Office of the Director of
Telecommunications
Regulation

The Irish Telecommunications Market

Quarterly Review

March – May 2000

Document No. ODTR 00/44 **16th June 2000**

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

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Foreword by the Director

My primary role as regulator is to promote the rapid growth of competition by opening up markets, keeping them open and flexible until competition is so well established that they remain open and flexible of their own accord. With more and more players active in the Irish market and additional means of accessing the market, increased competition will ensure that Irish consumers benefit from lower prices, more choice and better quality services.

I am pleased to issue this third review of the Irish telecommunications market for the quarter March to May 2000 which summarises the most recent developments which have taken place in the market.

I would like to extend my gratitude to the significant number of licensed operators who contributed information to my office for the purposes of this Quarterly Review and continue to encourage the ongoing contact between my office and the licensed operators in this context. Their input is essential to building the picture of how the market is developing and ultimately how competition is evolving.

In turn, the availability of such market reviews is essential to the ongoing stimulation of the vibrancy of the sector in ensuring well-informed consumers, market information to existing players and attracting potential investors to the telecommunications sector in Ireland.

1 Introduction

This review summarises the developments in the Irish Telecommunications sector in the period since our last review on 22nd March 2000. The review includes:

- A general overview of regulatory developments in the Irish Telecoms market;
- A market overview discussing recent market developments
- A summary of sector restructuring and changes in company ownership
- An international comparison of telecommunications tariffs

- Appendix I includes a full list of licensees in Ireland and their areas of activity;
- Appendix II includes a list of all ODTR publications since 22nd March 2000.

All figures and statements expressed in this review seek to reflect developments in the Irish market since the ODTR's last quarterly review in March 2000. While every effort has been made to include the most up-to-date figures and estimates, we have in some instances, referred to earlier data. The data used to estimate market size has been calculated from a questionnaire distributed to all licensed operators in Ireland, covering the period 1st January – March 31st 2000. The ODTR would like to take this opportunity to thank the operators and organisations who have contributed information and comments for this review and appreciates their efforts in facilitating the publication of this document. The Director continues to encourage all operators to complete the questionnaire on a quarterly basis to ensure as complete a picture as possible of the Irish market can be presented in the quarterly review.

2 Regulatory Developments

In the three months since our last review, there have been a number of key developments in the regulatory environment, which have had significant implications for the development of competition in the Irish telecommunications market.

2.1 Licensing

The most important development in the quarter was the conclusion of a number of protracted legal proceedings. This has facilitated the prospective entry of several new operators into the Irish telecoms marketplace, as licences may now be issued for mobile and wireless local loop. The dropping of *eircom*'s proceedings against the RIO decision of September 1999 has also cleared the way for continued development of competition in the market (see 2.2 below).

A competition for a third mobile licence in Ireland was initiated in 1998. Two applications were received, evaluated and ranked in the following order: Meteor Mobile Communications Ltd ("Meteor") and Orange Communications Ltd ("Orange"). Orange appealed the decision of the Director to award the licence to Meteor to the High Court. The decision of the High Court, which upheld the appeal by Orange was appealed by the ODTR and Meteor to the Supreme Court. On 18th May 2000 following nearly two years of legal proceedings the Supreme Court unanimously found in favour of the Director's original decision to award the third mobile licence to Meteor.

Welcoming the decision, the Director has announced that she will now make arrangements to issue the third licence, which she believes will bring about a significant reduction in mobile charges right across the board. She expressed her satisfaction that the Supreme Court had recognised the quality of the work and integrity of the evaluation team in their original deliberations and looked forward to the competition Meteor will bring to the mobile market. Meteor report that they are confident that the company will still be able to roll out a network providing 80% coverage of the population within nine months. They also believe that the network will be established in time for the Christmas period, enabling the company to capitalise on buoyant sales over the holiday season.

On Tuesday 21st September 1999 the Telecoms Regulator Etain Doyle announced the top ranked companies following a competition for the right to operate FWPMA[1] services. Four broadband and four narrowband licences were offered. The regulator announced that *eircom*, Esat Telecommunications, Formus Communications Ireland Ltd and Princes Holdings Ltd were the higher ranked applicants in the broadband competition. In the narrowband competition *eircom,* Princes Holdings Ltd and Esat Telecommunications were the higher ranked applicants. There was no eligible applicant for the fourth licence, type D, in the narrowband competition.

Subsequently, the FWPMA competition has been subject to legal challenge by BroadNet and Formus. As a result of a settlement agreed on May 10th, these proceedings have now been set aside. This will now enable the Director to issue 7 licences by the end of July, six of which may be issued in June.

[1] Fixed Wireless Point to Multipoint Access (also known as 'wireless local loop') offers an alternative means to provide the connection from the customer's premises to the nearest network access point for the provision of telecommunications services. It offers a radio-based alternative to copper or fibre optic cable.

The release of these FWMPA licences is very valuable in promoting competition in the Irish telecommunications market and the prospect of the early issue of the fourth broadband licence shortly is also very attractive. The regulator is carrying out a review of the availability of spectrum for WLL (wireless local loop) and will issue a consultation paper shortly. This review will also deal with the 'D' block of narrowband spectrum which was not covered in the last round.

During the last quarter the Director also outlined the proposed timetable for the introduction of third generation mobile (or 3G) services in Ireland. 3G, a low-cost, high-capacity means of mobile communications, will offer data rates of up to 2Mbit/sec with global roaming and other advanced capabilities. These innovative services will allow for the delivery of pictures, graphics, video communications and other wide-band information as well as voice and data, direct to people on the move. The ambitious timetable set out for the licensing of these services provides for the publication of the competition details by October 2000, the running of the competition from November 2000 to February 2001 and the awarding of the licenses by the end of February 2001. A total of 155 MHz of radio spectrum is available for 3G services in Ireland and it is expected that networks would be developed and rolled-out during 2001-2002 with the launch of services later that year.

In an effort to further stimulate competition in the mobile market, the Director has also initiated a consultation on the issue of new players entering the market by gaining access to the networks of mobile network operators. The consultation paper ODTR 00/32 entitled 'The Regulatory Framework for Access in the Mobile Market' seeks views on various forms of access including the resale of mobile airtime, independent service provision, indirect access and mobile virtual network operators. It considers the benefit that these players can bring to the Irish consumer, how they might stimulate competition, and the regulatory framework within which they could operate. The consultation process will last until mid June and the Director looks forward to a wide range of views in assisting her decision on key regulatory action in this area.

2.2 Enabling Competition

Whilst the facilitating of new operators entry into the market is a necessary condition for the development of competition, in many cases it is not sufficient and needs to be supplemented by other forms of regulation. This regulation takes the form of controls on prices and specific access requirements, in particular relating to interconnection. Fair access to the former incumbent's network is an essential principle for enabling new players to provide effective competition.

One means through which this is achieved is through the requirement on e*ircom* to publish its Reference Interconnect Offer (RIO). The RIO sets out e*ircom*'s stall of interconnection services for the other licensed operators and the charges for those services. Individual operators can then choose the elements they require to build their services and negotiate a specific agreement with e*ircom* on those issues. In April the ODTR concluded a further review of e*ircom*'s RIO, issuing a decision which outlines the Director's position on a number of key issues of importance to the industry, as well as widening the range of services that *eircom* must provide to other operators. Arising out of this decision, e*ircom* will now be required to offer Service Level Agreements against delivery of interconnect circuits and will for the first time be required to pay penalties for failing to deliver on the timeframes specified. This decision notice also details the process to be followed by e*ircom* when introducing new interconnect products for its own retail arm and other licensed operators. All of this should lead to greater competition and hence tangible benefits to the consumer in terms of choice, price and quality.

Also in April, the Director published her decision on the introduction of Local Loop Unbundling[2] (LLU) in Ireland. In this decision, ODTR 00/30 - 'Report on the ODTR consultation on local loop unbundling: Decision Notice D6/00', she announced a framework to facilitate the introduction of LLU by April 2001, as well as the convening of working groups to oversee its implementation. The provision of 'unbundled access to the local loop' will enable new entrants to access the e*ircom* local network and deliver new cost-effective services such as DSL direct to consumers. LLU has the potential to reduce the cost of access to subscribers, complement alternative access infrastructure and facilitate the prospect of greater competition in access markets over the coming years. The framework announced by the Director moves forward aggressively on the option of bitstream access, but also starts the preliminary groundwork for the other options - both full physical access and line sharing. High-speed bitstream access enables the service provider to provide high-speed services to customers, with the access provider installing the access link using its preferred ADSL equipment and configuration. The Director welcomes the interest and enthusiasm of the industry and believes that it is only through such a collaborative approach that the tight timetable for LLU can be met.

[2] Local Loop unbundling (LLU) is an access service provided between the customers premises and the line side of the access provider's (in the Irish case, Eircom's) local switch. It gives the access seeker access to the 'last mile' (the local loop from the point of interconnect to the customer's premises). LLU is attractive to the new entrant because it replaces a large up-front investment cost with a rental cost and provides a relatively low cost and quick means of obtaining access to customers.

3 Market Overview

Since our last review in March, the Irish telecommunications sector has continued to expand rapidly, with almost all segments of the market experiencing increased demand. On the back of a booming economy, the mobile and Internet markets have maintained their buoyant development, while the relatively lower growth rates in the fixed sector belie an increasingly competitive environment, where the new entrants continue to make significant inroads into *eircom*'s dominant market share.

Based on revenue data from the operators[3] for the quarter to 31st March 2000, the ODTR estimates that the new entrants' share of the fixed line market is in excess of 10%[4]. New entrants market share is supported by the significant growth in *eircom*'s fixed wholesale traffic (competitors' traffic carried on *eircom*'s network), which grew almost 15 fold from 48 million minutes in the 12 months to March 1999 to 752 million minutes in the 12 months to March 31st 2000[5]. The ODTR expects that the new entrants' market share will continue to rise encouraged amongst other things by carrier pre-selection[6] and the imminent introduction of geographic number portability[7]. Ultimately the principal beneficiary of this competition is the consumer as competitors strive to provide the best mix in terms of price, choice and quality.

Employment in the sector has continued to flourish with the 10 largest operators employing over 15,000 staff[8].

3.1 Fixed Line Services

Although somewhat dampened by the significant movement by consumers towards mobile, the fixed line market continues to maintain an upward trend. In the twelve months to March 2000, the total number of fixed PSTN telephone lines grew by approximately 3.2% to just under 1.6 million lines. This has increased Ireland's penetration per household unit to 84%[9] and pushed the number of PSTN telephone lines per inhabitant up to 43.5%[10]. Whilst these levels still remain below many of our European neighbours, the phenomenal growth experienced in mobile penetration suggests a trend by consumers toward substitution of a fixed line by a mobile phone subscription. Currently, with the number of mobile subscribers now at over 1.65 million[11], the total number of mobile lines now exceeds the total number of fixed PSTN telephone lines. With more and more consumers increasingly using mobile as

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[3] In the previous quarter data was collected from a sample of operators as a pilot exercise and yielded a market share for the other licensed operators (OLOs) of between 6-7%. For the quarter ended 31st March 2000 all licensees (general and basic) were requested to provide information in order to provide a more accurate assessment of market share. Thus the market share figures for the two most recent quarters should not be considered directly comparable.

[4] This calculation is based on data provided by *eircom*'s competitors for the quarter to 31st March 2000 and *eircom*'s unaudited results for the 6 months to 30/9/99 and its Preliminary Statement of results for the full year ended 31st March 2000.

[5] From Eircom's Full Year 2000 Results p70.

[6] Carrier pre-selection is a service that enables a subscriber to the fixed network to select a different carrier from the local loop operator for the routing of all or some of its outgoing calls.

[7] Number portability refers to the ability of end-users to retain their telephone numbers when they change their network operator or service provider, their location or their service. This service is due to be introduced on a phased basis from July to November 2000.

[8] Average no. of full-time employees over the period 1/1/00 - 31/3/2000.

[9] From Eircom's Financial Results to March 2000.

[10] ODTR estimate.

[11] Estimate of the number of mobile subscribers as at 31/3/2000. Source: Mobile Communications 26th May 2000.

their main means of communication, the ODTR expects this trend to continue with mobile lines likely to exceed all fixed lines[12] by mid 2000.

With the increasing migration of voice to mobile, many analysts believe that the greatest opportunities in the fixed market will now be in the area of high-speed local broadband services. According to the latest AC Nielsen NetRatings figures, almost 18pc of all Irish residential Internet users are self-employed, suggesting that there is already a significant market for higher speed services among home-based Internet users. Currently the fastest speed available to most residential Internet users is 128Kps, around 5 times faster than the standard phone line. To meet the expected explosion in demand for broadband in the local network, a number of operators are currently investing heavily in upgrading their local loop networks so as to be in a position to provide these services.

Of these, *eircom* and the cable companies appear to be the most advanced. *eircom* is expected to invite other operators to work with them on the provision of trial services by the end of June or early July with an expected concentration on ADSL technology. Unlike regular dial-up services, ADSL provides continuously available, "always-on" connection, which means its pricing will be on a flat-rate basis, thereby alleviating concerns regarding the hour or length of time a user is connected. Under regulatory rules on non-discrimination, *eircom* must enable other operators offer services available to its retail arm and with ULL, ADSL type services will be available from several operators. The two main cable companies – *ntl* and Irish Multichannel – will also be serious competitors in providing local broadband. Under their digital licences issued last year, they are required to upgrade their networks and by March 2001, 140,000 houses (200,000 including MMDS) must have digital TV services (which will include telephony/Internet capability) available to them. FWPMA licences provide for further competition in local access on an initial basis.

Whilst the development of broadband networks at the local level has only recently been initiated, at the national level very significant levels of investments in infrastructure have been underway for the past several years. New entrants such as Esat Telecom, OCEAN, MCI and GTS have all invested in high-capacity fibre optic links connecting the major towns and cities. In addition to investing in its own retail infrastructure, *eircom*'s carrier services division has reported an investment which delivers capacity equivalent to building a network one third the size of the *eircom* network as it was in December 1998. While all of this investment represents a substantial achievement, such is the growth of the economy in recent years that the demand for leased lines will necessitate continued infrastructural investment by all the operators.

Adequacy of supply coupled with the pricing of leased lines are two of the key enablers of the digital economy. In April, following extensive discussions with the ODTR, *eircom* announced a series of tariff reductions, which will effectively reduce the price of leased lines by on average 16–18% These reductions which are estimated to produce cost saving of approximately £20 million per annum will help to increase the competitiveness of Irish industry generally as well as assisting in the further development of Internet and e-commerce services. The price reductions will take effect from the start of July 2000 onwards.

Whilst these reductions will help to bring down the cost of national leased lines, the price of international leased lines is also expected to fall sharply, when the Government-supported Global Crossing link goes live later on at the end of this month. This connection, consisting initially of 32 STM-1 lines before rising to over 150 by the end of June next year, will link directly with Global Crossing's worldwide network and ultimately connect Ireland to over 200 cities worldwide. The Government has promised to sell on capacity at just above cost, introducing greater transparency into the market for international capacity. Coupled with the

[12] This includes PSTN, ISDN and leased lines.

recent landing of a second major transatlantic link by the Canadian firm 360Networks, this huge increase in supply is expected to bring almost unlimited bandwidth to the State and force prices for this kind of connectivity down sharply.

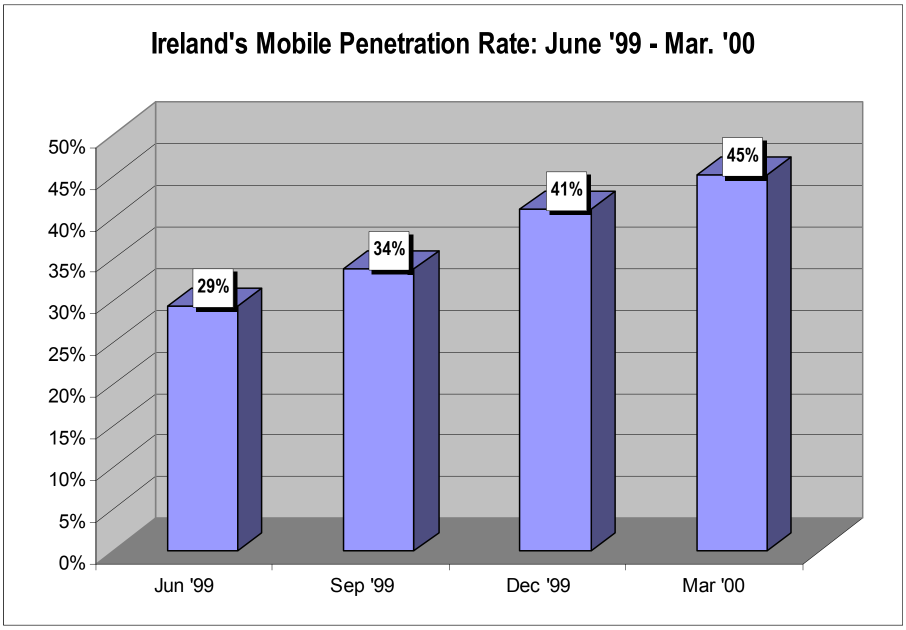
Table 1: Fixed Services offered in the residential and business markets.

Public Voice	International		Long Distance		Local	
Operator	***Bus.***	***Resid.***	***Bus.***	***Resid.***	***Bus.***	***Resid.***
eircom	✔	✔	✔	✔	✔	✔
Esat Telecom *	✔	✔	✔	✔	✔	✔
OCEAN *	✔	✔	✔	✔	✔	✔
MCI Worldcom	✔	✘	✔	✘	✔	✘
Cable & Wireless	✔	✘	✔	✘	✔	✘
GTS Ireland	✔	✘	✔	✘	✔	✘
Stentor	✔	✘	✘	✘	✘	✘
Interoute	✘	✔	✘	✔	✘	✔
Irish Multichannel & subsidiaries	✘	✔	✘	✔	✘	✔
Hibercall	✔	✔	✔	✔	✔	✔
Switchcom	✘	✔	✘	✔	✘	✔
Swiftcall	✘	✔	✘	✔	✘	✔
Valuetel	✘	✔	✘	✔	✘	✘
SM Communications	✔	✔	✔	✔	✘	✘

* Both owned by BT

3.2 Mobile Communications

Following a large jump in the number of subscribers during the fourth quarter of 1999, Ireland's mobile penetration rate maintained its upward trend into the first three months of this year, rising from an estimated 41% at the end of December 1999 to 45% at the end of March 2000. Spurred on by a combination of falling handset prices and new product offerings, the total number of subscribers in the country climbed to just over 1.65 million[13]. Eircell remains the larger operator with a reported figure of just over one million subscribers[14], bringing their share of the market to approximately 63% compared to Digifone's 37% share.



Source: ODTR estimates

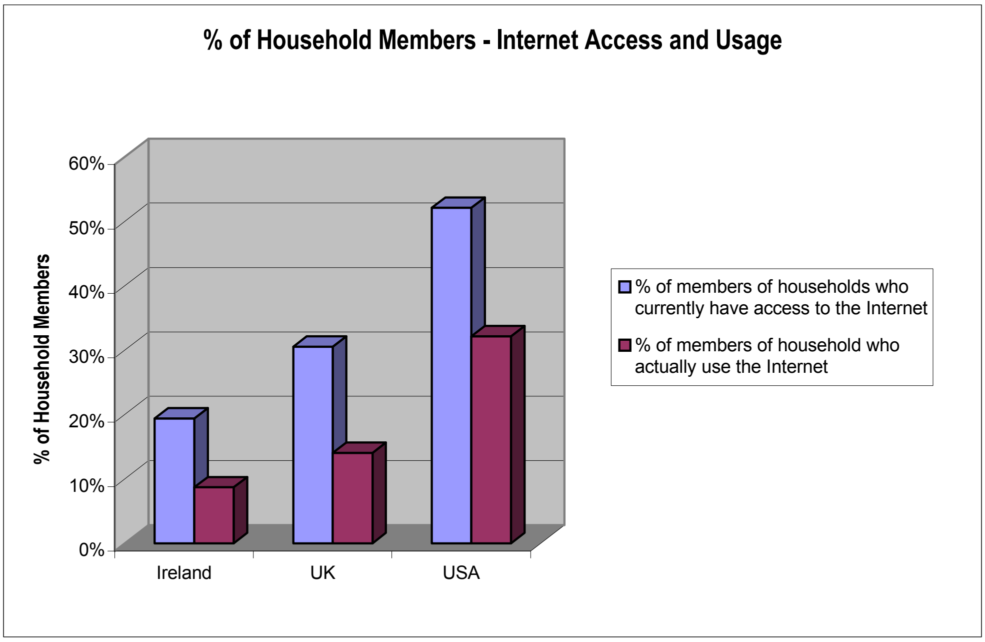
The biggest driver in the mobile market continues to be the growth of prepaid customers, with Eircell reporting that 83% of their net additions in the 12 months to March 2000 were 'Ready-to go' customers. Prepaid subscribers now account for almost 60% of Eircell's customer base, a figure broadly in line with most other mobile operators across Europe.

Although the growth in subscribers has meant an expansion of the market into increasingly cost-conscious sub-groups (e.g. teenagers, students, etc), Eircell have reported that in the 12 months to March 2000 the average minutes of usage over this period was 'steady' at 161 mins[15]. The recent introduction of prepaid WAP services by both Eircell and Digifone hopes to build on their success in this market, as both operators believe that in the longer-term the major growth opportunities will be in the area of data services.

[13] Estimate of the number of mobile subscribers as at 31/3/2000. Source: Mobile Communications 26th May 2000.
[14] Eircom Financial Results to March 31st 2000.
[15] Eircom's Financial Results to March 31st 2000.

3.3 Internet & Multimedia

Despite the increasing pervasiveness of the Internet in Irish society, in terms of household members' Internet usage and access, Ireland still lags behind many of the more developed Internet markets. According to research conducted during April by Nielsen netRatings, approximately 19% of Irish household members have access to the Internet, although just under half actually used it. This compares to 52% of American household members who have Internet access, two-thirds of whom made use of it, while in the UK 31% of household members have Internet access but, as in Ireland, just under half used it during the month of April.



Source: Nielsen//NetRatings, April 2000.

As well as having a comparatively lower level of usage, Irish household members also spend less time online than their counterparts in either the UK or the US. According to Nielsen's research, the average Irish household member spends just under four and a half hours a month surfing the Internet compared to over five hours in the UK and almost nine and a half hours in the US. Within the Irish figure a marked gender difference also exists, with Irish men spending an average of almost 5.5 hours per month surfing, with Irish women spending just three hours 20 minutes.

The price of basic telecom access is one of the main drivers of Internet usage. Even with a significant number of free ISPs in Ireland, overall household Internet usage is still low compared to the US where flat rate Internet access encourages the average household Internet user to spend more time online and have more sessions per month. Consumers paying for local phone charges on a time basis are discouraged from heavy usage and from logging on frequently.

Table 2: Average Internet Usage for Ireland, the UK and the US, April 2000.

	United States	Ireland	United Kingdom
Number of Sessions per Month	19	9	11
Number of Unique Sites Visited	11	17	17
Page Views per Month	671	358	400
Page Views per Surfing Session	36	40	36
Time Spent per Month	9:26:23	4:29:49	5:10:32
Time Spent During Surfing Session	30: 27	0:30:04	28:22
Duration of a Page Viewed	0:00:51	0:00:45	0:00:47
Active Internet Universe (actually surfed)	80.3 million	319,000	8.3 million
Current Internet Universe Estimate (those who had access, but did not necessarily go online)	130.2 million	713,000	18.0 million

Source: Nielsen//NetRatings, April 2000

4 Ownership Trends and Development of Competition

Following the high-profile consolidation within the Irish telecommunications industry during the first quarter of this year, the last three months has been considerably more subdued with a much lower level of M&A activity. In the fixed line sector, while formal approval of BT's acquisitions of both Esat Telecom and OCEAN Communications have been completed, *eircom*'s future shareholder base looks set to change with confirmation that the Dutch telecoms group KPN will sell its 21% stake in the company. Telia, which owns a 14% share in *eircom* through Comsource - a joint venture with KPN, has reversed its initial decision and now says it has no "immediate" plans to sell its stake. At the time of writing *eircom*'s share price continues to trade below its initial floatation price of 3.90 euros.

In a separate development, *eircom* have recently announced a policy decision to seek a separate stock exchange listing for their Internet related businesses in the last quarter of this year. Reporting a 175% increase in their ISP customer base to 243,000, the company has announced that it is considering a range of other options including possible acquisitions and joint ventures to accelerate the development of these businesses. The Internet was one of *eircom*'s fastest growing market segments during the last 12 months, with its two Internet subsidiaries – Indigo and *eircom*.net claiming a 60% share of the ISP market in Ireland.

Amongst the other players, Nevada Telecom, a joint venture between the UK's Energis and the Northern Ireland electricity company Viridian, has made a formal offer for the Dublin-based operator - Stentor Communications. Following the announcement by Stentor's majority shareholder CRBF, of its intention not to provide additional capital, the bid is being recommended by Stentor's board. The IR£36 million bid, if successful, would enable Nevada to compete on an all-Ireland basis putting it in direct competition with *eircom*, BT/Esat and Cable & Wireless.

Elsewhere, Cable & Wireless has bought two subsidiaries of Lake Holdings - network integration businesses Lake Communications Systems and Topology Systems. Topology Systems will be renamed Cable & Wireless Topology and will offer network integration and services. The company which employs 60 people will join Cable & Wireless which already employs 360 people in Ireland. Cable & Wireless is expanding its operation in Ireland and this acquisition should enable it to become a provider of data and Internet protocol solutions in Ireland.

Global Crossing Ltd, who are due to commence their Irish operations on the 30th June, are in the process of completing their acquisition of IXnet UK Ltd., a wholly-owned subsidiary of IPC Systems. IXnet focuses on the provision of voice, data and content distribution services to the financial services community. It has announced that it intends to continue to provide services to its Irish customers with no change in the rates or terms and conditions currently on offer.

5 Review of Telecommunication Tariffs

This section compares movements in incumbents' tariffs[16] for a range of telecommunication services since the ODTR's last review in March. The tariff comparisons, generated from the pricing of a number of baskets of telecom services, effectively rank Ireland's position against a group of key countries in relation to telecom tariffs. The baskets, which are constructed by Teligen using an OECD approved methodology, provide a 'snapshot' of Ireland's position vis-à-vis other countries at a particular point in time. The baskets of services examined in this review include:

- National PSTN
- International PSTN
- National Leased Lines
- International Leased Lines

Overview

Overall the trend in Ireland's telecom tariffs during the quarter has been static to slightly positive. In the PSTN sector, Ireland has maintained its rankings in both the national and international business baskets, while in the residential baskets it has improved its position by one ranking in both the national and international baskets. Since the residential baskets are more heavily weighted in off-peak calls, this result is most likely due to an improvement in Ireland's off-peak rates relative to the other countries included in the study.

In the leased line sector, Ireland has made some improvement in the national leased line basket climbing up the table from eleventh position to its current ranking of eighth. In the international leased line basket, Ireland remains in eighth position, with little change in the overall rankings of most countries. Ireland's ranking in both these categories is expected to improve in the coming months, with *eircom*'s recent announcement of reductions in national leased line tariffs coming into effect from the start of July, and the Government-supported Global Crossing high-speed link due to go live on 30th June 2000.

5.1 National Residential Basket[17]

The 'National Residential Basket' examines the average cost of national (incl. local) calls for the residential sector. At the ODTR's last review in March 2000, Ireland was ranked 16th among 19 key countries, eight rankings behind the UK and four rankings behind the OECD average. As set out in Figure 1, Ireland has gained one ranking and is currently in 15th position, now only two rankings behind the OECD average. Both the UK and Switzerland have continued to build on their recent gains with both countries gaining two rankings each to move up to 6th and 9th positions respectively.

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[16] It should be noted that competing operators sometimes offer cheaper tariffs and this would also be true in the other countries surveyed.

[17] The national PSTN basket is defined with a fixed charge basket based on installation and rental charges, and a usage charge basket based on a certain volume of calls, distributed over 14 different distances from 3 to 490km, at 6 different times of the day, and with 3 different call durations depending on the hour and distance. The basket is constructed using each country's average call charges and excludes VAT. For the purpose of this document we focus largely on European countries, although it is important to not that the 'OECD average' figure represents the average cost for all the 29 OECD countries.

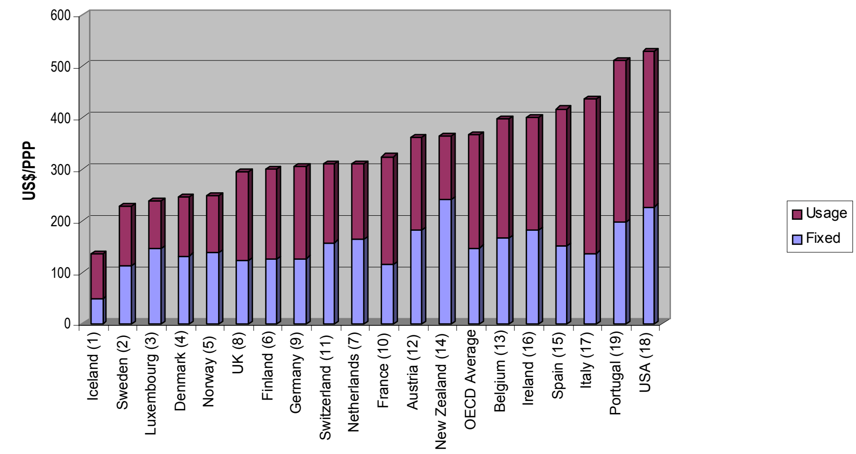


Figure 1 - OECD National Residential Basket - May 2000

NB: The numbers in brackets represent the countries respective rankings as at March 2000

5.2 National Business Basket

The 'National Business Basket' examines the average cost of national (incl. local) calls for the business sector. The business basket is made up of a much larger number of calls compared to the residential basket, with a greater proportion at peak times although they are generally of shorter duration. Previously, in March, Ireland was ranked 13th, one ranking behind the UK and one ranking ahead of the OECD average. As Figure 2 illustrates, Ireland has maintained this ranking and remains in 13th position. Similarly, the UK remains one position ahead of Ireland in 12th position. As with the residential basket, there has been little change at the top of the table, with the exception of Switzerland which continues to move up the table gaining another four rankings bringing it up to 7th position.

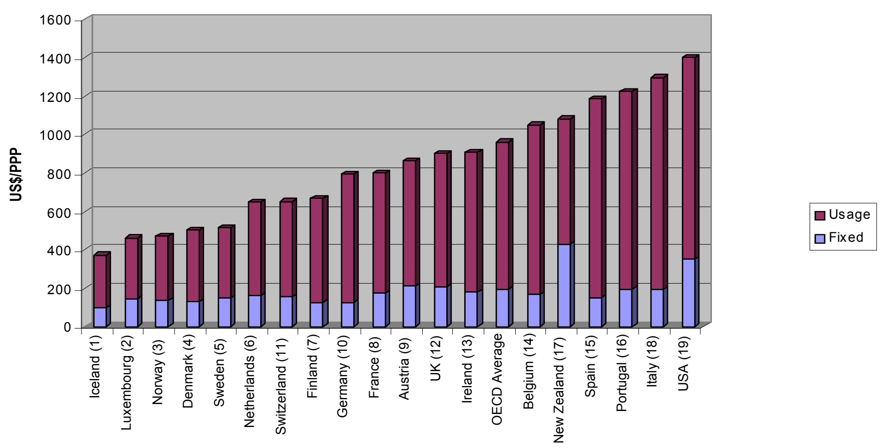


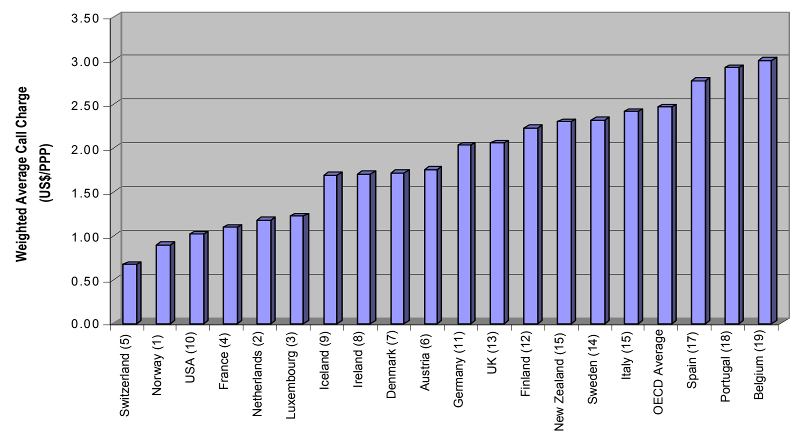
Figure 2: OECD National Business Basket - May 2000

NB: The numbers in brackets represent the countries respective rankings as at March 2000

5.3 International Residential Basket

The international residential basket sets out the average cost of international calls for residential users. In March, Ireland was in 8th position, five rankings ahead of the UK and nine rankings ahead of the OECD average. As set out in Figure 3 below, Ireland has maintained this position, although the UK has gained one ranking to move up to 12th position. Switzerland continue to make gains across all categories and moves up four rankings from 5th position to first. The only other notable improvement is in the US's position which sees it move from 10th position up to 3rd.

Figure 3: OECD International Residential Basket - May 2000

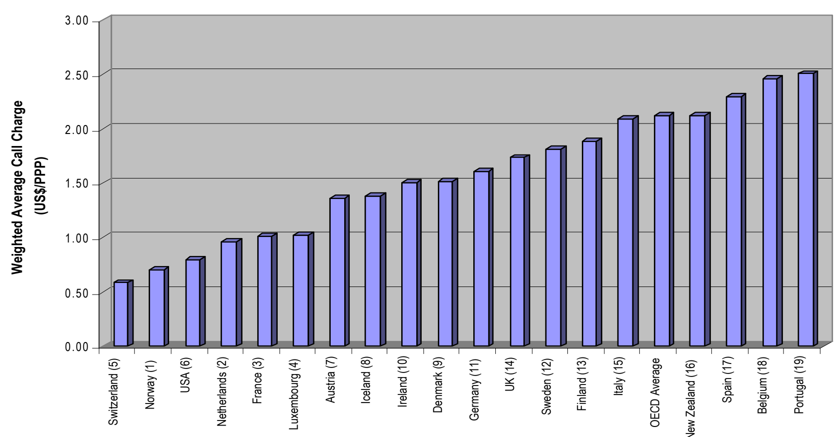


NB: The numbers in brackets represent the countries respective rankings as at March 2000

5.4 International Business Basket

Figure 4 below sets out the average cost of international calls for business users. As is the case in the construction of the national baskets, the international baskets have different weightings for the business and residential sectors. The business basket apportions 75% of the cost of calls to peak rates, while the residential basket apportions only 25% to peak rates. As can be seen from the graph below, Ireland has gained one ranking and has moved up to ninth position, three rankings ahead of the UK and seven ahead of the OECD average.

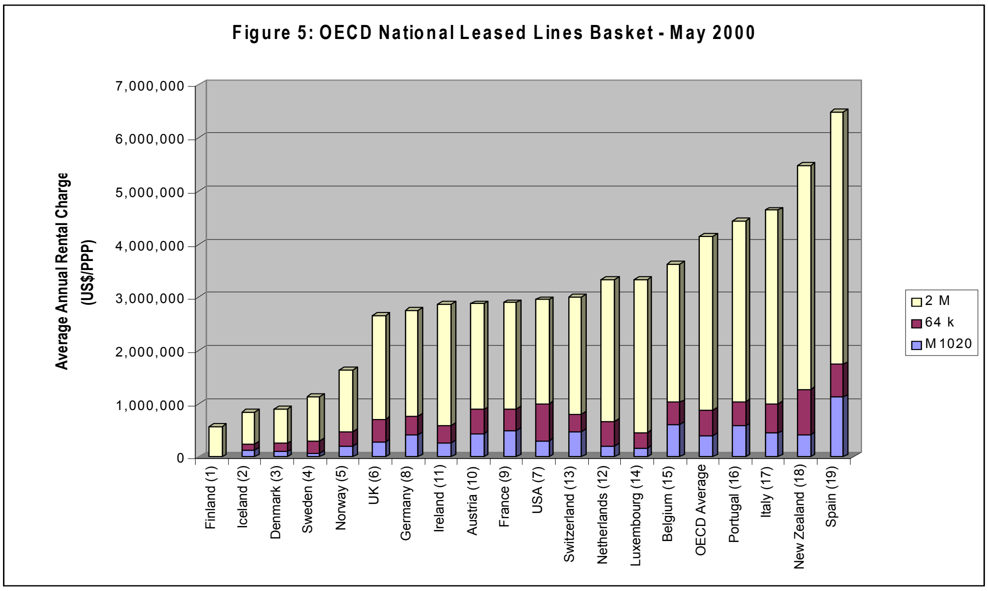
Figure 4: OECD International Business Basket - May 2000.



NB: The numbers in brackets represent the countries respective rankings as at March 2000

5.5 National Leased Lines[18]

Using the OECD methodology, figure 5 below illustrates the cost of various national leased lines as at May 2000. Since our last review in March, Ireland has gained three positions, climbing up to 8th place, two rankings behind the UK. A possible explanation for this improvement in Ireland's ranking may be the OECD's re-adjustment of the basket to include 500km circuits. Despite its improved position, Ireland still remains considerably behind the Scandinavian countries, although this is expected to change when the reductions in national leased line tariffs recently announced by *eircom* come into effect from the start of July 2000.



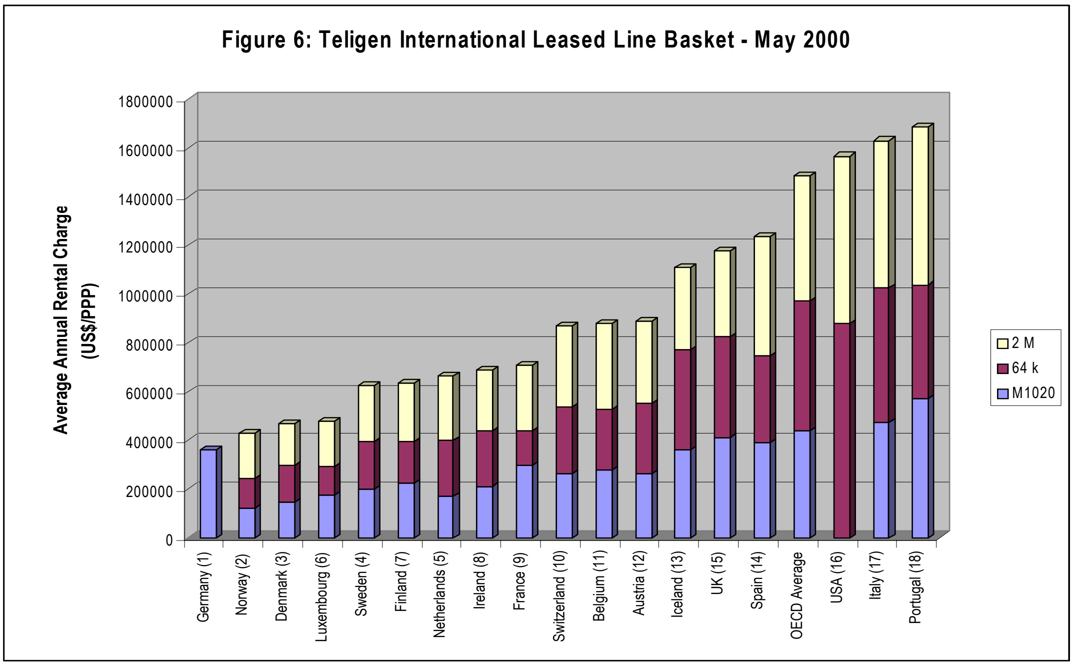
NB: The numbers in brackets represent the countries respective rankings as at March 2000

5.6 International Leased Lines[19]

Using a method developed by Teligen, figure 6 overleaf sets out the cost of various international leased line tariffs as at May 2000. In March 2000, Ireland was ranked 8th amongst the 18 countries, six rankings ahead of the UK and eight rankings ahead of the OECD average. Ireland has remained in this position with little change in the standing of most other countries in the overall rankings. Ireland's position in this category is expected to improve later in the year, with the roll-out of the Global Crossing and 360Networks high-speed links.

[18] The national leased line basket is based on 100 circuits distributed over distances from 2 to 500km. The total basket for all quantities is shown above. The leased line basket only takes the annual rental charges into account, because of the difficulties in defining a comprehensive, compatible list of installation charges. In Teligen's February 2000 leased line product, the national leased line basket was based on 100 circuits distributed over distances of 2 to 200km.

[19] Teligen has developed an international leased line basket, which is based on half-circuit prices from each country to all other OECD countries. The prices are weighted according to traffic volumes on each route to produce an average price for each country. The basket consists of twenty M1020 lines, twenty 64kbit/s lines and 2Mbit/s circuits.



NB: The numbers in brackets represent the countries respective rankings as at March 2000

Appendix I – List of Licensees

GENERAL LICENSEES	Operational	Voice Telephony	Infrastructural Network	Reseller	Other VAS
AUCS Communications Services (Ireland) Ltd. - formerly known as AT&T Unisource	✔	✕	✔	✕	VPNs, International Call Centre Solutions.
Aurora Telecom Ltd	✕	✕	✕	✕	✕
Budget Telecommunications Ltd	✔	✔	✔	✔	Non geographical numbers Freefone numbers
Cable & Wireless Services Ltd	✔	✔	✔	✕	Global Frame Relay, ATM Nat. Private & Int'l leased Circuits
Cablelink	✔	✕	✔	✕	Cable TV services
Cable Management Ireland Ltd *	✔	✕	✔	✕	Cable TV & telephony services
Carrier 1 AG	✕	✕	✕	✕	✕
Cignal Global Telecommunications Ireland Ltd	✕	✕	✕	✕	✕
Eircom *	✔	✔	✔	✕	Global voice, data and internet services provider.
Eircell	✔	✔	✔	✕	Mobile Operator
Esat Telecommunications Ltd *	✔	✔	✔	✕	Global voice, data and internet services provider.
Esat Digifone	✔	✔	✔	✕	Mobile Operator
Esat Net	✔	✕	✔	✕	Internet Service Provider
NASC Teoranta (T/a IOL)	✔	✕	✔	✕	Internet Service Provider
Formus	✕	✕	✕	✕	✕
IDT Europe BV Lts Liability Coolder	✕	✕	✕	✕	✕
Interoute Ireland Ltd *	✔	✔	✔	✔	Re-selling long distance domestic & international services; callcards.
ITG Group (IRL) Ltd.	✔	✕	✔	✕	Payphones, Equipment installation
GTS Ireland Ltd. *	✔	✔	✔	✔	Carrier and access services; Internet services; callcards.
IXC Communications Services Europe Ltd.	✕	✕	✕	✕	✕
LCN-Ireland, L.L.C.	✕	✕	✕	✕	✕
LDMI Telecommunications of Ireland (previously known as Vianvi Ltd)	✕	✕	✕	✕	✕
Mastercall International Ltd	✕	✕	✕	✕	✕

GENERAL LICENSEES	Operational	Voice Telephony	Infrastructural Network	Reseller	Other VAS
MCI WorldCom	✔	✔	✔	✕	Int'l frame relay, int'l freefone service into Ireland, Nat. & Int'l VPNs.
Meridian Communications Ltd. (formerly known as ACCess Telecom)	✔	✔	✕	✔	Resale of mobile telephony services
NTL (UK) Group, Inc.	✔	✕	✔	✕	Currently Cable TV services only
Ocean Communications Ltd *	✔	✔	✔	✕	Complete voice, data and internet service provider.
Post GEM	✔	✕	✔	✕	Internet Service Provider
PrimeTEC UK Ltd	✕	✕	✕	✕	✕
Primus Telecommunications Ltd	✕	✕	✕	✕	✕
Princes Holdings Ltd *	✔	✔	✔	✕	Cable TV & telephony services
RSL Communications (Ireland) Ltd	✕	✕	✕	✕	✕
S.M. Communications T/A Worldlink *	✔	✔	✕	✔	Prepaid Services
Startec Global Communications UK Ltd.	✕	✕	✕	✕	✕
Stentor Communications Ltd	✔	✔	✔	✔	Call centre and VPN solutions Callcards
Suir Nore Relays Ltd *	✔	✕	✔	✕	Cable TV and telephony services
Swiftcall Centre *	✔	✔	✕	✔	Callcards, Prepaid residential service.
Tele2 Telecommunications Services Ltd.	✕	✕	✕	✕	✕
Teleglobe Ireland Ltd	✕	✕	✕	✕	✕
Transaction Network Services Limited	✔	✕	✕	✕	Dial-up access for point of sales.
VarTec Telecom (UK) Ltd.	✕	✕	✕	✕	✕
Viatel (I) Ltd.	✕	✕	✕	✕	✕
WTI Ireland Ltd.	✕	✕	✕	✕	✕
Yac.com Ltd.	✕	✕	✕	✕	✕

* Indicates operators who currently offer residential services.

BASIC LICENSEES	Operational	Voice Telephony	Infrastructural Network	Reseller	Other VAS
Alord Holdings Ltd (T/a Switchcom) *	✔	✔	✕	✔	Callcards, Prepaid residential service.
AT&T Global Network Services Ireland Ltd.	✔	✕	✔	✕	Dial up and leased line services
Cargo Community Systems Ltd.	✔	✕	✔	✕	e-commerce solutions
Casey CableVision Ltd.	✔	✕	✔	✕	Cable TV Limited internet services
Conduit Enterprises Ltd	✔	✕	✔	✕	Nat. & Int'l directory enquiry services
EGN B.V.	✔	✕	✔	✕	Managed data systems & frame relay services for multinationals
Global Crossing Ireland Ltd.	✔	✕	✔	✕	Carriers' carrier
Global One Communications Ltd.	✔	✕	✔	✕	ATM Switching
GTE Internetworking International Corporation	✕	✕	✕	✕	✕
Hibercall Ltd. *	✔	✔	✕	✔	Prepaid & Postpaid Services, Callcards
Indigo	✔	✕	✔	✕	Internet Service Provider
Iridum Communications Germany GmbH.	✕	✕	✕	✕	✕
IXNET UK Ltd.	✔	✕	✔	✕	Limited service to banks.
Lake Communications System	✔	✕	✔	✕	ISDN, business solutions
MediaNet Ireland Ltd	✔	✕	✔	✕	Internet business solutions
Next Telecom	✕	✕	✕	✕	✕
Reuters Ltd T/A Reuters Connect Services.	✔	✕	✔	✕	Private wire services.
Sonic Telecom	✕	✕	✕	✕	✕
Société Internationale de Télécommunications Aéronautiques	✔	✕	✔	✕	Managed data network access services for the airline industry.
TCS (Ireland) Ltd.	✔	✔	✕	✔	Voice Telephony services via the Internet.
Tele Media International Ltd.	✕	✕	✕	✕	✕
Timas Ltd (T/A Galileo Ireland)	✔	✕	✔	✕	Frame relay service for travel agents
Torc Telecom	✔	✔	✕	✔	Re-selling long distance domestic & international services; callcards.
Unisource Carrier Services AG.	✕	✕	✕	✕	✕
Valuetel Ltd. *	✔	✔	✕	✔	Re-selling long distance domestic & international services; callcards.
Web-Sat Ltd.	✔	✕	✔	✕	Internet access via satellite; SMG news services.

* Indicates operators who currently offer residential services.