



Office of the Director of
**Telecommunications
Regulation**

Interconnection services for calls destined for Internet Service Providers

Consultation paper

Document No.

ODTR 99/02

January 1999

Oifig an Stiúirthóra 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

In December 1998, the ODTR received representations from various telecommunications operators requesting that 1891 Internet access be made available as an interconnect service. A request for a public consultation on this issue and a request for a complete study on the arrangements for Internet access and related interconnection prices in Ireland were also received. These representations raised wide-ranging issues about how interconnection should be arranged for calls destined for Internet Service Providers (ISPs) generally.

The ODTR has only received comments and representations from telecommunications operators. No representations have been received from ISPs or from any other interested party. In order to receive as many views as possible, notification of this consultation process will be specifically brought to the attention of ISPs operating with 1891 access codes.

This paper is the first in a two-stage consultation process that the ODTR is holding on Internet access arrangements and related interconnection in Ireland. This first stage addresses the immediate issue of Internet access as an interconnect service under the present interconnection regime.

The second stage of the consultation will deal with issues that require a longer time frame to analyse. The ODTR intends to conduct a review of the arrangements for Internet access and related interconnection issues. The results of this review will be discussed in the second-stage consultation paper to be published as soon as it is feasible to do so.

The measures proposed in this paper for interconnection arrangements for access to ISPs operating with 1891 codes are proposed as interim measures pending the more formal review of appropriate interconnection arrangements for calls destined for ISPs and other services.

Due to the importance of this issue, comments are requested on the proposed interim measures by close of business on Friday 29 January 1999. Comments on the scope and inputs into the review of Internet access arrangements are required by close of business on Monday 15 February 1999. All responses should be addressed to:

Maeve O'Reilly
ODTR
Irish Life Centre
Abbey Street
Dublin 1
Ireland
Tel: +353-1-804 9600
Fax: +353-1-804 9680
Email: oreillym@odtr.ie

2 Background

2.1 Legislative Background

EU and Irish legislation sets out procedures for providing interconnection services. The most relevant pieces of legislation are:

Directive 97/33/EC of the European Parliament and Council of 30 June 1997 on “interconnection in Telecommunications with regard to ensuring universal service and interoperability through application of the principles of open Network Provision (ONP)” (the “Interconnection Directive”);

The European Communities (Interconnection in Telecommunications) Regulations, 1998; S.I. No. 15 of 1998 (the “Interconnection Regulations”) which transpose this Directive into Irish law.

The Directive and Regulations place special obligations on an operator who is designated by the Director as having Significant Market Power (“SMP”). Among these are the following:

- ❑ The obligation to publish a Reference Interconnection Offering (“RIO”) that is defined as: *an offer to provide an interconnection facility that includes a description of the interconnection offerings setting out the particular components according to market needs and all of the terms and conditions for interconnection to be satisfied by a person wishing to enter into an interconnection agreement*¹. The Director may, in certain circumstances, direct changes be made to the RIO.
- ❑ The obligation, in providing interconnect services, to adhere *inter alia* to the principles of non-discrimination as described in the interconnect regulations.

Telecom Éireann is currently the only operator that has been designated as having SMP on the relevant market and therefore subject to these requirements.

3 1891 Internet access in Ireland

3.1 1891 service

In January 1999, Telecom Éireann introduced a new daytime call charge to 1891 access codes of 7.5 minutes for each unit fee of 9.5p (ex. VAT). This discount from the cost of a local call is justified by Telecom Éireann by the fact that fewer network elements are used for an 1891 call than for a normal local call, effectively reducing the cost charged to Telecom Éireann Retail from Telecom Éireann Network.

An ISP who wishes to operate using the Telecom Éireann 1891 service must obtain an 1891 number (issued by the ODTR) and have a Point of Presence (“PoP”) in the local call area of

¹ Paragraph (17) of Regulation 8 of the European Communities (Interconnection in Telecommunications) Regulations, 1998, S.I. No. 15 of 1998.

the end user. Telecom Éireann offers this service to ISPs where the ISP PoP is hosted in Telecom Éireann premises. Translation of the 1891 numbers into normal PSTN or ISDN numbers is carried out directly at each Telecom Éireann local exchange and routed to the PoP of the relevant ISP. The customer is charged the lower 1891 rate rather than the local call rate.

The facility does exist for any additional routing outside the local call area to be charged to the ISP on a per call and/or per minute basis. However, after consultation with ISPs Telecom Éireann has not introduced this option.

1891 calls use similar network elements as local call origination to Other Licensed Operators (“OLOs”). At the local exchange the 1891 call is routed to the PoP of the ISP and then typically over a frame relay network to the ISP server. The network elements used in local call termination are not used for the 1891 call. The ISP pays for the use of the frame relay network; this cost is covered by the charge to the end-user by the ISP. There is no payment made to the ISP or charge imposed on the ISP (on a per minute basis) for calls delivered to the PoP by Telecom Éireann. End users who subscribe to an ISP that does not have a PoP within the end users’ local area can call that ISP using a normal telephone number but will be charged the relevant local or trunk retail rates and not the reduced 1891 rate.

3.2 Interconnection arrangements for calls destined for ISPs

3.2.1 Background

On 22 December 1998, the ODTR requested that Telecom Éireann provided a price for 1891 Internet access as an interconnect service, or inform this Office why the service was not available.

In response, Telecom Éireann has stated that it has no objection to offering 1891 as an interconnect service but believes that there is an issue that should be explored in connection with such a service. If this access code were to be freely permitted over a national interconnect, it would be possible for ISPs who had decided not to invest in a national PoP network to provide national service through the use of carrier selection codes. Any customer in a charge area where the ISP had not located a PoP could access the service by dialling a 5-digit carrier selection code followed by the 1891 code for the required ISP. The carrier owning the carrier selection code could then deliver the call across any interconnection point with Telecom Éireann and (assuming the 1891 number involved has a valid translation at the Telecom Éireann interconnect node) connect to the ISP. Furthermore, unless carriers themselves first translate from the 1891 code to the intended true geographic number, before delivering the call to Telecom Éireann, there is a real danger of rejection or misdirection of calls for technical reasons.

3.2.2 Proposed non-discriminatory interconnection arrangements

As discussed earlier, the relevant legislation requires Telecom Éireann to adhere to the principles of non-discrimination in providing interconnection services. Interconnection is defined as:

The physical and logical linking of telecommunications networks used by the same or a different organisation in order to allow the users of one organisation to communicate with users of the same or another organisation, or to access services provided by another organisation².

² European Communities (Interconnection in Telecommunications) Regulations, 1998, S.I. No. 15 of 1998.

It is clear that Telecom Éireann's own downstream arm is in a position to offer a service (access to ISPs operating on 1891 codes connected to the Telecom Éireann network) whereas, without appropriate arrangements for the treatment of such calls over an interconnect link, competing operators cannot. There is no doubt that any customer connected to a PSTN in Ireland should be able to access any customer connected to, or any service provided via, the PSTN. This includes access to ISPs. It seems clear therefore that the following arrangements should be available as interconnect services without further delay:

- Interconnection of calls originating on OLO's networks (or passed to OLO's networks) destined for an ISP connected to the Telecom Éireann network;
- Interconnection of calls originating on Telecom Éireann's network (or passed to Telecom Éireann's network) destined for ISPs connected to OLO's networks.

1891 numbers are codes that indicate that a telephone call is destined for a particular ISP. Translation of the 1891 code into an ISP telephone number currently occurs at the Telecom Éireann local exchange at which the call is received. If an OLO were to carry out this number translation before passing a call to Telecom Éireann via an interconnect link, an interconnection service for calls destined for ISPs connected to the Telecom Éireann network would already effectively exist. However, the price charged for these calls is an issue.

3.2.3 Proposed interim interconnect charges

In theory, there are two possible ways of viewing the ISPs and their status in the licensing and interconnection regimes. ISPs could be considered to be interconnecting operators (most ISPs hold Value Added Service (VAS) licences, this issue is discussed in greater detail later) or customers of Telecom Éireann (although not connected at the local loop in the normal manner). Regardless of this, under the present interconnection regime (that does not provide for a specific arrangement for calls passed over an interconnect link that are destined for ISPs) a transit charge appears to be the applicable charge for calls destined for ISPs connected to the Telecom Éireann network.

It is proposed that OLOs should be charged the present national transit rate for calls destined for ISPs connected to the Telecom Éireann network. These charges should apply (and be considered to have applied from the date on which Telecom Éireann adjusted its published and approved RIO, that is August 1998) pending the conclusion of the review of Internet access and related interconnection arrangements in Ireland or until such time as interconnecting parties agree an appropriate price through commercial negotiations. At the moment, transit charges are not distance related. This raises issues for all transit calls, not just calls destined for ISPs. The introduction (and applicability) of transit charges that vary according to distance and the delivery of transit calls at tandem exchanges only, are issues that will be considered further by the ODTR as part of the general review of Internet access arrangements and other interconnection consultations.

3.2.4 Technical and commercial issues

There are various issues that relate to the capacity of the ISP PoPs and number translation and the subsequent routing of calls destined for ISPs. The ODTR considers these issues should be resolved between Telecom Éireann, OLOs and ISPs through commercial negotiation. The ODTR is in favour of all parties attempting to resolve all issues (or

discuss viable solutions) before referral to the ODTR. The ODTR expects these matters to be resolved within a short time frame to be agreed and specified at the outset by the parties concerned.

3.2.5 Impact of proposed interim charges

Most ISPs have PoPs in Dublin. In the short term there is likely to be a concentration of OLO interconnection points and networks in Dublin. If transit charges apply to calls destined for any ISP, an OLO can hand over these calls to Telecom Éireann and pay a single flat-rate transit charge for delivery to any ISP in Ireland. It is likely to be profitable for OLOs to offer this service to direct³ customers. However, the networks and interconnection points of OLOs are, at the moment, still quite limited. The ODTR is of the opinion that the number of calls routed to ISPs outside the local calling area of a directly connected customer will for the moment be relatively small.

In the case of indirectly connected customers, it is likely to be profitable for OLOs to handle calls from customers destined for ISPs connected to the Telecom Éireann network when the OLO pays a primary call origination charge only. It is unlikely to be profitable for an OLO to offer calls to ISPs at local (or below) call rates when the OLO pays greater than a primary call origination fee. Of course, if an OLO does have an interconnection point in the calling area of a customer that wishes to call an ISP without a PoP in that area, it is possible that the OLO can charge a local call rate, route the call outside the local call area to the ISP and make a positive margin on the call. However, as discussed previously, the concentration of OLO networks, ISP PoPs and OLO interconnection points in Dublin leads the ODTR to believe that this possible scenario will have limited implications.

The impact on ISPs of a transit interconnection charge for calls destined for ISPs connected to the Telecom Éireann network is expected to be minimal, at least in the short term. However, this is an issue on which comments from ISPs are particularly welcome.

4 Review of Internet access and related interconnection arrangements in Ireland

The ODTR intends to conduct a full review of Internet access arrangements in Ireland. This study will commence immediately after this initial consultation. Some of the proposed topics are briefly discussed here; comments are welcomed on the proposed topics and scope of the review and should be submitted to the ODTR by Monday 15 February 1999.

Ireland does not have a highly prescribed interconnect/retail price relationship for services where value is added at the call termination (e.g. information services and premium rates services). Internet access services may fall into the class of services that require particular interconnection arrangements that are linked to the retail price of the service. It is anticipated that the review will examine:

- Options for appropriate interconnection arrangements for access to present Internet services and also for future services such as pay-as-you-go and flat rate Internet access services;

³ The term direct customer means a customer who is connected directly to the network of an OLO and does not have to dial a carrier code to connect indirectly to a telecommunications operator through Telecom Éireann's network.

- The relationship between retail prices for future services and future interconnection charges that may be required to take into account retail bundling of call conveyance and Internet access charges. Comments from ISPs and operators on the nature of future Internet access products are particularly welcome.

The review will interact with other work streams considering such issues as:

- The possible interconnect arrangements for number translation and toll-share services and;
- Those issues surrounding the relationship between interconnection and retail charges both between Telecom Éireann Network and Telecom Éireann Retail for calls that originate and terminate on different networks.

Other topics identified for examination include:

- The status of ISPs under the present licence and interconnect regimes. Any interconnect arrangement that deals with interaction between retail and interconnect charges must account for the status of ISPs in the licence and interconnect regimes. Generally, ISPs in Ireland hold VAS licences that expire at the end of June 1999.
 - What are the practical and commercial implications of the status of ISPs in the licensing regime?
 - Are ISPs customers or interconnecting operators?
- The ability of the OLOs to compete effectively with Telecom Éireann's 1891 service under the present regulatory and interconnection regime and the apparent advantage that Telecom Éireann enjoys in the supply of access to ISPs;
 - Is this advantage a result of the particular characteristics of the 1891 service or is it a result of the interconnection regime generally?
 - What is the implication of the location of the ISP PoPs in the Telecom Éireann exchange?
 - Can and should access to the ISP PoPs by other operators be required?
 - What options might be open to OLOs to increase their competitiveness independently of the regulatory and interconnection regimes?

5 Conclusions

Telecom Éireann is required to provide non-discriminatory access to ISPs connected to the Telecom Éireann network as an interconnect service. This paper proposes a number of measures aimed at facilitating the development of appropriate interconnection arrangements for calls destined for ISPs:

- OLOs should provide an interconnect service for access to ISPs connected to OLO networks;
- Specific technical and commercial matters should be negotiated between the relevant parties in the first instance;
- The ODTR will carry out a full review of the arrangements for 1891 Internet access and related interconnect arrangements and prices;

- Pending the result of the review, it is proposed that a transit charge should apply to calls destined for ISPs that are passed over interconnect links.

The ODTR welcomes comments on the conclusions set out above by Friday 29 January 1999. Comments on the scope and inputs into the review of Internet access arrangements and related interconnection issues are required by Monday 15 February 1999.
