

ETNO Reflection document - Comments on the Draft ECC Report 153 on Numbering and Addressing in Machine-to- Machine (M2M) communications



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Executive Summary

- ETNO welcomes the opportunity to comment on the Draft ECC Report 153.
- ETNO agrees that national numbering policies for M2M communication are required to support the potential demand for M2M applications and endorses the conclusion of the report that no harmonised approach is needed in Europe, regarding the solutions to address the impact and needs on numbering and addressing of M2M services

General comments

The Association of European Telecommunications Network Operators (ETNO)¹ wishes to thank the Electronic Communications Committee (ECC) and its working group Working Group Numbering and Networks (WG NaN) for providing the opportunity to comment on the Draft report 153 related to Numbering and Addressing in Machine-to-Machine (M2M) Communications.

ETNO fully agrees that national numbering policies for M2M communication are required to support the potential demand for M2M applications and endorse the conclusion of the report that no

¹ The European Telecommunications Network Operators' Association (ETNO) is representing 41 major companies, which provide electronic communications networks over fixed, mobile or personal communications systems in 35 countries. More information about ETNO can be found at: www.etno.eu

harmonised approach on possible numbering solutions is needed in Europe, as the level of impact of M2M services on numbering and the appropriate solutions depends on the design and usage of the national numbering plans.

Such a harmonised approach would be even more difficult, considering the fact that the term M2M services refers to a large number of different applications that sometimes have little in common, as the report underlines. There is no single definition for M2M and it is today difficult to clearly identify which services can be considered as part of the M2M segment. Moreover, as some existing (and future) services can potentially use voice functions, M2M should not be considered only as a data connectivity service.

ETNO agrees that the expected growth of M2M services and the consequent need for large volume of addresses could impact the availability of resources. Especially if the solution for M2M is based on E.164 numbering plans, then the availability of resources needs to be considered and anticipated.

ETNO also agrees on the fact that IPv6 addressing could be a valid alternative for the future. As the exhaustion of IPv4 resources at global level will happen no later than 2011, the availability of IPv6 solutions for M2M could evolve considerably, compared to the current status of IPv6 deployment.

In the context of IP networks, it is obvious that only IPv6 can be a solution for M2M services, but we would suggest explaining this more extensively in the report.

ETNO would also observe that the deployment of all-IP IPv6 mobile networks is still at a very early stage and done in a very small scale: when it comes to commercial deployments, a number of constraints remain unknown, including the need for MSISDNs for machines.

Nevertheless, ETNO agrees that, on the middle term, solutions based on numbering have to be considered. Moreover, M2M technology offers specific solutions to various industries or vertical markets. These solutions are designed to meet disparate requirements and have to be considered individually for the analysis of possible specific numbering solutions.

Given the impact on the market and on the networks, ETNO highlights the importance that any decision regarding the modification of the national numbering plans to accommodate the needs for M2M should be anticipated and be taken in close cooperation with market players.

ETNO also notes that not only network operators will be impacted by these solutions. As the M2M market is particularly fragmented, many players operating on various links of the value chain have to be considered: M2M module vendors, integrators, service providers, end clients...

Cost is still a key issue for the M2M market which traditionally uses established technologies. Any solution should be evaluated on its economic impact.

The fact that M2M applications are still an emerging market should be taken into account. Any decision on numbering should not slow down or impede the development of the M2M market.

Detailed comments

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The terminology used for option C is somewhat misleading because options A and B are to the same extent as option C "an international numbering solution" since all three are part of the E.164 international numbering plan. It would be preferable to refer to option C to "a numbering solution under a non geographic (i.e. global) country code".

Chapter 4 – Assessment of numbering capacity required for M2M communications.

ETNO recognizes that estimations over a 10 years period on numbering capacity are very challenging. But a numbering plan has to be designed for an even longer period of time, typically several decades, and should be based on prospective analysis.

Trying to adapt a numbering plan for a period of 10 years is not sufficient.

ETNO also observes that telecoms architectures based on IP addressing and numbering are not comparable. So, for some services it might be very difficult to use IP addressing as an alternative to public telephone numbers, even if in principle both IP addressing and classic numbering are candidates to be considered for the support of M2M services.

Finally, ETNO would like to point out that the deployment of all-IP IPv6 mobile networks is still at a very early stage and done in a very small scale. A number of constraints remain unknown when it comes to commercial deployments, including the need for MSISDNs for machines.

4.2.1 Starting points.

Some assumptions are made on the use of mobile numbers and on the annual growth of M2M applications. It would be useful to have the source of these data.

ETNO recognizes that the mobile access from M2M devices is the most viable access method. As a consequence, the national numbering context may call for dedicated numbering ranges used in a mobile environment for M2M services.

But, as the numbers are not supposed to be seen and known by users, and as user friendliness is not an issue, such dedicated numbering ranges should not necessarily come from traditional numbering ranges dedicated to mobile services. Any range in the national numbering space can be selected where sufficient capacity is available, provided that the technical implementation is possible (e.g. number length limitations).

ETNO also recognize that for the long term, non mobile networks should also be considered as potential candidate to support M2M services.

4.3 Conclusions on Required M2M Numbering Capacity.

ETNO agrees that there is a significant risk that real market demand for numbers for mass applications could become far higher than the given estimates.

As a consequence, national Authorities in charge of managing the numbering plan should take this possibility into account in their reflections.

ETNO appreciates that care should be taken to fit into the constraints related to the E.164 recommendation, i.e. that the number length shall not exceed 15 digits.

5.2 Numbering resources for M2M applications.

The use within a network of network internal numbers (Option D) should not be excluded per se. This is a valid alternative option, which can respond to specific needs.

However, ETNO does not believe that such an option alone can solve a capacity issue at a national level, given the restricted use of such resources (it cannot be deployed in an environment larger than a single network).

Such usage can only be by the initiative of each operator depending on the ability of its network to support such solutions and the M2M application requirement.

This seems to be useful when use cases refer to a communication within a closed user group. In this case the usage of Public Numbering would not be necessary

Option C - According to the ITU requirements this option C can only be implemented for trans-national services, and as such cannot be considered as the solution to solve the numbering capacity issue for M2M services deployed within a national environment.

Regarding number portability, ETNO wants to mention that number portability and some other legal requirements, in principle, might not have any value in the specific case of M2M applications where the

number is only used as an address and not as a name. There is no need for the customer to publish the numbers used for an M2M application.

In addition, number portability may not be compatible with some interesting options like Option D (network internal numbers). Excluding the number portability requirement will be particularly easy in case of Option B, C or D.

5.4 Strategy for M2M Numbering and Addressing

ETNO agrees that a numbering policy for M2M communications is required when the existing number ranges do not have sufficient unallocated capacity to support the potential demand for M2M applications.

In addition, ETNO believes that there is a variety of services that requires different solutions.

Even if on the long term we can expect that IPv6 addressing can be a valid alternative for some applications, other numbering options will also be required and used for others.

We can also mention that it will be difficult, or even impossible, to impose on M2M applications already deployed and using specific numbering resources a migration, on the short term, to totally different addressing solutions designed for M2M services. However, an early selection of such alternative M2M addressing solutions may allow the market to migrate smoothly and adopt these resources in the medium and long term service developments.