

ETNO Expert Contribution on “Draft ECC Report 87 - The future of numbering”

Executive Summary

The European Telecommunications Network Operators' Association (ETNO) has carefully reviewed the Draft ECC Report 87 “The future of numbering”.

In general it is not clear which question is supposed to be answered by this Report and what its purpose is.

The scope of the Report is restricted to the “future of E.164 numbering”. It is very “traditional voice” oriented, and does not take much into account new services.

In addition this Report holds a set of Recommendations and a future numbering plan structure. For most of the countries concerned these do not take into account the technical problems industry could face when implementing the scenarios depicted in the Report to route the calls, charge the calls and negotiate interconnection agreements. In addition problems related to accounting, security, privacy and legal interception are neglected in the Report. It has to be underlined that if the scenarios described in the Report become true, the solution of the above problems would be very costly for the entire telecommunications industry (operators, service providers, content providers) and as a final result customers will have to pay for it.

Introduction

ETNO welcomes the opportunity to comment on draft ECC Report 87 “The future of numbering”. ETNO represents the voice of 41 of Europe’s largest, well established telecommunications operators in 34 countries.

As public network operators, ETNO members have a great interest in numbering issues. Therefore, ETNO has carefully reviewed the Draft ECC Report 87 “The future of numbering”.

In general, clarification is needed on the purpose of this Report and what kind of questions it attempts to answer.

The scope of the report is restricted to the future of E.164 numbering. It is very “traditional voice” oriented, and does not take much into account new services.

Concerning the recommendations of the Report, first it should be recalled that European countries have different structures for their Numbering Plans and some countries have to some extent implemented some of the

recommendations of the Report. This means that the concerns that are expressed in the comments regarding the consequences of the recommendations primarily are valid for the majority of countries where a geographical numbering plan is preserved and which allocate specific number ranges e.g. to nomadic services (VoIP). For countries such as Denmark with no geographic numbering plan and with full geographic portability, no clear number-based distinction between different services (fixed/mobile) and no specific numbers for potentially nomadic services, some of the recommendations of the Report may not necessarily pose a problem.

However, for most of the ECC countries this Report holds a set of Recommendations, scenarios and a future numbering plan structure that does not take into account the technical problems that operators could face, to route the calls, charge the calls and negotiate interconnection agreements. Furthermore, problems related to the accounting, security, privacy, numbering misuse, fraud and legal interception are neglected in the Report. It has to be underlined that if the scenarios depicted in the Report were to occur, the solutions would be very costly for the whole telecommunications industry (operators, service providers, content providers). In the end of the day the customers will have to bear these costs.

The general structure of the present National Numbering Plans in Europe fits not only the traditional circuit-switched network scenarios, but the new scenarios with new service offerings: the old paradigm that the number identifies the service should mainly remain true in the future. In converging networks users will benefit from being able to identify from the number the service that they are going to get and its tariff. New service offerings, such as nomadism, may be given new numbers, enabling operators to route and tariff the calls accordingly, and the users to know that the called party is nomadic.

The implementation of nomadicity will have implications for accounting, security, privacy, legal interception procedures, location information and should be considered further.

In certain European countries geographical number ranges are already used to provide nomadicity. In other countries a modification of the definition of geographic numbers is needed to provide nomadicity, as is indicated in ETNO's comments to Recommendation 2. If geographic numbers are used for nomadic services, special care should be taken, e.g. for emergency /112-location services, for legal interception and tariff transparency for the end user.

In the following part specific comments on the Report and the Recommendations can be found.

Specific Comments

Chapter 3:

The tone in chapter 3.4.4 underestimates the consumer need for Number Portability; the meaning of the second bullet under 3.4.4 is unclear. Number

portability has proven to be an important attainment to the consumer. Sub-allocation of numbers (ch 3.5) is forbidden in some European countries such as The Netherlands, where a numbering plan change is being prepared that, amongst others, states restrictions on sub-allocation.

Table in chapter 3.6: is unclear and does not appear to be relevant.

Chapter 4:

Ch 4.2, Changes to cost structures: This is not a numbering issue and should not to be dealt with in this Report.

Recommendations

Recommendation 1: When the terminating rates for different services are within, say, 20% of each other, NRAs should consider changing the definitions of the scope of services in the numbering plan, in such a way that number portability between all the services concerned can be required.

COMMENT 1: It should be up to the market to decide if number portability between different services is required and to what extent terminating rates shall be adapted. Furthermore, in some cases different services with different tariffs can be provided via the same number. For instance, SMS and Mobile voice services are provided via the same number to the customer, but these services may have different tariffs.

This Recommendation would raise serious issues since customers in some countries that currently have geographic information, use such information to know the specific service they are dialling: geographic information is much appreciated by the users (e.g. if they require a plumber they need to know from the number where he is located, in order to phone only those plumbers in the directory living in their neighbourhood). Obviously this does not apply in other countries which already have *location portability nationally*.

In some countries the extent to which a customer can keep a number when moving to a different location is governed by the commercial environment of portability, often a combination of regulatory and technical considerations. Callers need to be informed about the tariffs, especially in cases where the calling party incurs costs that differ from those expected. Furthermore, operators have to be able to differentiate depending on the dialled number for routing, charging, security, privacy and legal interception services.

In addition operators may need to differentiate between fixed and mobile calls for routing, charging, security, privacy, legal interception services and special offers depending upon the user terminal.

Recommendation 2: NRAs should introduce new number ranges for new services only when really needed and only if it is quite inappropriate to accommodate the new services in existing ranges.

Subscribers should be allowed to retain their existing numbers for enhancements to existing services and new services that retain compatibility with existing services. The scopes of services allowed for the number ranges concerned should be correspondingly widened.

COMMENT 2: In some countries new number ranges might be needed for avoiding exhaustion of geographic numbers. Such requirements for new number ranges would take into consideration

- *the possible increase of new providers for nomadic users requiring geographic numbers*
- *for technical problems related to routing, charging, interconnection, security, privacy legal interception and*
- *the provision of data for emergency services.*

Geographical numbers can be used for nomadism, but in some countries a redefinition is needed for geographic numbers (e.g. place of residence of the customer, or company address, instead of the location of the physical access point). In addition, careful consideration should be given to technical restrictions and requirements for tariff transparency and legal interception procedures. Some countries have already begun allowing use of nomadism on geographic numbers whilst maintaining an element of geographic information. In other countries with location portability nationally, there is already the possibility for customers to retain existing numbers when moving to a different place of residence.

Recommendation 3: NRAs should study further the implications of removing the geographic significance of numbers within their own country, especially for interconnection and should consider taking this step when the operators start to adopt IP-technology widely.

COMMENT 3: The geographic significance of numbers within a country may be relevant for consumers. The information that consumers derive from geographic numbers includes location and call charging. Any changes to the use of geographic numbering will have to be seen in the context of consumers' current knowledge and the potential impact, if performed too fast, that such changes might provoke. Removing the geographic significance of numbers will necessitate the closing of the number plan.

Furthermore geographic information offers more tariff transparency to customers; in case there are different regional and national tariffs. The extent to which geographic information is associated with the number resource, will impact the extent to which number portability can be implemented. Countries that retain geographic information for number resources provide limited geographic portability, whilst those countries that have no geographic information permit number portability nationally.

In some countries the increasing penetration of mobile users is reducing the importance of the geographic significance of numbers, provided that the issue of routing emergency numbers can be technically handled and tariff transparency can be assured.

Recommendation 4: NRAs should recognise that nomadicity is a user benefit and should not apply usage conditions that restrict the user benefit of nomadicity. Such restrictions would not be enforceable in practice anyway. In the longer term, NRAs and ECC NNA should consider proposing revisions to E.164 if the use of cross border nomadicity grows substantially.

COMMENT 4: In a country nomadic services may be supported by both geographical numbers and by specific number ranges, paying due consideration to technical restrictions and requirements for tariff transparency and legal interception procedures and the provision of location data for emergency services. Cross border nomadicity should be investigated further. Roaming may be technically feasible and supported in an IMS environment, but this issue should not be oversimplified.

Though geographic numbers might be permitted for use with services that provide nomadicity, it should not be a priori assumed that they will be used in that manner.

Recommendation 5: NRAs should explore the possibility of improving tariff transparency and increasing the scope for convergence and number portability by equalizing termination rates between similar services for example by moving on a glide path towards low or zero termination rates. Further discussion of this is a wider issue than numbering but there is a strong linkage with numbering.

COMMENT 5: Pricing of calls, interconnection payment and commercial arrangements should be decided by competitive forces and only when these fail, appropriate remedies might be implemented. Numbering is not a vehicle for such remedies.

Recommendation 6: The review of the EU Framework should consider enabling NRAs to link maximum retail price limits for calls to each number range as a consumer protection measure (if this is not possible under the current regime) These limits would be well above the level set by competition and protect users in "micro-monopoly situations" where they are unable to benefit from competition.

COMMENT 6: Imposing price caps for premium rate services could protect consumers from unexpectedly high bills. This measure is already implemented in a number of European countries. However, price caps regulation makes sense only for a few number ranges, in some countries with individual number allocation, and has to be handled with care to prevent any market distortions.

Recommendation 7: NRAs should be cautious about introducing new number ranges with high retail tariffs as they will increasingly become anomalous as the tariffs for other calls reduce.

COMMENT 7: In some countries a number of measures are already in place for consumer protection, e.g. customers get tariff information at the beginning of a PRS call. Premium rate services should use specific number ranges to facilitate easy tariff transparency and consumer protection

measures through number management. However, apart from possible regulated price caps, the setting of specific tariffs should be subject to market mechanisms only.

Recommendation 8: NRAs should consider updating and broadening number portability requirements between operators of dissimilar services in accordance with the broadening of the scope of number ranges in the numbering plan.

COMMENT 8: Portability should only exist between services that are substitutable among each other.

Recommendation 9: There is no need to change the country based structure for most number allocations.

COMMENT 9: ETNO does not believe that there is a need to change the country based structure for any number allocation.

Recommendation 10: Regulators should consider allowing one level of sub-allocation but require any operator who makes the sub-allocation to inform the NRA of the sub-allocation. NRAs should ensure that the party that receives the sub-allocation meets the requirements associated with the original allocation. The means to achieve, including the exact responsibilities of the parties concerned in order to prevent misuse, will need further study.

COMMENT 10: Rules regarding sub-allocations, if not considered carefully, could cause many problems related to security issues and legal interception, as well as routing, charging and interconnect. In addition, sub-allocation of numbers is, or is going to be, restricted in some countries. For example such as in The Netherlands with the next number plan change.

Recommendation 11: To qualify for an allocation of geographic numbers, an operator should offer interconnection arrangements so that other operators in the same area can hand-over calls without incurring long distance termination rates or additional costs to convey the calls to a distant interconnection point.

COMMENT 11: This would restrict the freedom of trade. However, this requirement is met in most European countries.

Recommendation 12: There does not appear to be a great deal to gain from moving to a system of individual number allocation although there is gradual trend for the rights of users over numbers to increase. Developments around "user" ENUM should however be monitored as they could lead to the need to move to personal allocation.

COMMENT 12: ENUM allows mapping different user identities to Internet addresses. It is not related to personal allocation or block allocation.

Recommendation 13: NRAs could consider exploring the advantages and disadvantages of allowing numbers to be made available to users with or without a link to the country concerned and who are not resident in that country or area to have a virtual presence there,

subject to reasonable measures including the need to ensure that adequate numbers remain available for residents and that numbers do not have to be lengthened to meet demand.

COMMENT 13: It should be discouraged to sell national numbers of a country to users who are resident in another country, since this is detrimental for the national numbering plans (it accelerates exhaustion) and introduces problems related to security, data protection and legal interception. NRAs should carefully analyse the consequences of such a proposal. NRA's would have no authority over non-residents' use of numbers. Such use could also damage the reputation of all commercial operations located in certain countries as well as the international reputation of the member state.

Recommendation 14: NRAs should monitor carefully the development of connectivity to new operators, and to operators with allocations in new number ranges. They should ensure that existing operators are required to provide connectivity and that new ranges are not excluded unreasonably from flat rate tariff offers.

COMMENT 14: As previously stated, call pricing, interconnection payments and commercial arrangements should be decided by competitive forces and only when these fail then appropriate remedies might be implemented. Numbering is not a vehicle for these remedies.

Recommendation 15: NRAs should monitor carefully the tariffs for calling non-geographic numbers and the inclusion or exclusion of such numbers in flat rate calling plans and take steps if necessary to prevent abuse of micro-monopoly power by called parties.

COMMENT 15: Further clarification is needed on this issue.