

Numbering Conventions Revision

Consultation Paper

Document No. ODTR 01/39

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Oifig an Stiúrthóra Rialála Teileachumarsáide
Office of the Director of Telecommunications Regulation
Abbey Court, Irish Life Centre Lower Abbey Street, Dublin 1.
Telephone +353-1-804 9600 Fax +353-1-804 9680
Web www.odtr.ie

1 Introduction

The first version of the National Numbering Conventions, Document ODTR 00/10, was published in February 2000 and since then it has successfully fulfilled its role of providing a framework within which the national numbering resource could be managed. That first version was deliberately restricted to coverage of the main types of numbers and codes of interest on a day-to-day basis, and even then the coverage of mobile networks was very limited. It is now time to revisit the original Conventions and also to extend them to cover additional types of numbers/codes, including those only infrequently encountered, while also improving mobile coverage.

Version 2 of the National Numbering Conventions, document ODTR 01/40, is now published in draft form and it should be downloaded from the ODTR web site at www.odtr.ie and read in parallel with this document. Alternatively, a copy may be requested by contacting Ms. Claire Nolan, ODTR (Phone +353 1 804 9629, e-mail nolanc@odtr.ie).

In addition to the questions in section 2 relating to draft version 2 of the National Numbering Conventions, section 3 of this document includes a series of supplementary questions where external guidance is needed before draft text can be put forward. Although comments are invited from all, this section is especially appropriate for members of the Numbering Advisory Panel¹ (NAP) to respond to. The responses will either be used to guide subsequent versions of the Conventions, or if they are sufficiently clear-cut they will be dealt with within the Version 2.

The Director now invites views from interested parties on the draft National Numbering Conventions - Version 2, using the questions which we pose in the next sections of this document. Comments should be submitted in writing before 5 p.m. on Friday 13th July 2001 to: -

Ms. Claire Nolan,
The Office of the Director of Telecommunications Regulation,
Abbey Court,
Irish Life Centre,
Lower Abbey Street,
Dublin 1.

All comments are welcome, but it would make the task of analysing responses easier if comments reference the relevant question numbers from this document.

In order to promote further openness and transparency, the ODTR will make copies of the comments available for public inspection at its offices, apart from response information explicitly marked as confidential. Respondents submitting confidential material in their responses should clearly mark it as such, and include it in a separate Annex to the response.

¹ The NAP is a panel of experts from the telecommunications industry and representatives of the telecommunications consumer sector, who have agreed to provide advice to the Director in respect of numbering issues. They can be consulted on a case by case basis, often by email and without the need for a formal meeting.

Following the consultation, the Director will issue a report or Decision Notice on the main issues raised and, in the absence of major impediments, the definitive Version 2 of the Conventions will be published.

Neither this consultation paper nor the draft Version 2 of the Conventions constitutes legal, commercial or technical advice. The Director is not bound by them. The consultation is without prejudice to the legal position of the Director or her rights and duties under legislation.

2 Consultation Questions

Respondents should indicate their agreement, or otherwise, with the following questions and include their reasons — especially in the case of disagreement. Responses may be made in any form, but it greatly assists analysis if they are related directly to specific questions.

While it has been the intention to cover all significant changes to the Conventions with specific questions, numerous lesser Convention changes considered to be too minor for specific highlighting are also incorporated. These include typographical corrections, grammatical improvements, other minor content improvements etc. Respondents may download the original Numbering Conventions document (ODTR 00/10) from the ODTR web site and compare it with draft version 2 using Word's tracking facility, in order to see all changes in detail. A question is included at the end of section 3, which provides an opportunity for respondents to submit additional comments on any changes to the Numbering Conventions they feel are not adequately covered by specific questions in this document.

2.1 Questions on changes included in Draft Version 2

- In Section 2, a change is made to the definitions of 'Activated' and 'PSTN' and a new definition is inserted for 'Mobile Network'. Do you agree with these definitions?
- In Section 3.2, a second sentence is added to Convention 3.2-1 (immediately before the note) and Convention 3.2-6(ii) is rewritten, including reference to a new Annex 6. Do you agree with these changes (including Annex 6)?
- In Section 11.1, Convention 11.1-4 is updated to take account of the introduction of Number Portability, 11.1-11 is revised to remove potential ambiguity and 11.1-15 has had a note added.

Note: No fundamental changes to the principles of the existing conventions are intended by any changes to section 11 of the Conventions.

Do you agree with these changes?

Q4 Section 11.3.1 has been changed by adding a new requirement covering usage of 190X customer service short codes. Do you agree with this change?

Q5	A new section 11.6 "Mobile Numbers and Mobile Codes Usage" is inserted ² , thus introducing better coverage of mobile networks. A corresponding annex A1.3 covering eligibility criteria is also introduced. Do you agree with (the principle of) <u>introduction</u> of these sections?
Q6	Do you agree with the <u>contents</u> of new sections 11.6 and A1.3 relating to mobile numbering?
Q7	There is no coverage of the strong growth area of Short Message Service (SMS) in the mobile numbering sections. Are you aware of any specific SMS issues that should be covered in the National Numbering Conventions?
Q8	A new section 11.7 "Usage Conditions for Data Network Identification Codes (DNICs)" is inserted ² , thus introducing new coverage of data networks. Although there is currently little activity in this area, which may seem like old technology, it was felt appropriate to include it for the purpose of completeness. Do you agree with (the principle of) <u>introduction</u> of this section and do you have any comments on the future of traditional data networks addressed by use of
	DNICs?
Q9	Do you agree with the <u>content</u> of new section 11.7 covering DNICs?
Q10	A new section 11.8 "Usage Conditions for International Signalling Point Codes (ISPCs)" is inserted ² , thus introducing new coverage of international signalling points. A corresponding annex A1.7 covering eligibility criteria is also introduced. Do you agree with (the principle of) <u>introduction</u> of these sections?
Q11	Do you agree with the <u>content</u> of new sections 11.8 and A1.7 covering ISPCs?
Q12	Section 11.9 (former Section 11.6) covering Number Portability is totally revised and extended to take account of current conditions and of mobile networks. Do you agree with the content of new section 11.9? Are there any Calling Line Identification (CLI) issues that should be covered, specifically in relation to Number Portability?

² It should be understood that extension of the Numbering Conventions in these areas does not alter any numbering responsibilities or principles of administration – the effect is rather to make existing approaches more explicit and to centre them in a single easily accessed document.

Section 13.2, covering calls to Northern Ireland, is revised to bring it up to date. Do you agree with these changes?
Section 15, covering revision of the Conventions, is revised by deleting Convention 15-1, which is now redundant, and by insertion of "typically" in Convention 15-4 to allow for exceptional short-term situations. Do you agree with these changes?
Section A1.4 (former Section A1.3) covering Carrier Access/Carrier Selection is amended to also now include CPS ² . Do you agree with this change?
A new Section A1.5 is introduced, covering Number Portability routing prefixes. Do you agree with this change?
Section A1.7 (former Section A1.5) covering Internet Access is extended to also now support PAYG and Flat Rate Internet access mechanisms (as introduced by ODTR 01/12) ² . Note: It should be noted that no changes of principle are being introduced in respect of Internet access by this revision of the Numbering Conventions – only
coverage of already announced new access mechanisms. Do you agree with this change?
Section A1.8 is introduced to provide coverage of ISPCs. Do you agree with this change?
Annex 2 is amended by inclusion of new conventions A2.1-8 and A2.2-8, to explicitly cover failure to take up reservations. Do you agree with this change?
Annex 3 existing text is slightly re-ordered and extensions included in order to cover information needed in respect of DNICs and ISPCs. Do you agree with these changes?
Annex 5 is extended by updating of Figure 2 and by inclusion of some additional examples. Do you agree with these changes?

Q22	A new annex 7 is included to provide a set of service descriptions which may act
	as guidelines for users. The information presented there was already implicit in
	the first version of the Numbering Conventions but the ODTR now feels the
	purpose of the Conventions is better met by making them explicit. Do you agree
	with (the principle of) this <u>addition</u> ?

Q23	Do you agree with the content of the new Annex 7 in respect of service
	definitions?

3 Additional questions not yet addressed within Draft Version 2

Note: Although guidance is welcomed from all respondents in respect of the following questions, they are especially targeted at members of the Numbering Advisory Panel¹. Responses from consumer members are particularly encouraged. However, as it is ODTR experience that consumers feel less well qualified to respond to these types of questions – even when the impact may fall mainly on consumers – the ODTR has included an explanatory annex to this document for their benefit.

3.1 Extra Codes

Some responses to the original consultation on the National Numbering Conventions proposed that new numbering conventions should be included in respect of some or all of the codes DNIC, NSPC, ISPC, IIN, MNC, NSAP and AESA (See Annex 1 for brief explanation of these). Apart from the codes DNIC (Data Network Identification Codes), ISPC (International Signalling Point Codes) and MNC (Mobile Network Codes) mentioned in Section 2.1, the other codes could also be addressed in draft version 2 of the Conventions (or later version). The ODTR does not believe it would be useful to include conventions for the other codes for the reasons given below, but would welcome opinions on this:

- **National Signalling Point Codes** (NSPCs) are negotiated directly between bilateral networks, without an obvious need for ODTR intervention;
- **Issuer Identifier Numbers** (IINs) for telecommunications charge cards are not currently contentious in Ireland. (Note: They are regulated in Denmark and perhaps some other countries);
- Network Service Access Points (NSAPs) addresses need not be covered by conventions, as the level of competition in OSI services to which NSAPs belong is low (and likely to remain so) and ODTR intervention is not currently needed. Consequently, the ODTR also does not need to take responsibility for their administration;
- ATM End System Addresses (AESAs) may need to be included in the Numbering Conventions in the future, depending on the growth of ATM but no issues have yet arisen. The ODTR may at that time also need to take responsibility for national administration of AESAs—though possibly by delegation of some tasks.

Q24	Do you agree with omitting the codes NSPC, IIN, NSAP and AESA from the Conventions?
	If you do, please comment.
	If not, please say which you feel should be included and on what basis.

Q25	Do you consider anything else is needed in the Conventions in respect of ATM or
	Frame Relay? If so, please comment.

3.2 Definitions

It is proposed that the existing Numbering Conventions should have improved or new conventions in respect of 'bursty traffic', 'frequent misdialling', 'malicious calls' and 'short codes'. These are referred to in the following (existing) conventions:

Bursty traffic: Convention section 11.2.3 (see Annex 1 hereto, for explanation).

Frequent misdialling: Convention 8.2-4

Malicious Calls: Convention 8.2-5

Short Codes: Convention 4.1.1-3, Section 6, Section 8, Annexes 1, 2, and 3.

Q26	Do you feel that any of these definitions (or others in the Conventions) need
Q20	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
	improvement or addition (e.g. the definition of bursty traffic, which originated
	from the Task Force on Numbering and was a best collective view in 1998, is
	rather specific? Is there a better – but still usable - view today)?
	If so please provide your proposal for the definition(s) of interest to you.

3.3 Obligations on non-SMP operators

Convention 3.2-3 obliges operators with Significant Market Power (SMP) in access networks to open access to all relevant numbers allocated by the Numbering Plan Management at ODTR. The ODTR would understand 'relevant' to mean <u>any</u> number that a customer might reasonably expect to be able to access (e.g. it would exclude access to Network Unique Codes on another network). Convention 3.2-4 however only requires non-SMP operators to open access to such numbers subject to commercial negotiations between operators. This may mean that access to some numbers is denied to customers of the non-SMP operators.

Q27	i.	Do you consider that the rules on opening access in Convention 3.2-3 for SMP operators should also now be applied to non-SMP operators?
	ii.	If so, do you consider there is a need for a delay before implementing this change to allow the completion of any outstanding commercial negotiations?
	Ple	ase explain your views on this.

3.4 Generic Recorded Announcement

It has been proposed that it should be possible to devise an industry reference recorded announcement that would be suitable for use, with only minor adjustments, in most cases of number change. This would bring benefits of harmonisation and customer familiarity, while still leaving operators free to adopt alternative announcements when the reference announcement is not relevant.

Q28	Do you agree with the concept of a (voluntary) industry reference recorded announcement for changed numbers?
	If yes, you may wish to suggest a suitable set of words.

3.5 Number Activation

The ODTR provides notification of primary number allocation to the recipient of the allocation and it is then the responsibility of that party to notify and negotiate with all Irish and overseas authorities concerning the implementation/activation of those allocations. Section 7 of the Numbering Conventions describes this. It might be helpful to operators if an agreed long-term process for this notification of number activation to all relevant parties could be agreed.

Q29	Do you agree that an industry-agreed process for notification by operators of
	number activation (i.e. bringing into service, following allocation) would be
	useful?
	If so, can you provide a draft of such a process for discussion?

3.6 Frequent misdialing and malicious calls

Section 8.2 of the Conventions describes user's rights in the case where numbers are vulnerable to receipt of frequent misdialed calls or where (many) malicious calls are received. It is desirable to establish a recognised procedure for operators to follow in those situations, including clearer definition of the terms themselves (*Note: the definitions are already addressed in Q26, above*).

Q30	Can you propose a set of operator procedures for handling the cases of:
i	i. Numbers vulnerable to frequent misdialed calls? And/or
i	ii Numbers receiving malicious calls?

3.7 Usage conditions after secondary allocation

Some concern has been expressed in the past to expand Conventions section 11.2.2 (covering secondary allocation to end users), which is rather cursory at present when compared with section 11.2.1 that covers primary allocation.

Q31	Do you agree that the existing Section 11.2.2 is adequate?
	If you feel Section 11.2.2 needs to be expanded, can you propose appropriate draft conventions for that section, for consideration?

3.8 Sanctions for bursty traffic offenders

Decision Notice D1/00 noted that views were split on whether sanctions should be specified for dealing with offenders who (persistently) apply bursty traffic to numbers not allocated for this purpose. Those who wished for robust action foresaw the abused numbers being withdrawn from the end user to whom they are allocated, possibly after several warnings. Those who were against sanctions indicated a concern that other operators (i.e. originating or transit operator) shouldn't be obliged to take action to implement sanctions imposed by the terminating operator (except as agreed in any interconnection agreement). The Numbering Conventions already provide a certain degree of support for such sanctions, where necessary and are without prejudice to a user's right of appeal to the Director in the event of unfair treatment.

Q32	In the light of ongoing experience, do you agree that the current level of support
	for sanctions in the Conventions provides a reasonable balance that allows operators to protect their networks while not being over-bearing on responsible traffic generators?
	If not, please give your reasons and outline the steps you feel should be applied.
	If yes, please comment.

3.9 Personal Number Usage

The existing convention 11.3.5 on personal numbers was developed by the Task Force on Numbering (TFN), but Decision Notice D1/00 noted there were some reservations that it may be unnecessarily restrictive. In the concurrently running consultation on Version 2 of the conventions it is proposed to amend this convention slightly to clarify it (see Annex 1 of this document).

The basic premise of the existing Convention (which remains unchanged in draft Version 2) is that the caller should not be expected to pay extra for a service of which he/she may be totally unaware, and which is generally only of benefit to the called party. The opposing viewpoint is that this service should be left to market forces to develop and it is for each customer to distinguish the charges for calls he/she makes.

The advantage of the present Convention is that it's meaning is clear and therefore it is enforceable, with only limited problems being reported in Ireland. This compares with relatively serious abuse of personal number services that has been reported in other jurisdictions where the service is less precisely defined (see http://www.oftel.gov.uk/publications/numbering/pers0501.htm, for example). Nevertheless, it may be that an additional type of personal numbering service, that leaves the customer rather more at risk in respect of charges, would find better uptake in Ireland.

Q33	Do you agree the Convention on Personal Numbers (old version or proposed slightly amended version now under consultation) is adequate for the time being?
	If not, please give your views on amendment of the convention.

Q34 Do you consider it necessary or desirable to adopt a new Numbering Convention on Personal Numbers, similar in principle to the existing one apart from:

- i Charging principles, where the caller could be subject to higher charges than the existing Convention permits?
- Number range used? A new number might be allocated to ensure that any problems and complaints which might be generated by the new service, would not adversely affect the existing 0700 service or Personal Number Services in general.

Please give your views on these matters, including:

In respect of (i), what protections against unanticipated excess charges – if any – should be provided for the caller?

In respect of (ii), is a closely adjacent number like 0701 acceptable or should a well-separated number range (079X, 0709, 0810) be used to emphasise the intended separation from 0700?

3.10 Network Unique Short Codes

Decision Notice D1/00 identified some confusion about the usage of NUSCs, which had not long been introduced at that time. It is therefore appropriate to consider whether improvements are needed to the current conventions (in Section 11.3.7). NUSCs are codes within the range 171 to 1749, inclusive. Each network operator is free to use them for appropriate services related to operation of its network and in compliance with the conventions.

Q35	In Section 11.3.7 a new note is added to the introductory text and Convention
	11.3.7-6 is slightly amended. Furthermore, a new convention 11.3.7-7 is added to
	clarify that network operators (NOs) may not establish advantageous positions
	vis-à-vis non-NOs who are ineligible to receive NUSCs, by using their NUSCs
	for purposes unrelated to network support. Do you agree with these changes?

Q36	Do you agree that the NUSC conventions in section 11.3.7 are sufficient?	
	If not, please provide your suggested changes or additions.	

Furthermore, it has been suggested that it might be of benefit to all – operators and users alike - if similar services provided on more than one network could use identical NUSCs. This implies a level of co-operation not currently seen in NUSC usage. It is not clear if operators would value the benefits of user familiarity on certain agreed codes over the constraints implied in such a common usage.

Do you agree it is desirable to investigate what services are used under each	
NUSC by different operators and to develop industry recommendations for the	
functions to be provided by at least some of these codes?	
If yes, can you suggest which codes might be suitable for common usage?	
if yes, can you suggest which codes might be suitable for common usage:	
If no, please indicate your reasons for disagreement.	

3.11 Eligibility Criteria for Secondary Allocation

The current Conventions define criteria for primary allocation of geographic and non-geographic numbers in Annex 1, Sections A1.1 and A1.2. It wasn't felt necessary (at that time) to specifically list any criteria for secondary allocation (i.e. allocation to end-users) as the default situation is that eligibility is presumed unless reasons for refusal are known. Furthermore, end users who have been refused allocation may use the conventions of Section 4.3 to appeal this decision to the Director. Nevertheless, the Director seeks opinions on whether this situation is adequate.

Q38	Do you agree that it is unnecessary to include specific eligibility criteria for secondary allocation in Annex 1 of the Conventions?	
	If you disagree, do you have proposals for suitable Conventions?	

3.12 Calling Line Identification (CLI)

CLI is a telecommunications area that impinges strongly on data protection issues as well as routing of calls. The ODTR is not in favour of including CLI coverage in the National Numbering Conventions except where this might have clear relevance to numbering issues. Number Portability, mentioned earlier (see Q12) is one possible case, but perhaps there are others.

Q39	Do you consider there are specific CLI issues which should be covered in the National Numbering Conventions?
	If so please identify them, with reasons. Please also indicate the form of words you consider appropriate, if any?

3.13 Other matters

This consultation paper attempts to address all important changes made to the draft revision of the Conventions, but inevitably some items considered to be important to some respondents may be felt to have received too limited (or no) treatment. The following question, is intended to provide the opportunity for input on any such matters, without opening up issues which are outside the scope of the National Numbering Conventions.

Q40	Do you wish to propose conventions or comment on any aspects of the		
	Conventions which you feel are inadequately (or not at all) addressed, or new		
	issues which may be appropriate to the conventions?		

Annex 1: Explanations and clarification

Re Question 24: Extra Codes (also Questions 8, 9, 10, 11, 20)

ISPCs are network addresses allocated to key Irish exchanges so that international telecommunications traffic can be transmitted to and received from those exchanges by corresponding exchanges in other countries. NSPCs perform the same function at a national level for traffic flowing between exchanges within Ireland. Regulation of the former is of more importance than the latter.

Issuer Identification Numbers (IINs) are numbers allocated to organisations authorised to issue charge and credit cards, though within the context of the National Numbering Conventions, only those IINs used to identify telecommunication companies in Ireland which work in an international environment are under consideration. The cards are used for accounting purposes in an international interchange environment. Only a single IIN, which forms the first part of the card numbers in accordance with ISO/IEC 7812, can be allocated per organisation. Allocations are under the control of the ITU-T, though applications must receive national approval to be accepted.

ATM End System Addresses (AESAs) and NSAPs are used to identify connection points in ATM (broadband) networks. The AESA identifies a (public or private) interface point to the ATM network whereas the NSAP provides access between two ATM protocol layers.

Re Question 26: Particular Definitions

Bursty Traffic refers to the situation where large surges of traffic arises at intervals, causing sudden peak loads and possible congestion on the network(s) carrying this traffic to the destination number. Competition lines would be just one example of this.

Vulnerability to **frequent misdialling** could occur where a subscriber's number is very similar to the telephone number of a large busy institution or where a formerly busy number has not been quarantined for a sufficient period of time before being brought back into use after cancellation.

Short codes are special short numbers – normally beginning with 1 – to access very popular services needed by a wide range of customers. As these codes make heavy impacts on the overall numbering resource it is important to limit their use. A well-known short code (and exception to the initial digit 1 situation) is 999.

Re Ouestion 27: SMP

eircom is currently designated as having SMP in the fixed market and Eircell and Digifone have SMP in the mobile market. Eircell is also designated as having SMP in the interconnect market for mobile.

Re Question 28: Recorded Announcements

It is a part of the Conventions that when a customer's telephone number changes there should be a period of parallel running between the old and new numbers, followed by a period when callers to the old number hear a recorded announcement advising them of how to contact the called party in the future. As the reasons for number change can

vary it can be difficult to standardise on the contents of the recorded message – and there can also be differences between operators. Clearly it is in everyone's interests to see if a basic core message – easily understood by customers - can be devised, with operators then being free to adapt this to the circumstances, as needed.

Re Question 33: Personal Numbers

There are various types of personal number services which could be implemented. However, the underlying principle is that the called party is the holder of a special number which can be converted by the network(s) into a new real destination number that the user can vary at any time. In principle, the service provider operating the personal number service holds a telecoms routing profile of the called party which defines how the number conversion process works, in a way that is preset by the called party (e.g. route all calls to Work number from 9:00 a.m. to 6:00 p.m. and then to home number (or answering service or fax or ...) between 6:00 p.m. and 9:00 a.m.).

Re Questions 11, 12 and 36: NUSCs

The following are known cases of how operators are currently using NUSCs in agreement with the ODTR. Usage by other networks, if any, will be established as soon as possible.

Code	Known Use(s)	In Use By
171	Mobile voice mail retrieval	Digifone
	Mobile voice mail retrieval	Eircell
	Mobile voice mail retrieval	Meteor
172	IVPN	eircom
	Change greeting	Eircell
173	VPN	eircom
	Change voicemail password	Eircell
1740	DoL Customer care	Digifone
	Fax retrieval	Eircell
1741	Speakeasy accounts	Digifone
	Ready to go top-up	Eircell
1742	Used as competition number	Digifone
	Not in use	Eircell
1743	Info services	Digifone
	Not in use	Eircell
1744	Digifone secretary	Digifone
	Message information receipt SMS	Eircell
1745	Speakeasy info lines	Digifone
	Message information request SMS	Eircell
1746	Digitext Lotto	Digifone
	Entertainment SMS	Eircell
1747	Speakeasy help line	Digifone
	Etrieve email	Eircell
1748	WAP provisioning	Digifone
	Not in use	Eircell
1749	Not in use	Eircell