CEPT ECC
Electronic Communications Committee

ECC Recommendation (15)02

Guidelines for Major changes to National Numbering and Dialling Plans concerning E.164 Numbers

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INTRODUCTION

Since 1998, the telecommunications landscape has fundamentally changed. The telecommunications markets' of most Conference of European Postal and Telecommunications Administrations (CEPT) countries have now been fully liberalised and European Union regulatory framework for Electronic Communications Networks and Services has been implemented in the EU/EEA countries.

Technological developments have resulted in new products, services and applications and several important regulations, reports, recommendations, technical specifications and decisions have been published by the Electronic Communications Committee (ECC), the European Commission, 3GPP and the ITU-T providing information, guidance and policy direction in the numbering area.

This Recommendation has now been updated to reflect these changes and to take account of other relevant policy directions and guidelines on the future of numbering plan management.

ECC RECOMMENDATION 15(02) OF 23 APRIL 2015 ON GUIDELINES FOR MAJOR CHANGES TO NATIONAL NUMBERING AND DIALLING PLANS CONCERNING E.164 NUMBERS, AMENDED 16 DECEMBER 2020, UPDATED 11 JUNE 2026

"The European Conference of Postal and Telecommunications Administrations,

following

a) The adoption of the European Telecommunication Office (ETO)'s final report on "Review of National Numbering Schemes on their Openness to Competition" by the European Committee for Telecommunications Regulatory Affairs (ECTRA) Plenary on 4 December 1997 in Bruges;

b) The adoption of the ECTRA Report (ECTRA Report 48380) on "Harmonisation of short codes in Europe" in September 1998;

c) The publication of the ECC's Report (ECC Report 87) on "The Future of E.164 Numbering Plans and Allocation Arrangements" in September 2006 in Lisbon;

d) The adoption of ECC Decision (ECC/DEC/(07)03) of 6 July 2007 on "Reserving the National Numbering Range Beginning with '116' for Harmonised Numbers for Harmonised Services of Social Value" (amended 26 February 2008 and 16 June 2010, 08 March 2024);

e) The adoption of ECC Decision (ECC/DEC/(09)06) of 30 October 2009 on "Reserving the National Short Message Service (SMS) Numbering Range Beginning with '116' for Harmonised SMS Numbers for Harmonised Services of Social Value" (ECC/DEC/(09)06) (amended 16 June 2010, 08 March 2024);

f) The adoption of ECC's final report (ECC Report 153) on "Numbering and Addressing in Machine-To-Machine (M2M) Communications" in November 2010 in Luxembourg;

g) The adoption of ECC's final report on "Evolution of Geographic Numbers" (ECC Report 154) in November 2010 in Luxembourg;

h) The adoption of the ECC's Recommendation (ECC/REC/(11/03) on "Numbering and Addressing in Machine-To-Machine (M2M) Communications" in May 2011 in Athens;

i) The adoption of ECC's final report on "Open and Closed Dialling Plans" (ECC Report 178) in May 2012 in Dubrovnik;

j) The adoption of ECC Decision (ECC/DEC/(17)05) of 2 March 2018 on "Harmonised Prefixes and Short Codes in National Numbering Plans";

k) The amendment of ECC/DEC/(07)03 of 6 July 2007 on Reserving the National Numbering Range beginning with '116' for Harmonised Numbers for Harmonised Services of Social Value latest amended on 8 March 2024;

l) The amendment of ECC/DEC/(09)06 of 30 October 2009 on Reserving the National Short Message Service (SMS) Numbering Range Beginning with '116' for Harmonised SMS Numbers for Harmonised Services of Social Value latest amended on 8 March 2024.

taking into account

a) ITU-T Recommendation E.164 - The International Public Telecommunication Numbering Plan;

b) ITU-T Recommendation E.101 - Definitions of terms used for identifiers (names, numbers, addresses and other identifiers) for public telecommunication services and networks in the E-series Recommendations;.

c) Directive 2002/58/EC of the European Parliament and of the Council of 12 July 2002 concerning the processing of personal data and the protection of privacy in the electronic communications sector (Directive on privacy and electronic communications) as amended by Directive 2006/24/EC and Directive 2009/136/EC;

d) The adoption of the European Commission Decision (2007/116/EC) on "reserving the national numbering range beginning with 116 for harmonised numbers for harmonised services of social value" of February 2007 as amended;

e) Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code (Recast).

considering

a) That major changes to the national E.164 numbering plan and dialling plan are very costly. They need to be carefully evaluated with an impact analysis and consulted upon with stakeholders. Any changes should then be planned and implemented over an appropriate timeframe;

b) That major changes to the national E.164 numbering plan and dialling plan may be necessary to increase flexibility and availability in the use of numbers and to mitigate the risk of exhaustion in the future;

c) That major changes to the national E.164 numbering plan and dialling plan may be necessary to ensure that numbering resources continue to be made available for new market entrants and for new and innovative services;

d) That any proposed changes to the national E.164 numbering plan and dialling plan should take into account the interests of stakeholders and the requirement for backward compatibility if applicable;

e) That the removal or reduction of geographic requirements/significance for the use of numbers makes the use of numbering blocks much more efficient in the national E.164 numbering plan. Geographic information could continue to remain relevant for some purposes and the costs and impacts of losing geographic significance need to be carefully considered;

f) That closing the dialling plan facilitates a more efficient use of the national numbering plan as it releases additional numbers for use for operators, subscribers and services. A decision to close the dialling plan does not necessarily imply the removal of geographic significance of numbers;

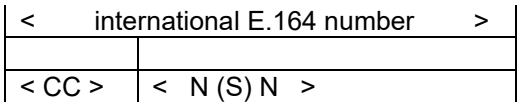
g) That even if IPv6 addresses are considered the best long term solution for IoT/M2M services/applications it is expected that the rapid development of some IoT/M2M services/applications, which use existing public electronic communications networks, may have an impact on national E.164 numbering plans because devices/machines need to be uniquely addressed to enable them to communicate with each other;

h) That an increasing consumer preference for mobile services will have an impact on national E.164 numbering plan as a greater demand for mobile numbers is expected in the future;

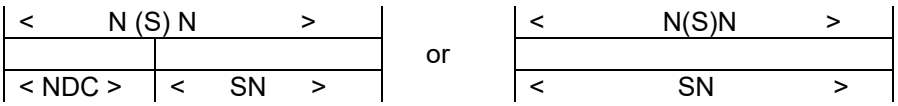
i) That the national E.164 numbering plan may become less and less fragmented and may finally consist of fewer separate number ranges which will be used for Person-to-Person communication (private and business communications), IoT/M2M communication and value-added services.

defining for this recommendation

a) that a National (Significant) Number (N(S)N) is that portion of the corresponding international E.164 number that follows the Country Code (CC).



b) that an N(S)N consists of either a National Destination Code (NDC) followed by a subscriber number (SN) or an SN only.



c) that some N(S)Ns may only be dialled in the national format and not in the international format. In this case, the N(S)N is a national-only number and not considered to be an E.164 number (see Annex A in ITU-T Recommendation E.164).

d) that the NDCs for specific geographic region/numbering area of the national numbering plan is called a Trunk Code (TC) that together with the national (trunk) prefix (i.e. 0) then constitute the area code.

e) that local dialling may be possible for certain trunk codes (TC), i.e., dialling the SN only when both the calling party and the called party are within the same trunk code area. National dialling is then distinguished from local dialling by using a national (trunk) prefix, normally the digit 0, before the N(S)N.

f) that a prefix is a string of digits that may be dialled before an N(S)N in a dialling sequence on a public electronic communications network within the geographic area covered by the national numbering plan. The prefix provides some extra information to the network, for example regarding the (national or international) format of the dialled number, the carrier to be selected for the call or the status of certain supplementary services required for the call.

g) that a national dialling sequence may consist of an N(S)N only, or a prefix (or several prefixes) followed by an N(S)N.

h) that the dialling plan deals with national dialling sequences.

i) that a major change in a national numbering plan consists of one or more of these important changes like e.g. change of maximum number length, closing the dialling plan, introduction or removal of NDCs (deletion of all area codes in a country).

recommends to CEPT administrations, when planning major changes to their national E.164 numbering plan and dialling plan,

a) that, where national circumstances dictate and following an impact analysis and consultation with stakeholders, the national E.164 numbering plan and dialling plan may be reviewed in order to achieve a more efficient and sustainable use of the total available numbering capacity. In this process, the following options may be considered *inter-alia*:

   the closing of the dialling plan; and/or

   the reduction of the number of geographic areas; and/or

   the removal of geographic location significance for geographic telephone numbers; and/or

   withdrawing and/or redefining numbers designated for services that are obsolete or no longer offered on the market.

b) that at least one value of the most significant digit of the N(S)N is left spare to allow flexibility for future changes;

c) that sufficient capacity is always made available for the growing demand for numbers for mobile services, and also for IoT/M2M services in accordance with ECC Recommendation (11)03."