further granting of rights of use for numbering resources to such undertakings, if it is demonstrated that there is a risk of exhaustion of numbering resources, in accordance with Article 93(2).

As mentioned, NRAs/CAs shall ensure that national numbering plans and procedures are applied in a manner that ensures equal treatment to all providers of publicly available electronic communications services and non-ECN/ECS entities, when this latter is applicable. In particular, NRAs/CAs shall ensure that an undertaking to which the right of use for numbering resources has been granted does not discriminate against other providers of ECS as regards the numbering resources used to give access to their services, in accordance with Article 93(3).

In order to achieve a consistent implementation and application of these new provisions across the European Union, BEREC has adopted, according to the legal mandate set for in article 93(2) by 21 June 2020, after consulting stakeholders[2] and in close cooperation with the Commission, the present guidelines on common criteria for the assessment of the ability to manage numbering resources by non-ECN/ECS entities and on the risk of exhaustion of numbering resources if numbering resources are assigned to such undertakings.

1.2 Objective and scope

The BEREC Work Programme 2019 included the delivery of BEREC guidelines on common criteria for the assessment of the ability of undertakings other than providers of ECN or ECS to manage numbering resources and of the risk of exhaustion of numbering resources when a MS opts to allow the assignment of numbers to non-ECN/ECS entities.

These guidelines only concern the assignment to non-ECN/ECS entities. This implies that these entities do not provide any publicly available ECN/ECS but use the assigned numbering resources for the provision of specific services, in accordance with the EECC.

---

[2] The draft Guidelines were submitted to public consultation (BoR (19) 114) from 14 June 2019 to 28 August 2019. The relevant results are reported in the document BoR (20) 49.

Therefore, these guidelines will not apply to the assignment of numbering resources to ECN/ECS providers. These guidelines are only applicable to those MS that opt to assign numbering resources to non-ECN/ECS entities.

2 Terminology

The terms and abbreviations used in these guidelines are understood as follows:

ECN/ECS provider: undertaking providing public electronic communications network or publicly available electronic communications services under the general authorisation regime.

Non-ECN/ECS entity: undertaking other than provider of public electronic communications networks or publicly available electronic communication services.

M2M service: M2M is a service involving an automated transfer of data and information between devices or software-based applications with limited or no human interaction.

M2M user: user that purchases an M2M service for the products that it sells (e.g. connected devices, car) or that are used by its clients (e.g. car manufacturer, electricity provider using smart meters).

End-user: a user not providing public electronic communications networks or publicly available electronic communications services.

Direct assignment: the assignment of numbering resources by the numbering plan administrator to an end-user who receives the right of use of the resources under specified conditions in an administrative decision.

Primary assignment: the assignment of numbering resources by the numbering plan administrator to an eligible applicant (i.e. primary assignee) who receives the right of use of the resources under specified conditions in an administrative decision.

Secondary assignment: the assignment of numbering resources by an assignee to an end-user who receives the right of use of the resources under specified conditions in a contract.

Sub-assignment: the assignment of numbering resources by an assignee to another entity that is not an end-user.

Number hosting: the implementation of an assignee`s numbering resources on the network of an electronic communications networks provider to enable connectivity for the assignee`s end users.

3 Criteria for the assessment of the ability to manage numbering resources for non-ECN/ECS entities

According to Article 93(2) of the EECC, the assignment of numbering resources to non-ECN/ECS entities falls under the discretion of each MS and could be specifically prescribed by its own national electronic communications framework.

To that extent, each NRA/CA might consider if it is necessary:

1. to identify new ranges of numbering resources or reallocate a present range for the assignment to ECN/ECS providers and non-ECN/ECS entities, also taking into account that such resources may have extraterritorial rights of use;

2. to review the length of the numbers and the size of the number blocks to be assigned;

3. to limit the assignment to non-ECN/ECS entities to specific types of numbering resources.

Moreover, these NRAs/CAs should consider how the non-ECN/ECS entities, as assignees, can cooperate in the prevention and in the investigation in case of fraudulent use and/or misuse of numbering resources.

For the sake of these guidelines, BEREC considers the term "*ability to manage*" (Article 93(2)) to mean the skills and tools needed to perform a specific task, such as the management of numbering resources. This numbering management includes all necessary steps to activate and use the numbering resources, such as requesting an ECN/ECS provider to host the numbering resources, asking an ECN/ECS provider to enable interconnection with other numbering resources' assignees so that, where economically feasible, "*end-users are able to (…) access all numbers provided in the Union*" (Article 97(1) of the EECC) and providing a service corresponding to the intended purpose of use of that number. In addition, "management" should comprise the effective actual use of the assigned numbering resources, thus minimising the amount of unused numbering resources.

In addition, the undertaking must also ensure compliance with any relevant requirements set out pursuant to Article 94 of the EECC.

The minimum criteria which should be met regardless of the respective numbering resources when a MS opts for the assignment of numbering resources to non-ECN/ECS entities are set out below. Additional criteria for the assessment of the ability to manage specific numbering resources by non-ECN/ECS entities might be imposed by MS

The criteria set out in section A refer to the information to be provided by the applicant in order to submit an eligible application. Further criteria to be assessed during the evaluation of the application for the assignment of the numbering resources are set out in section B. Moreover, section C sets out a criterion to be evaluated after the assignment.

A. Basic information that a non-ECN/ECS entity should provide:

1. Identification and contact information[3]

   The applicant should provide the company/organisation registration number or other proof of their identity, address (e.g. own residential or business address in the country or address

---

[3] In case of assignment of numbering resources, the assignee is responsible to keep the NRA/CA informed with updated information in the event of any change.

of an authorised recipient in the country/EU/EEA), and the name and contact information of:

- the person legally responsible for the company/organisation;

- the legal representative of the company/organisation; and

- the contact person responsible for numbering aspects.

Applicants with an address in another country could be required to specify an authorised recipient with an address in the country of the application.

In any case, the contact information must allow the NRA/CA to contact the applicant and to deliver legally effective orders and to address/signal possible fraudulent use and/or misuse of numbering resources.

2. Description of service

The applicant should provide a description of the service with a sufficient level of detail to allow the NRA/CA to evaluate the service intended to be provided and the necessity of assigning the requested numbering resources. Consequently, the applicant in accordance with Annex 1, Part E, Point 1, of the EECC has to describe for what and how the requested types of numbering resources will be used, and this should also include a description of the business model. The NRA/CA must be able to verify whether the conditions for assignment, in particular those concerning the intended purpose of use, are met.

3. Technical implementation details

The applicant should provide the relevant technical details and documentation that demonstrate the capacity to comply with numbering usage conditions by itself or through an ECN/ECS provider. The NRA/CA must be capable of assessing the technical implementation of the service and whether it enables or would enable the applicant to comply with numbering usage conditions.

In most cases, the technical implementation of numbering resources by a non-ECN/ECS entity may require an agreement for technical support with an ECN/ECS provider(s). In particular, the applicant must provide information on the following parameters:

(a) information on envisaged or established agreement (with an ECN/ECS provider(s)) with respect to number hosting, access, and interconnection;

(b) the name of the ECN/ECS provider(s) with whom such agreements have been entered into, if applicable; and

(c) the expected timeframes associated with the implementation of the numbering resources by the applicant.

If the set of information outlined above, or parts thereof, is not available to the applicant at the time of application, the NRA/CA may request that the missing information is provided during the evaluation period. Alternatively, the NRA/CA may require the applicant to supply such information within predetermined timeframes following the assignment of the numbering resource.

4. Information on the requested numbering resources.

   The applicant should specify the type and, where applicable, number range, period for assignment and geographical area of use of the requested numbering resources.

   Numbering resources may only be used in accordance with their intended and defined purpose. The provision of the planned period for assignment serves the effective and efficient use of resources. This information must enable the NRA/CA to check the availability and risk of exhaustion of the desired numbering resources.

5. Usage projection

   The applicant should provide information about the usage projection to enable the NRA/CA to better monitor the future usage of numbering resources and plan ahead in its assignments of numbering resources. It also provides a starting point for the ex post evaluation of whether the actual usage matched with the envisioned usage from the application.

6. Declarations

   The applicant should declare that the information provided is accurate and that the numbers will be used in accordance with regulations, including what is foreseen in Annex I, Part E, of the EECC. The applicant has to ensure that the assigned numbering resource will be used legitimately. By providing a declaration, the responsibilities of the assignee will be emphasized.

Based on the information provided by the applicant, the NRA/CA should be able to analyse on a case by case basis the request concerning whether the non-ECN/ECS entity applicant complies with the rules including the guarantee of efficient use. During the evaluation of the application and where necessary the NRA/CA should advise and request applicants to provide it with missing or needed information.

B. Criteria to be evaluated by the NRA/CA during the evaluation period:

The NRA/CA should verify that the following criteria are met.

1. The application demonstrates an appropriate use of the numbering resources as set out in the national numbering legislation.

   The applicant shall demonstrate the need that justifies the assignment of the requested numbering resources. Furthermore, available information should demonstrate that the applicant is able to comply with legal provisions and/or ordered measures and it would therefore likely be able to ensure the appropriate use of numbering resources.

2. The applicant complies with the legal provisions for any previous numbering resources assignments.

3. The thresholds of minimal usage over time for the assignment of numbering resources is respected for previous numbering resources assignments of the same type.

4. There is no risk of exhaustion of numbering resources.

The NRA/CA needs to check its national threshold indicating the risk of exhaustion of numbering resources. This also enables MS to keep a reserve of numbering resources to be assigned only for services that are for public benefit.

C. Criteria used by the NRA/CA after the assignments:

In order to prevent assigned numbering resources from being unused and to ensure effective and efficient use, the NRA/CA should check whether the assigned numbering resources are activated and used by the assignee within a specified period of time.

If it turns out after the assignment that this criterion is not met or if the numbering resources are misused and/or fraudulently used, the NRA/CA may take further action (e.g. withdraw the numbering resources) under their relevant national legislation.

4 Criteria for the assessment of the risk of exhaustion of numbering resources for non-ECN/ECS entities

Taking into account BEREC Report on IoT[4] and CEPT Recommendations[5], the NRAs/CAs when assessing the risk of exhaustion of numbering resources may consider reviewing:

- the length and/or the size of the number blocks to be assigned, in particular for the assignment to non-ECN/ECS entities, and

- regulation governing the assignment and/or sub-assignment of numbering resources and number hosting for E.164 and E.212 numbering resources.

The criterion on the assessment of the risk of exhaustion of numbering resources is based on the comparison of the estimated usage of the numbering resources with thresholds of utilisation and/or expected time remaining until this threshold will be reached. The criterion may include the assessment of the degree of assignment (share of total numbering resources that have been assigned), the extent of actual use of assigned numbering resources, or a combination of both.

In order to estimate the usage of the numbering resources, a procedure to be applied after the assignment could be:

1. monitoring on the actual use of assigned numbering resources,

2. analysing the past development of assignments; and

3. generating a forecast on the development of future requests.

This activity is carried out in advance of a possible exhaustion in order to take proper actions for continuing the assignment of numbering resources, when possible.

---

[4] BEREC Report on Enabling the Internet of Things - BoR (16) 39
[5] CEPT/ECC Recommendation (11)03 on Numbering and Addressing for Machine-to-Machine (M2M) communications and CEPT/ECC Recommendation (17)02 on Harmonised European Management and Assignment Principles for Geographic E.212 Mobile Network Codes (MNCs).

5 Review clause

In line with obligations set out in the BEREC regulation, BEREC will monitor the application of the present guidelines and of the electronic communications sector in general. Based on the experience gained, including on the evolution in the assignments of numbering resources to non-ECN/ECS entities, BEREC will review the present guidelines by no later than 2023.