Allocation of additional access codes and number ranges for dial up Internet access

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Report on Consultation

and

Further Consultation
on
Calculation of Settlement Rates for NTCs

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1. Introduction

The Director is responsible for the administration of the national numbering resource pursuant to her powers under both Telecommunications (Miscellaneous Provisions) Act, 1996 and the European Communities (Interconnection in Telecommunications) Regulations, 1998 (S.I. No.15 of 1998), as amended.

As a result of sustained and rapid growth in demand for Internet access and services, consultation ODTR 00/94 was undertaken by the ODTR for the allocation of additional access codes and number ranges for dial up Internet access. Increasingly, the use of the Internet by Irish people, in their business and home lives is a key factor in ensuring Ireland's readiness for Information Society.

Following the consultation the Director now issues a decision that two new types of access codes and number ranges be made available for dial up Internet access. Low cost access for end users is very important and the achievement for such low cost access will be best stimulated by strong competition. The access models set out in this report are designed to provide a range of access pricing from zero rated call charges to zero rated subscription.

2. BACKGROUND

In December 2000, the Office of the Director of Telecommunications Regulation ("ODTR") launched a consultation paper *"Allocation of additional access codes and number ranges for Internet access."* (ODTR 00/94). The ODTR has published a range of other documents that are relevant to this topic, please find the Key documents listed below,

> ODTR 99/02 ("Interconnection services for Calls destined for Internet Service Providers")
>
> ODTR 99/46 ("Interconnect for calls destined for Internet and Number Translation codes") Decision Notice D9/99
>
> ODTR 00/17 ("Interconnect for calls destined for Internet and Number Translation codes") Decision Notice D4/00

Consultation ODTR 00/94 was intended to identify a set of access codes and number ranges that could be opened up in order to cater for current and future demand in dial up Internet access over a circuit switched network.

There is a variety of existing access models currently being employed for Internet access; for example the 1891 hybrid model combining a per minute charge with a monthly subscription and the 1890 local call charge access model. It is important to note that this Report on Consultation addresses additional access and number ranges only. The Director is however taking the opportunity presented by this Report to seek views in relation to the calculation of settlement rates for NTC's generally. Currently different NTC call types over different codes have different mixtures of call duration. The growth of the Internet has accentuated this, and these differences may undermine cost orientation.

For example, Internet calls have a long call duration whereas, voice calls tend to have a shorter call duration.

Therefore, the Director is considering whether it would be more appropriate for *eircom's* settlement rates to be calculated on the basis of individual operators actual call durations and points of interconnect. This issue is addressed in Section 5.

Eleven organisations responded in writing to the Consultation, as listed below:

- The Competition Authority
- Chorus Communications Ltd.
- eircom plc.
- Eircell
- ALTO
- Esat Digifone Ltd.

- Esat Telecom / Ocean Communications Ltd.
- Ntl
- NevadaTelecom
- Worldcom
- IBEC

The Director wishes to express her thanks to everyone who contributed to the consultation. With the exception of material marked as confidential, the written comments of respondents are available for inspection at the ODTR's office in Dublin.

3. REQUIRED INTERNET ACCESS CODES

The Director wishes to accommodate a range of Internet access pricing models. Please find below views from interested parties on the three questions that were posed in consultation ODTR 00/94.

3.1 Allocation of Additional Access Codes for Internet access

The first question sought views from respondents on a range of access codes and number ranges which would be associated with Internet traffic specifically and would allow for internet specific price points.

Question 3.1 Do you agree that these models would be useful? Are there others that you would like to employ? Please list the set of retail pricing models that you believe should be allocated 18xx codes in order to facilitate Internet access.

The Views of Respondents

The majority of respondents welcomed the introduction of new non-geographic codes for accessing the Internet and made the following points.

- The establishment of the proposed new codes would enable the market to develop by allowing different providers to charge different end-user prices.

- The introduction of new non-geographic codes that support subscription-based services and provide for a certain number of free hours in a time period would be welcomed.

- The existing number ranges should provide the starting point for reasons of tariff transparency but consider that there should be some flexibility for a number of price points and services within specific ranges.

- It may be useful to allocate specific codes for use solely in relation to Internet access, which would allow for the speedy implementation of alternative Internet access models when required.

- The suggested access codes and number ranges will prove useful for routing purposes and allowing additional pricing options.

eircom believes that the proposed set of models are a useful starting point to analyse the requirements for Internet access codes and for pricing arrangements for calling using these codes.

eircom believe the introduction of new Internet codes may encourage the migration of the Internet traffic to a NTC for the following reasons.

- The new access codes and ranges will facilitate implementation of efficient routing to the ISP, particularly where the service is hosted from another network;

- The settlement on the hosting network will be set at a level using the principles of D9/99 and D4/00, giving a higher settlement the closer the Network-to-Network Interconnect point (NNI) is to the caller. This gives the hosting network the correct build or buy signal, and so leads to economic efficiency.

eircom agrees that the flat-rate model is a logical complement to the 1891 and PAYG models. However, it is unclear if such a model is commercially viable at this point. The UK experience indicates that such services attract consumers with extreme usage patterns and it may be the case that their introduction may lead to such usage patterns. *eircom* distinguishes between two types of flat rate model:

1. ISP subscription includes pre-payment for an agreed volume of dial-up access;

2. Subscription qualifies the consumer to unlimited dial-up access with no call charges.

eircom believes it is worth considering whether separate 189x codes are required for these.

However, a number of respondents disagreed with the introduction of the new access codes, one mobile operator maintains that there is a danger in putting in place specific pricing models that are associated with specific access codes for the following reasons:

1. It would serve to restrict rather than encourage competition in pricing for calls to the Internet. Customers would be unwilling to move to new pricing initiatives because of the association of access codes with specific retail prices;

2. Market forces will deliver on price and there is no need for regulatory influence in setting pricing models;

3. New technologies (ADSL, GPRS) mean access to the Internet will be packet switched rather than circuit switched. They will provide greater routing efficiencies. Therefore, new access codes are unnecessary to deal with inefficiency problems of today when the introduction of new technologies will overcome them;

4. Pricing models that apply to the circuit switched environment may not be appropriate in a packet switched environment. Therefore, there is a danger that the ODTR's proposals would promote pricing models that are inappropriate to a packet switched environment.

One OLO was of the opinion that the proposed codes are not useful, as they will not lead to the introduction of new and innovative unmetered Internet access products in the Irish market. The ODTR should take a bolder line and suggest the introduction of access codes that allow true unmetered access at all levels of the *eircom* network.

The Competition Authority is concerned that the association of particular tariff regimes with specific access codes should not restrict the development of new, innovative tariff structures. For this reason, it may be useful to allocate a third access code and number range, besides the two proposed, which could be used for other tariff structures as they develop.

POSITION OF THE DIRECTOR

The Director notes the range of comments from very positive to negative on the allocation of additional codes and number ranges for Internet access. Although packet switched access will become increasingly important, the Director believes that circuit switched access will remain important for a considerable period of time. In that context, it is important that operators and ISPs are provided with options that will facilitate a variety of innovative pricing models.

The Director believes that new additional options for dial up Internet access with additional pricing and routing options for accessing the Internet would be advantageous to the market, the Director introduces two additional access codes facilitating two broad types of Internet access as follows.

Option 1: Pay-As-You-Go

> The customer is charged for its telecommunications element of the service, based on time on line and/or traffic generated, but Internet service is provided free of charge.

Option 2: Partial or Full flat rate access

> Partial or flat rate access including fully unmetered access, the customer in not charged for the telecommunications time on/line and/or for traffic generated up to pre-set limit or with no limits, but pays an agreed flat rate subscription fee for its Internet service.

The above models were chosen because there is already significant demand for PAYG access. A code dedicated to this use should be of use in facilitating efficient interconnection arrangements for such traffic. Also several respondents indicated potential interest in full flat rate (i.e. unmetered) models. Models in which a flat rate covers all usage in particular time bands are already a feature of the market. Here too, a dedicated access code should assist in the development of improved interconnection arrangements for such services.

The 1891 access code facilitates "hybrid" models, combining a per-minute charge with a monthly subscription, so the Director does not consider that an additional code is needed for this purpose.

With the exception of the additional new codes and number ranges for dial up Internet access, the Director does not feel that any further codes are needed at present. If a provider wishes in the future to develop an additional model not covered by the existing set of codes, it can request the opening of a new code. It is also important to note that allocation of a code and number ranges does not in itself enable provision of a new service; suitable interconnection and billing arrangements must be developed as well. In the first instance, these are a matter for commercial negotiation among the operators concerned.

The Director hereby introduces two additional access codes and number ranges for dial up Internet access.

1892 ABC ABC (Pay-As-You-Go)

1893 ABC ABC (Partial or Full flat rate access)

3.2 NEED FOR CONSTRAINTS ON TARIFFS

The second question sought views from respondents as to whether they believed it would be beneficial to constrain the range of tariffs associated with each specific access code.

Question 3.2 Do you feel that it is useful to constrain the range of tariffs that can be associated with each specific access code?

Views of Respondents

The majority of respondents disagree with constraining the range of tariffs that can be associated with each specific access code and have raised the following concerns.

- The basic approach should be to allow (non-SMP) operators commercial freedom to frame their services to best meet market requirements. Some general restrictions may be necessary.

- It is unwise to restrict the range of tariffs that are associated with particular services. It would stymie innovation and hinder the development of new products and services.

- Such restrictions would also undermine the potential of rating engines for tariff innovation.

- The basis of the consultation appears to be greater transparency for consumers. One respondent questioned whether different access codes would contribute to greater transparency, as Internet access numbers are generally pre-programmed into a user's computer. The user simply dials by clicking on the relevant icon and may not even see the number that is dialled. Therefore, ISP advertising is a more appropriate vehicle to convey price information to end users than the particular type of number range used.

However three respondents were in favour of using constraints on tariffs for Internet access,

- A constraint could be imposed in the short term, although any constraint on the upper level of retail rates needs to be assessed in the context of the underlying interconnect arrangements. That is, it should be set at a sufficiently high level to retain flexibility and sustainable entry. For example, given that 1892 and 1893 appear to the customer to be 'higher' than 1850 and 1890, then a possible constraint might be 'up to national rate.'

- Unconstrained pricing will lead to billing, transparency and customer care problems for originating networks. Customers have become familiar with associating codes with price points and do not expect a range of prices to apply to particular codes. Flexibility should be through the use of more codes rather than bands on particular codes. It should be the responsibility of the ISP and not the network provider to clearly indicate the tariffs that apply to accessing its service.

eircom believes that it is useful to constrain the range of tariffs that can be associated with each specific access code for the following reasons:

- Greater transparency for the consumer. It is likely that each access code will be

characterised by a number of Internet access offerings from competing ISPs. If each code is also characterised by a multiplicity of tariffs, the propositions available to the consumer will become confused. However, Solution Providers will require similar codes to offer related but distinct services to different segments of consumers using the same infrastructure, for example, similar tariffs but with time-of-day adjustments to target consumption patterns such as with business and residential;

- It will best support practicable interconnect arrangements for Internet access services.

The Competition Authority had concerns in relation to customer recognition of tariffs noted. Competition would be facilitated if consumers were better able to compare offerings from all operators. The lack of transparency of pricing models in many sectors of the economy, including telecommunications, has the impact of limiting the degree of price competition because of the search costs involved. As a result, churn rates tend to be lower than expected. Initiatives that enable customers to match their current consumption pattern to the offerings of various market participants ensure that consumers are assisted in identifying their optimal provider.

The Competition Authority would be concerned that the setting of maximum limits on charging under any given access code might act to ensure that all prices converge to this maximum. This may work to erode the competitive process whereby each participant in the market competes for customers vigorously.

For this reason, the Competition Authority would suggest that some measures be taken to assist consumers in comparing the various offerings on the marketplace on the basis of some normal consumption patterns.

The Position of the Director

As indicated in Document ODTR 00/94, the Director believes that individual Internet service providers should be able to set prices for their own access numbers, and that modern billing systems should be capable of accommodating such a regime.

The Director agrees with the Competition Authority and the majority of respondents that there is not a strong case for constraining the range of tariffs associated with each specific Internet access code. Arguments in favour of such a restriction centre on the benefits to consumers of making tariffs transparent by associating a tariff band with each code. However, unlike codes used with voice calls Internet access numbers are generally stored in software and dialled electronically. In many cases, the number is installed by service provider's software and consumers never see the number. This limits the extent to which useful price information can be conveyed by the code. The responsibility of communicating the various tariff options falls to the service providers, the details of which will be provided during the access code application process.

3.3 FORM OF TARIFF CONSTRAINTS

The third question sought views from respondents, on what their preferences were for an upper constraint, where they deemed it necessary for a constraint to be applied.

Question 3.3 *Do you have a preference for an upper constraint on the range of tariffs in the form of a multiple of the local call rate on the relevant network or some other suitable absolute value?*.

Since the Director does not see a need for upper constraints, an examination of the form such constraints would take is not necessary.

4. NUMBERING ARRANGEMENTS

4.1 THE EXPANDED INTERNET ACCESS NUMBERING SCHEME

Taking account of the analysis above, the Director now introduces the following numbering Scheme for Internet access in Ireland: -

Number Format	Description
1891 ABC ABC	**Existing service.** The customer is charged at or below the local call rate for the telecommunications time on-line, with no separate telecommunications traffic charge. The customer may also be charged a separate subscription fee and/or packet-based charge by his/her ISP.
1892 ABC ABC	**Pay-As-You-Go.** The customer is charged for the telecommunications element of the service, based on time on-line and/or traffic generated, but Internet service is provided free of charge.
1893 ABC ABC	**Partial or Full Flat Rate Access.** The customer is not charged for the telecommunications time on-line and/or for traffic generated up to a pre-set limit or with no limits, but pays an agreed flat rate subscription fee for its Internet service.

The "1890" shared cost (local call charge regardless of location) NTC code is also employed for Internet access, and is used as a Pay-As-You-Go service, as these tend to be priced at a rate equivalent to that used for local calls.

Since all dedicated Internet access numbering is in the 189X range, this will allow identification of Internet access traffic at the earliest required point in the originating network and facilitate efficient routing of this traffic.

4.2 CONDITIONS OF ALLOCATION AND USAGE

The following broad conditions of allocation and usage will apply to Internet access numbering resources. Final conditions will be specified at the time of allocation:

- The number shall only be used for routing Internet access traffic.

- An ISP to which an Internet access number has been allocated is bound by the specific conditions of allocation, directions issued from time to time by the Director relating to number allocations and the National Numbering Conventions[1]. The National Numbering Conventions set out the general principles governing the allocation and use of numbers from the National
- Individuals or companies to whom numbers have been allocated have a right of use in relation to the allocated number (subject to the allocation conditions), but have no proprietary rights in relation to that number.

- The number shall be issued on the understanding that it may be withdrawn or altered as required, as part of changes to the National Numbering Scheme and/or changes to Internet access mechanisms.

- The number shall not be transferable, and shall only be used by the individual or company to whom it has been allocated by the Director.

- As has been stated in D9/99[2] and D4/00[3], Internet access numbers shall be portable between networks, insofar as ISPs can move between Network Operators. Due to the traffic volumes involved in Internet access and the likely requirements for new interconnection paths between operators, Internet access number portability will be subject to processes and timescales agreed between network operators on a case by case basis. Generic planning and contractual arrangements to facilitate such movements should be agreed by the industry as soon as possible.

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[1] National Numbering Conventions, Version 1, February 2000. ODTR Document No. ODTR 00/10

[2] Interconnect for Calls destined for Internet services and Number Translation Codes – Decision notice D9/99, ODTR Document No. 99/46, July 1999.

[3] Interconnect for Calls destined for Internet services and Number Translation Codes – Decision notice D4/00, ODTR document No. 00/17, February 2000.

4.3 APPLICATION FOR INTERNET ACCESS NUMBERS

The Director now invites applications from eligible service providers for Internet Access numbers. In line with application procedures for any numbering resource, applicants are required to provide

- A description of the planned service,
- Evidence of technical capabilities for the implementation of the service and,
- A summary of the marketing plan for the planned service, including launch date.

The applicant may also provide other information deemed by them to be relevant to their application. Failure to provide the ODTR with sufficient information to process the application may delay the completion of the allocation.

The utilisation of existing allocations will be considered when examining applications for further allocations.

Applicants should indicate their preferred choice of number(s) from the available resource, which can be checked on the ODTR web site. Allocations will be made on a 'first come, first served' basis. For a period of three months from the issue of this Report on Consultation, the ODTR will reserve 1892 ABC ABC and 1893 ABC ABC numbers corresponding to 1891 ABC ABC numbers already allocated. These will be available for allocation during this time only to the service provider holding the corresponding 1891 ABC ABC number(s).

Applications for numbering allocations should be clearly marked "**Numbering Application"** and should be addressed to:

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

Applications may be made by e-mail to numapps@odtr.ie

At present, there is no charge for numbering allocations made to licensees. This situation may change in the future.

5. ADDITIONAL ISSUE – CALCULATION OF SETTLEMENT RATES FOR NTCs

Several respondents expressed the view that the scope of Consultation ODTR 00/94 should have been broader, with particular reference to the underlying interconnection arrangements for Internet access services.

Currently different NTC call types over different codes have different mixtures of call duration. The growth of the Internet has accentuated this, and these differences may undermine cost orientation.

For example, Internet calls have a long call duration whereas, voice calls tend to have a shorter call duration.

Therefore, the Director is considering whether it would be more appropriate for *eircom's* settlement rates to be calculated on the basis of individual operators actual call durations and points of interconnect.

Operator by Operator settlement rates could be adjusted to allow for the actual call duration and actual utilisation of the *eircom* network by either:

1 At the end of each interconnect billing period calculating a settlement rate based on the individual operator's actual call duration and eircom network utilisation for that period.

2 At the end of each quarter, calculating a settlement rate based on the individual operator's actual call duration and eircom utilisation for that quarter and applying that rate of settlement in the succeeding quarter.

"Do you agree settlements based on actual operator call durations and actual network utilisation should be implemented via option 1 or 2 above, or by some other means?" If so please give details of the process you would like to see employed.

The Director invites views from interested parties on the above question. Comments should be submitted in writing before 5pm on Friday, 16 of March 2001 to:

Aoife Mc Grath,
The Office of the Director of Telecommunications Regulation,
Abbey Court,
Irish Life Centre,
Lower Abbey Street,
Dublin 1.

OR

Comments may be submitted via email to: mcgratha@odtr.ie