Commission for
Communications Regulation

Irish Communications Market

Quarterly Key Data Report

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Corrigendum for the March 2007, Quarterly Key Data Report, ComReg Doc 07/07:

- pg 8 of the March 2007 report: "Traffic originating on a fixed line network accounts for 57% of all voice minutes, while mobile originating voice minutes account for the remaining 43%" The figures should be 55%, and 45% respectively

- pg 21 of the March 2007 report: "In Q4 2006 71% of total broadband subscriber were classified as residential". Page 22 of the March 2007 report, figure 2.7.3 states that the figure was 73%. The correct figure is 73%.

- Comparison with previous quarters for a number of areas of the report are based on revised submissions received from a number of operators who have provided ComReg with either additional or updated data on previous submissions. These include Chorus, *eircom*, Irish Broadband, Rapid Broadband, Ker Broadband and 3 Ireland.

1 Overall Market Data

Data presented in this report is based on quarterly questionnaires completed by authorised operators for the period from 1st January to 31st March 2007. The report is based on submissions from 62 operators, which represent almost all authorised operator market activity.

1.1 Number of Authorisations

Figure 1.1.1 - Total Number of Authorisations

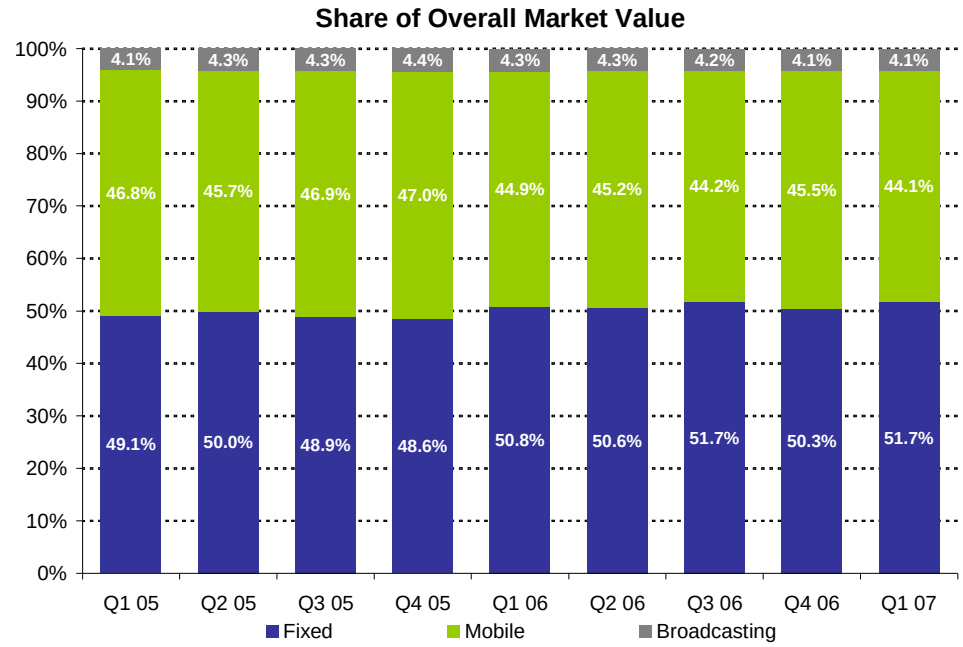
Total Authorisations	Mar 2007
No. of fixed and wireless authorisations	295
No. of mobile telephony authorisations	4
No. of broadcasting authorisations (incl. Cable TV, MMDS, Deflectors)	46
Total Number	345

Before providing networks or services to third parties, operators are required to submit a notification to ComReg for the purposes of compiling a register of authorised operators. At the date of publication there were 345 authorised undertakings in Ireland. It should be noted that the list above refers to the number of general authorisations granted by ComReg under the European Framework for Authorisations, and does not necessarily reflect the total number of commercially-active organisations or entities currently operating in the market. The total number includes a number of undertakings who are authorised to use license-exempt spectrum for the provision of services.

1.2 Overall Electronic Communications Revenues[1]

Data presented in Figure 1.2.1 examines the proportion of industry revenue attributable to the provision of fixed line, mobile and cable broadcasting services.

Figure 1.2.1 – Fixed, Mobile & Broadcasting as a % of Total Revenues[2]



Source: Quarterly Key Data Questionnaire

Overall electronic communications network and service revenues at the end of March 2007 were €1.12bn for the quarter, or €4.49bn on an annualised basis. Industry revenue increased by 0.7% in the quarter and by 9% compared to Q1 2006. Increased industry revenue this quarter is driven principally by growth in the fixed industry. According to the European Information Technology Observatory 2007[3], estimated Irish telecommunications spend as a % of total GDP was 2.28% in 2006, below the EU average of 3.03%.

In Q1 2007 fixed line revenues accounted for 51.7% of total electronic communications revenues, a 1.4% percentage increase since last quarter. In contrast the mobile industry's share of revenue dropped slightly from 45.5% in Q4 2006 to 44.1% in Q1 2007. This decline is due to seasonal influences such as the high level of mobile retail revenue attributable to mobile handset sales in Q4 2006, which are not reflected in the Q1 2007 figures.

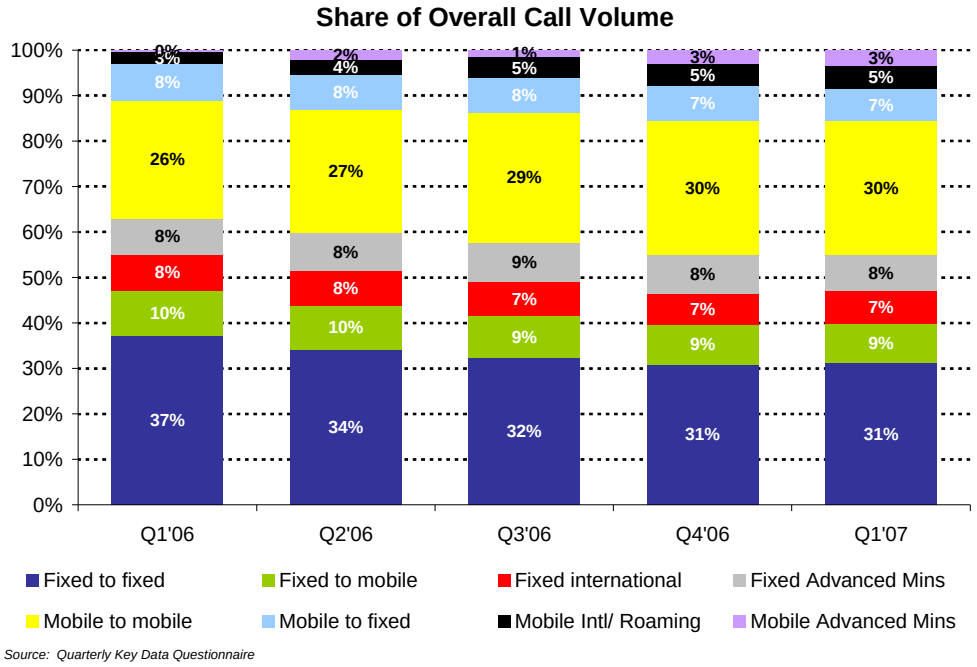
[1] For further detail on terms and definitions see ComReg Document Number 07/34a Explanatory Memorandum to Quarterly Key Data Report.

[2] The following services are accounted for in the total revenues figure: fixed (interconnection, retail narrowband services, leased line & managed services including PPC revenue as well as other revenues ((including web-hosting, co-location services, directory publication & other services)) broadband), mobile (connection, voice and data services, roaming) and broadcasting (including cable/MMDS broadcasting services, connection, rental and other charges).

[3] For further details on this report, see http://www.eito.org/

1.3 Overall Call Volumes

Figure 1.3.1 - Share of Total Voice Call Volumes (Minutes)[4]



Source: Quarterly Key Data Questionnaire

Figure 1.3.1 profiles volumes of voice calls by call type for both fixed and mobile voice on a quarterly basis. Voice minutes for the quarter totalled 4.45 billion minutes, a marginal increase on the previous quarter when total voice minutes were 4.44 billion minutes[5]. The proportions of voice traffic minutes remain unchanged this quarter compared to Q4 2006. Traffic originating on a fixed line network accounted for 55% of all voice minutes, while mobile originating voice minutes accounted for the remaining 45%.

[4] Fixed advanced minutes include premium rate services minutes, freephone minutes, operator services minutes, national and international virtual private network minutes. Mobile advanced minutes include premium rate services minutes and other mobile minutes such as voicemail, DQ, call completion minutes etc.

[5] Quarterly comparison is based on revised minute volumes for Q4 2006 as a result of additional information from operators as outlined in the corrigendum

1.4 Pricing Overview

This section examines Ireland's current and previous rankings based on comparison of prices for specific consumer baskets in a number of EU countries. Data on PSTN[6] and mobile basket prices is provided to ComReg by Teligen who use an OECD-approved methodology to compare fixed (PSTN) and mobile tariffs.

This format follows a basic three-step process consisting of:

- the construction of one or more baskets of telephone services;
- the pricing of those baskets; and
- the conversion of the individual currencies to standard units (i.e. US Dollars or euros and Purchasing Power Parities (PPPs)).

Countries are then ranked based on PPPs, with the least expensive country ranked 1st.

The charts presented in this section provide an overview of Ireland's ranking relative to other EU member states since the revision of the OECD baskets in February 2006. Individual pricing charts for each basket for February 2007 are analysed under the heading "Pricing Data" in the specific mobile and fixed sections of this document. Ireland's position is ranked in relation to other EU member states.

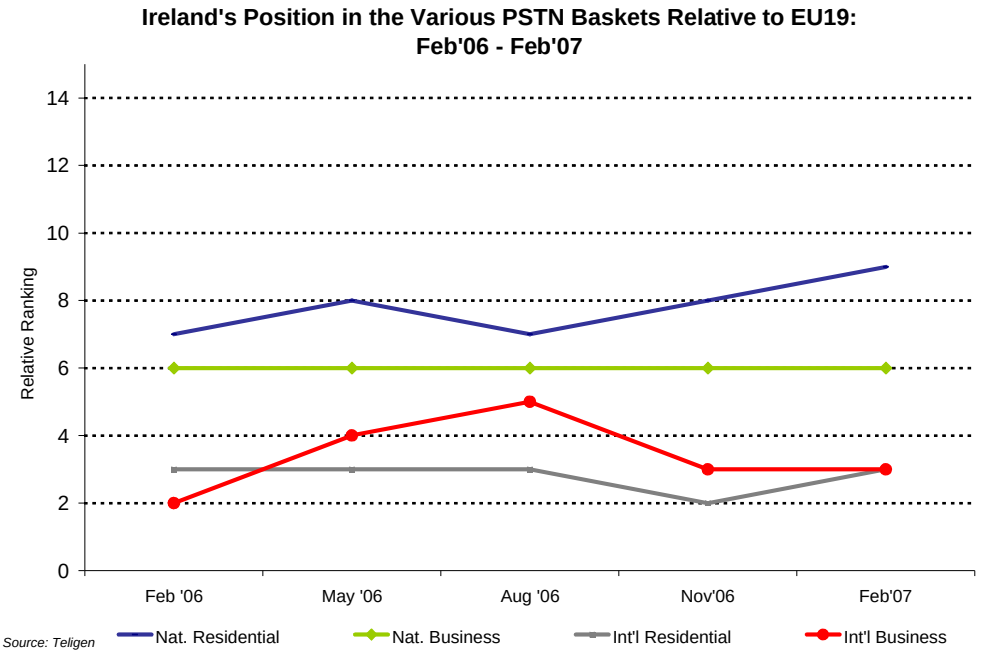
For further information on Teligen's methodology please see the accompanying memorandum ComReg 07/34a.

1.4.1 PSTN Baskets

Figure 1.4.1 shows the movement in Ireland's position relative to other EU countries in all PSTN baskets since February 2006, where the least expensive country based on the methodology is ranked 1st. Ireland remains less expensive than the average basket cost across all of the PSTN services analysed. This quarter the national and international business call baskets remained in the same ranked positions as in November 2006, at rank 6 and 3 respectively. The national business basket has ranked at 6th position consistently since February 2006. The national residential and international residential baskets dropped one rank each since November 2006.

[6] The PSTN refers to a public switched telephone network or copper telephony network, on which calls can be made. A PSTN line is more commonly known as a copper telephone line.

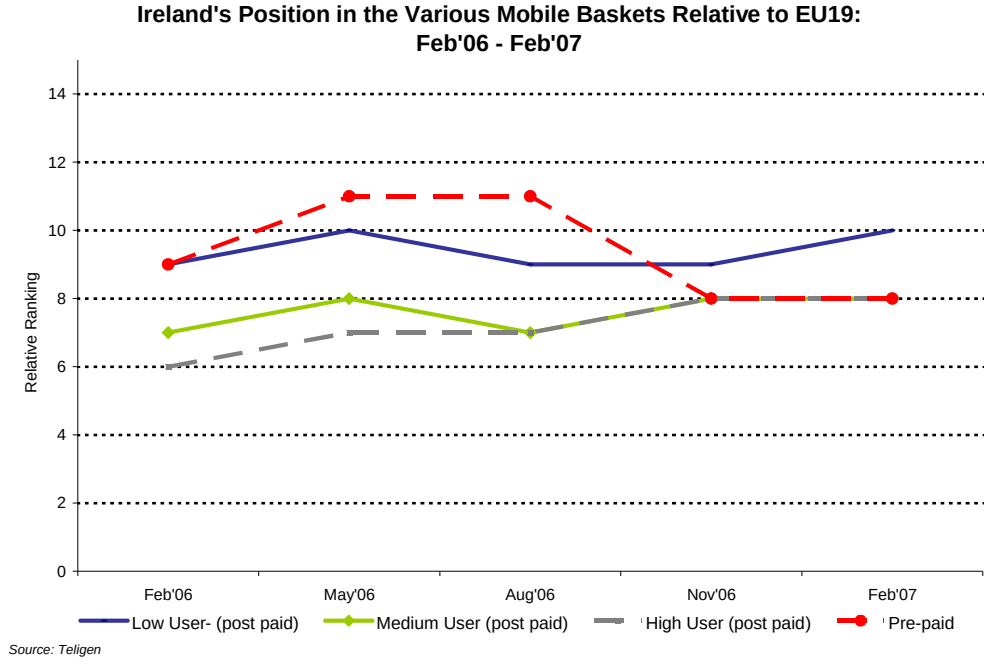
Figure 1.4.1 – Ireland's Position in the Various PSTN Baskets



1.4.2 Mobile Baskets

Figure 1.4.2 shows the movement in Ireland's position in all mobile baskets since February 2006 relative to the EU, where the least expensive country is ranked 1st. The pre-paid, medium-user and high user baskets all remained constant this quarter and are all currently ranked in 8th position. The low user post-paid basket was the only one to move this quarter, and has fallen one rank from 9th to 10th place among the 19 EU-member states analysed.

Figure 1.4.2 – Ireland's Position in Various Mobile Baskets

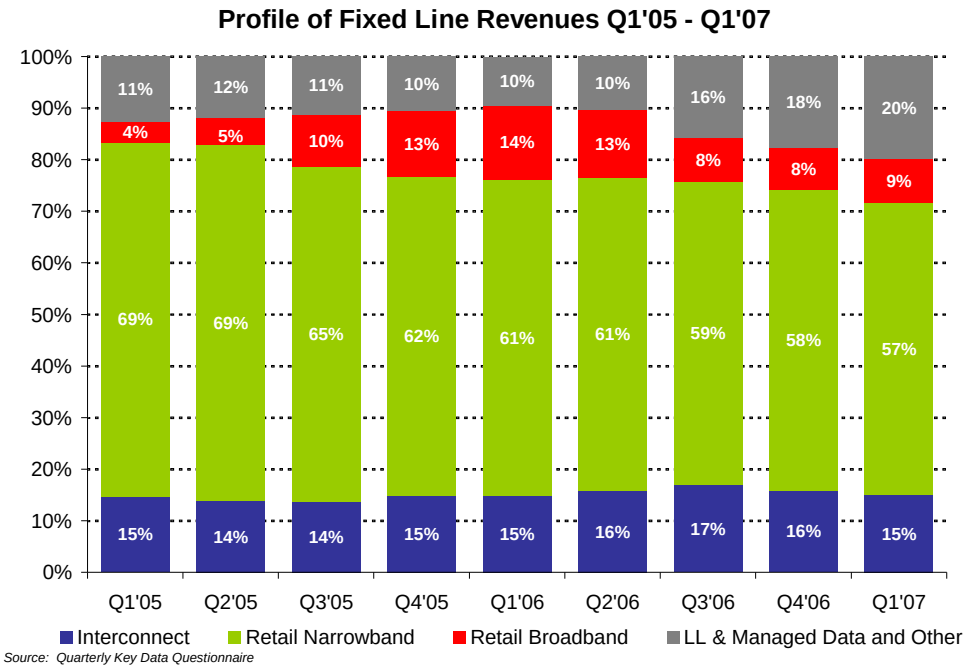


2 Fixed Market Data

2.1 Total Fixed Line Revenues

Fixed line revenues totalled nearly €580 million in Q1 2007, an increase of 4% since last quarter. In real terms, there were increases in all but the interconnection category, in particular, quarterly revenue increases were driven by those attributable to broadband and corporate services. Both retail revenues (from retail narrowband services, broadband services, and leased lines, managed data and other advanced data services) and wholesale revenues (from interconnect services) are captured in figure 2.1.1.[7]

Figure 2.1.1 – Profile of Fixed Line Revenues



Source: Quarterly Key Data Questionnaire

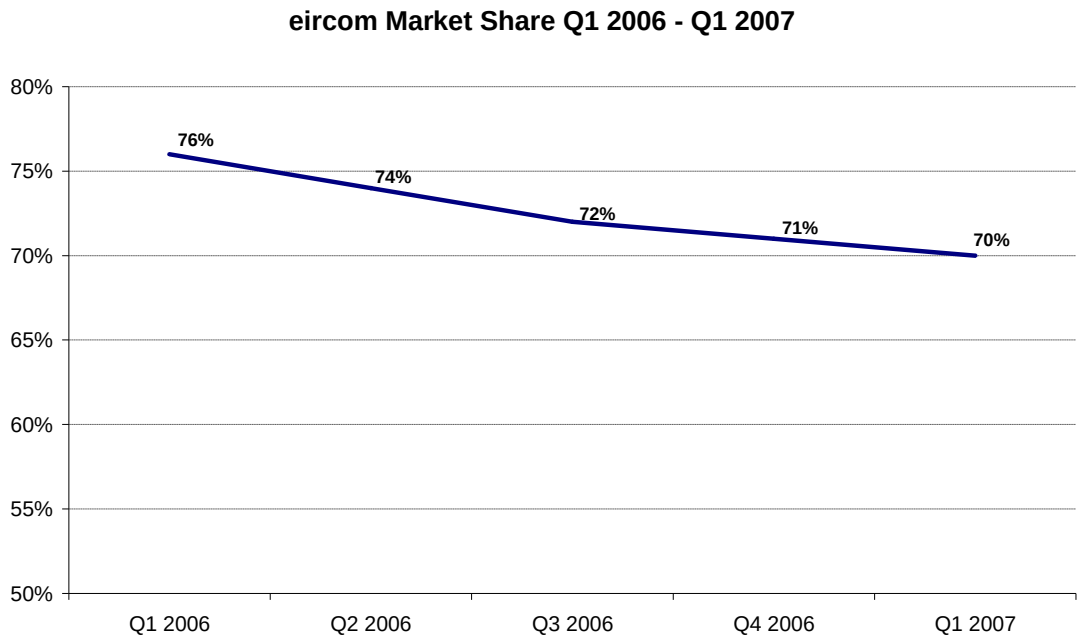
[7] Prior to Q3 2006 "Other Revenues" were included in the Broadband revenue category. Since Q3 2006, "Other Revenues" are included along with Leased Lines and Managed Data revenue and broadband revenues are reported separately. Other revenues include Packet Switch services revenue, ATM, Frame, other IP data revenues

2.1.1 Authorised Operators' Share of Overall Fixed Line Revenues

Figure 2.1.2 shows the market shares of the incumbent and other authorised operators (OAOs) in each of the fixed line service categories in Figure 2.1.1. Market shares are grouped within a number of revenue categories to link related services; however this classification does not necessarily reflect the specific markets identified in ComReg's Market Review process.

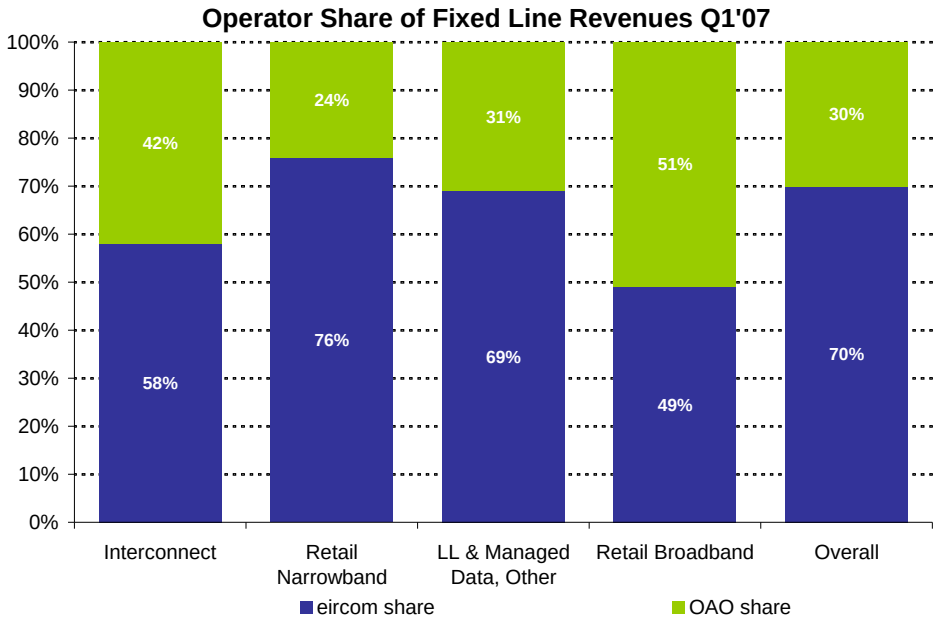
eircom's overall share of fixed line market revenue has seen a quarterly decline of 1%, and a 6% decline since the same period last year. The reported decline is likely to be due mainly to increased OAO activity in the market, but is also a result of an increase in the number of operators complying with requests made the Quarterly Report questionnaire, a number of operators are now being able to provide ComReg with fuller data sets as part of ongoing quality and compliance improvement initiatives.

Figure 2.1.2 – eircom Market Share



The European Commission's 12th Implementation Report, published in March 2007, reported that the average incumbent market share in the overall fixed voice telephony market has continued to decline. Average market share, in terms of retail revenues, fell from 67.7% in December 2004 to 65.8% in December 2005.

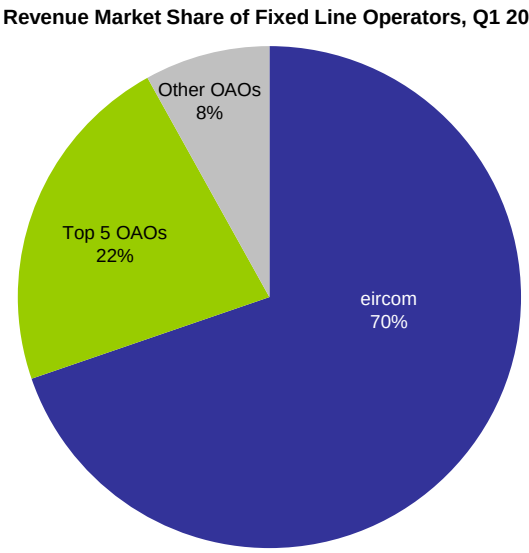
Figure 2.1.3 – Operator Share of Fixed Line Revenues



Source: Quarterly Key Data Questionnaire

Figure 2.1.3 outlines revenue market share in the market for Q1 2007 by breaking out the total fixed market in terms of shares held by the incumbent fixed line operator, the top 5 OAOs, and all other OAOs of fixed line revenue. After *eircom* - the largest revenue earning operator in the market, with 70% market share, ComReg estimates that the next five largest operators in terms of revenue contribute a further 22% of industry revenue, with the remaining 8% generated by all other operators in the fixed line market. Figure 2.4.1 is presented as additional analysis of the fixed market and should not be interpreted as a definitive statement of market shares in particular fixed line market segments.

Figure 2.1.4 – Revenue Market Share for incumbent operator, Top 5 OAOs and all other market operators

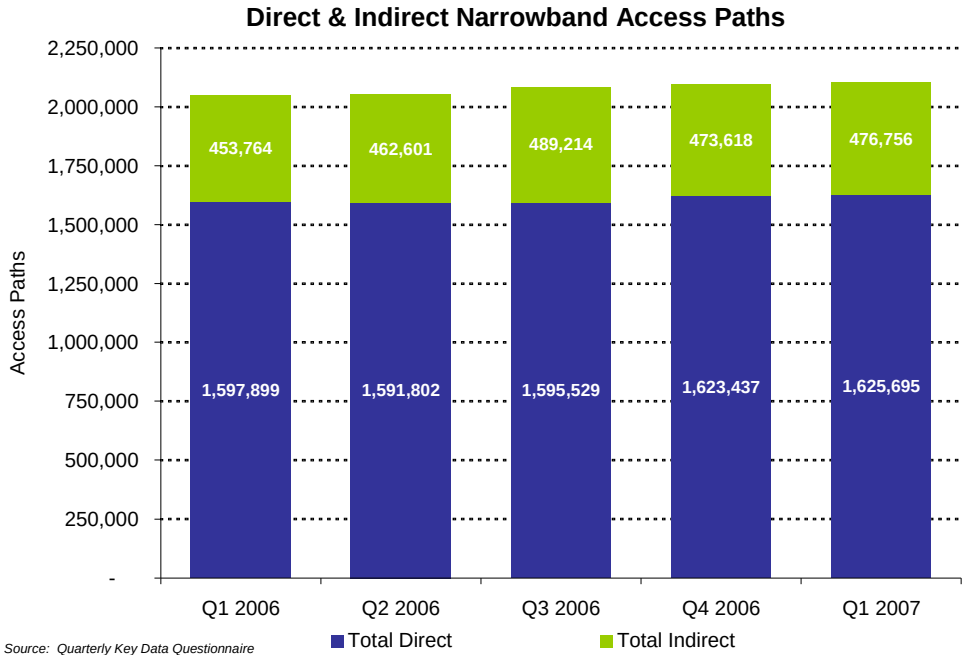


2.2 Fixed Line Access

2.2.1 Access Paths

Figure 2.2.1 presents the total number of narrowband fixed access paths (PSTN and ISDN) broken out by direct and indirect access[8]. There were just over 2.1 million direct and indirect PSTN and ISDN access paths in the Irish market in Q1 2007, a marginal increase of less than 1% since Q4 2006. ComReg includes direct access provided by means of Local Loop Unbundling (LLU) in direct access paths, based on the assumption that the line is directly controlled by an alternative operator. Indirect access paths totalled almost 477,000 in Q1 2007, a slight increase since Q4 2006. The number of indirect access paths is growing again after a decrease in Q4 2006. Indirect access still accounts for 23% of all access paths in the fixed market.[9]

Figure 2.2.1 - Fixed Access Paths



Source: Quarterly Key Data Questionnaire

2.2.2 Indirect Access Lines

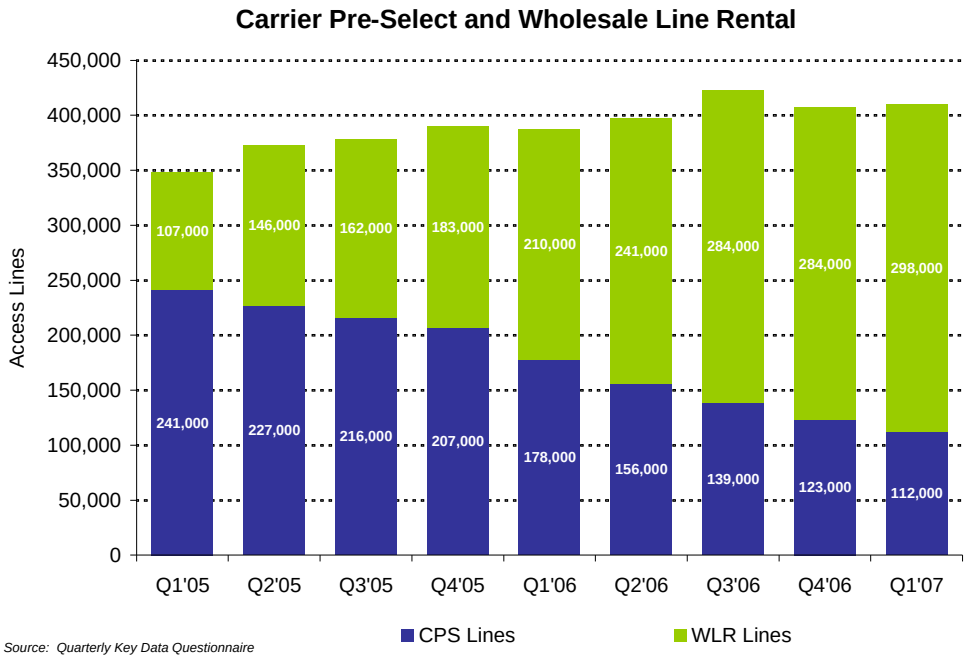
Figure 2.2.2 illustrates the overall number of PSTN and ISDN lines provided by means of either Carrier Pre-Selection (CPS) only or Wholesale Line Rental (WLR). Unbundled local loops, which are considered to enable OAO direct access are not included in this figure. In Q1 2007, there were almost 410,000 active lines, enabling OAOs to provide services to customers by reselling elements of *eircom's* copper network. The number of indirect access

[8] Indirect access paths relate to telephone lines provided to customers by means of carrier pre-select only or wholesale line rental. Carrier pre-select allows the user to receive all or a portion of calls from one provider and line rental from another provider (usually *eircom*). Wholesale line rental (also known as single billing) allows the user to receive every aspect of telephone service, including all calls and line rental from one single supplier.

[9] Access paths are not synonymous with access lines as for example in the case of ISDN paths, there may be more than 1 path provided via a single ISDN line.

lines has increased by 1% in overall terms this quarter, showing a slight recovery after the drop in Q4 2006. The annual growth in the number of indirect access lines for the 12 months to the end of March 2007 was 6%. Figure 2.2.2 charts the profile of indirect access in the Irish market. This chart shows how OAOs are migrating their customer base to single-bill services, i.e. WLR rather than CPS-only (i.e. calls only) services to customers. WLR lines managed by OAOs now account for 73% of indirect access lines compared to 31% in Q1 2005.

Figure 2.2.2 - Indirect Access Lines[10]



Source: Quarterly Key Data Questionnaire

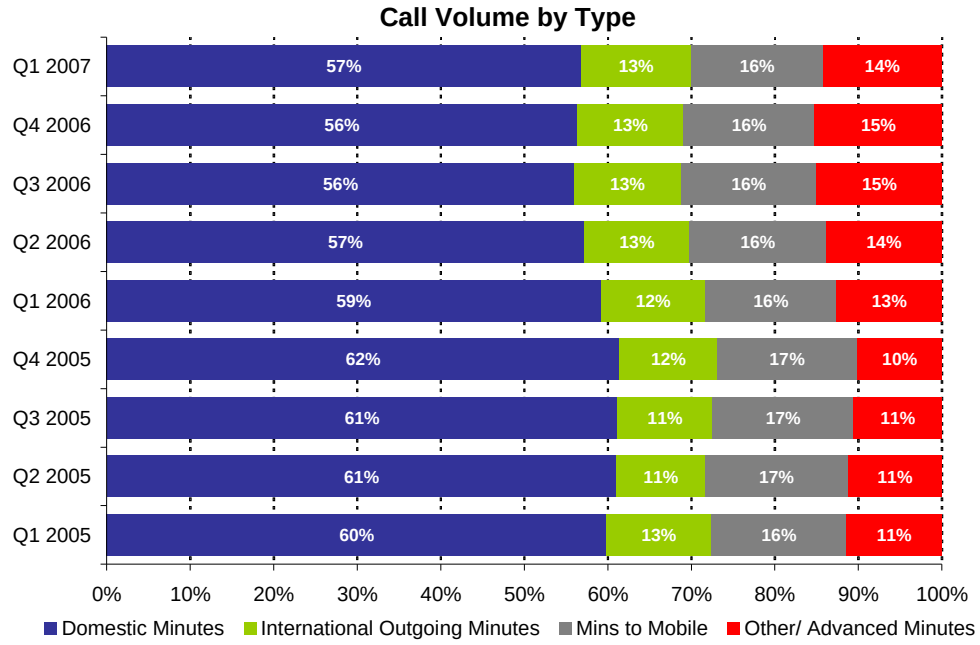
2.3 Fixed Voice Call Volumes

Fixed call traffic in Q1 2007 was just under 2.45bn minutes, a marginal increase of 1% since Q4 2006, although voice traffic minutes have fallen by 7% since Q1 2006. Figure 2.3.1 illustrates trends in fixed voice call minutes since Q1 2005.

The year-on-year decrease in total fixed line traffic reported by operators is primarily a result of a fall in absolute volumes of total domestic traffic minutes between Q1 2006 and Q1 2007. This is also reflected in the proportion of total fixed line voice traffic categorised as domestic minutes. In Q1 2006 domestic traffic minutes accounted for 59% of fixed line voice traffic, while in Q1 2007 this share of overall minutes had fallen to 57%. Changes in the volumes and profile of fixed line traffic will continue to be monitored by ComReg for evidence of changes in fixed line usage, such as increased fixed-mobile substitution.

[10] Number of lines are rounded to the nearest thousand

Figure 2.3.1 – Fixed Voice Call Volume[11]



Source: Quarterly Key Data Questionnaire

2.4 PSTN Pricing Data

ComReg presents independently-collated Teligen data using an OECD-approved methodology to examine the relative costs of a number of specific baskets of national and international telecoms services for both residential and business users. The data presented includes all EU-25 countries for which data is available.[12] Using this methodology, data is presented using USD ($) and Pricing-Power Parities (PPPs). The latter provide an indication of the cost of telecoms services in countries analysed in relation to the cost of all other products and services, and taking account of exchange rates differences.

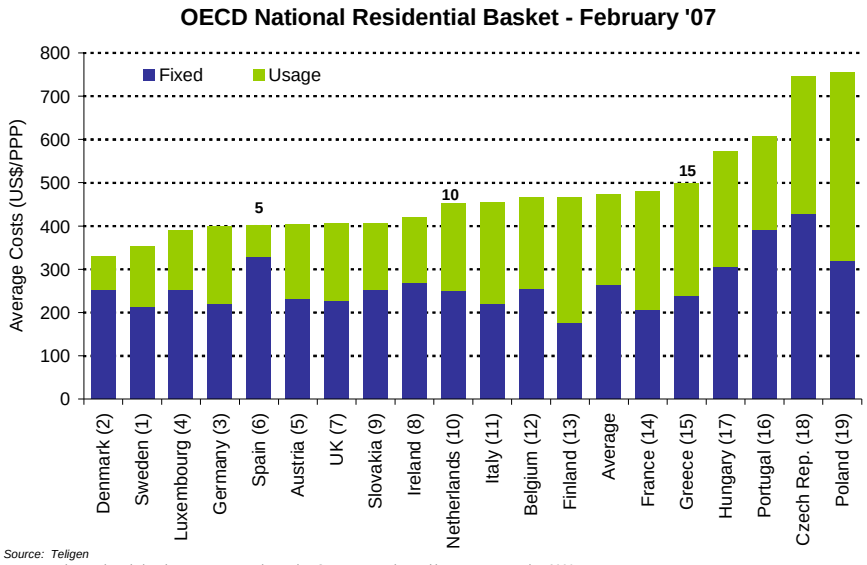
2.4.1 OECD National Residential Basket

Figure 2.4.1.1 illustrates Ireland's ranking in the national residential basket, based on a basket of calls and fixed costs for usage over a 12 month period. This chart is based on a comparison of the cheapest package or bundled product available for a specific customer usage profile. In many cases this will be a bundled service which shall include both line rental and a "bundle" of call minutes for a fixed monthly charge. It should therefore be noted that the "fixed" element in this basket is not an indication of the cost of basic line rental. In February 2007 Ireland was ranked at 9th position, a one-place drop since November 2006, five places better than the EU average in terms of price for this basket.

[11] Domestic Calls include local & national calls. Advanced service and other minutes include minutes to premium rate numbers, freephone numbers, callsave, operator services, VPN minutes, payphones and other services.

[12] This will be determined by whether the EU country is also an OECD member.

Figure 2.4.1.1 - OECD National Residential Basket – February 2007[13]

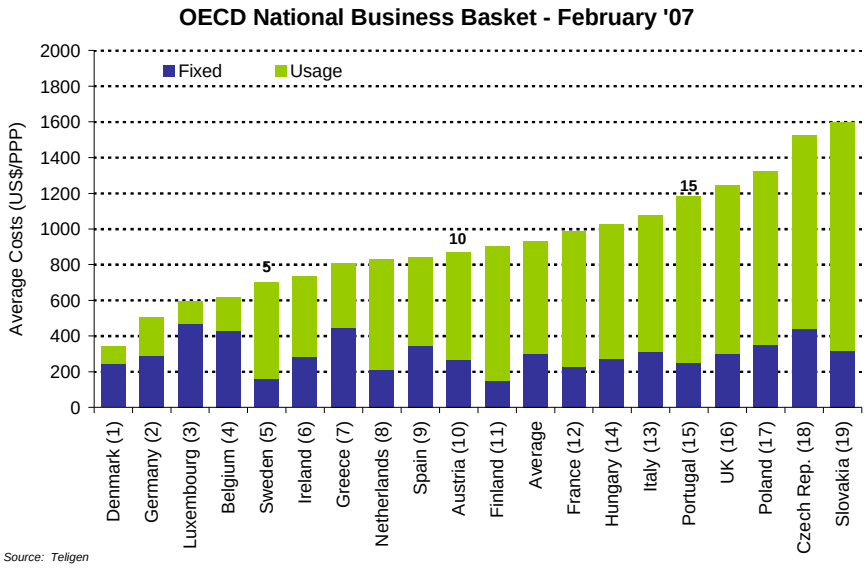


Source: Teligen
To note: The numbers in brackets represent each Member State's respective rankings as at November 2006

2.4.2 OECD National Business Basket

As with the residential basket, this chart is based on a comparison of the cheapest package or bundle available for a set number of voice calls over a 12 month period, and in many cases will include a fixed charge for access as part of a bundled service. It should therefore be noted that the "fixed" element in this basket is not an indication of the cost of basic line rental. Ireland has been placed in 6th position in the national business basket consistently over the past year, and is six places better than the EU average in terms of price.

Figure 2.4.2.1 - OECD National Business Basket – February 2007



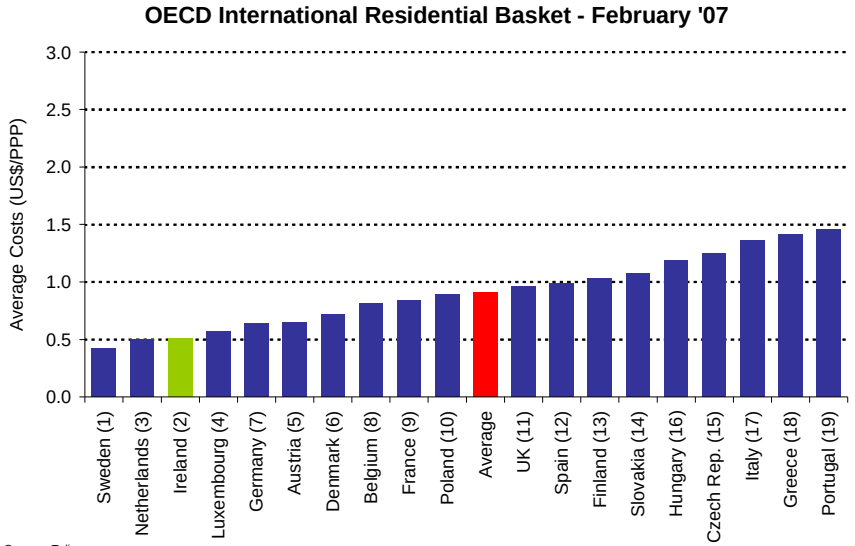
Source: Teligen
To note: The numbers in brackets represent each Member State's respective rankings as at November 2006

[13] Residential tariffs include VAT. VAT rates vary between member states.

2.4.3 OECD International Residential Basket

Figure 2.4.3.1 shows that Ireland is ranked in 3rd position this quarter in terms of the cost of three-minute peak international calls and five-minute off-peak international calls from one country to all other countries in the basket. This is a one place drop on the previous quarter, eight places better than the EU average in terms of price.

Figure 2.4.3.1 - OECD International Residential Basket – February 2007[14]

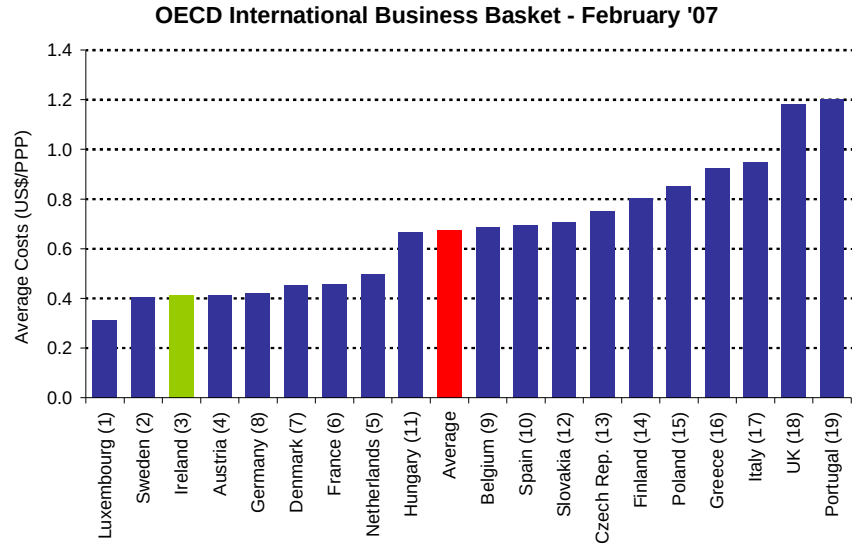


Source: Teligen
To note: The numbers in brackets represent each Member State's respective rankings as at November 2006

2.4.4 OECD International Business Basket

Ireland has remained in 3rd place among EU countries analysed in the international business basket, and is seven places ahead of the EU average in terms of price.

Figure 2.4.4.1- OECD International Business Basket – February 2007



Source: Teligen
To note: The numbers in brackets represent each Member State's respective rankings as at November 2006

[14] Residential tariffs include VAT. VAT rates vary between member states.

3 Internet and Broadband

3.1 Overall Internet Subscriptions

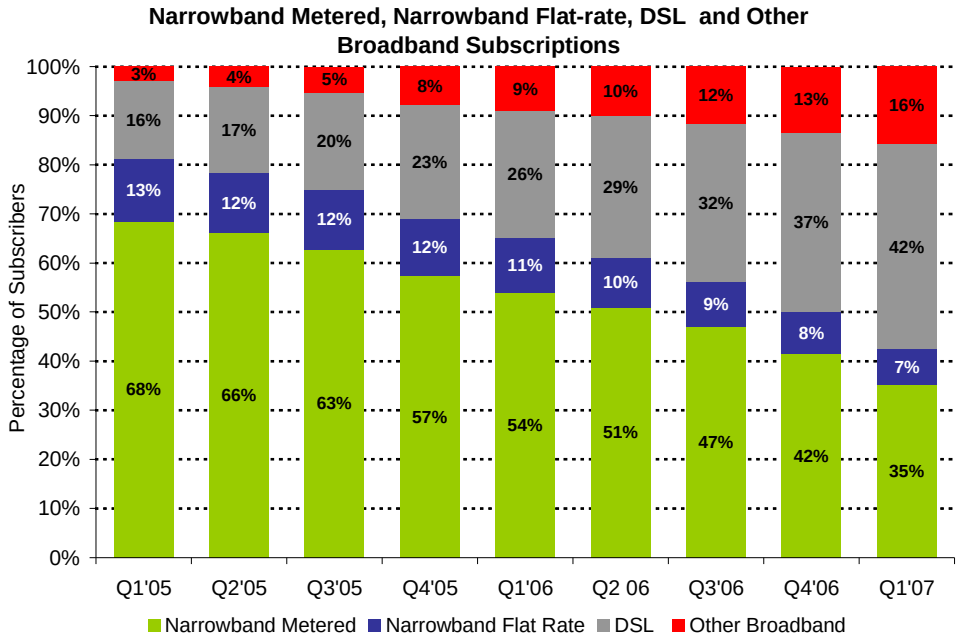
At the end of Q1 2007, there were a total of almost 1.046 million active internet subscriptions in Ireland. Table 3.1.1 shows the total number of narrowband and broadband subscriptions to internet services in Ireland.

Table 3.1.1 – Total Number of Active Internet Subscriptions in Ireland

Subscription Type	Q1 07 Subs	Quarterly Growth Q4'04-Q1'07	Year-on-Year Growth Q1'06-Q1'07
Metered Narrowband	367,500	-15%	-26%
Flat Rate Narrowband	76,300	-14%	-26%
ADSL Broadband[15]	436,000	+15%	+83%
Other Broadband	165,900	+19%	+98%
Total	1,045,700	+1%	+13%

Figure 3.1.2 profiles internet subscriptions in Ireland using the classifications of subscription type outlined in figure 3.1.1. The profile of internet subscriptions has changed considerably since Q1 2005, when broadband accounted for 19% of all internet connections. In Q1 2007, broadband subscriptions accounted for 58% of all internet subscriptions in Ireland.

Figure 3.1.2 – Profile of Active Internet Subscriptions in Ireland



Source: Quarterly Key Data Questionnaire

[15] DSL refers to a digital subscriber line, the means by which broadband speeds (i.e. in excess of 144k) are delivered over the copper telecoms network.

Figure 3.1.3 provides a historical view of the growth of total internet subscriptions in Ireland, and the migration from narrowband to broadband subscriptions since the start of 2003. The adoption of broadband in Ireland has led to a decline in the use of narrowband internet connections as existing subscribers migrate to faster speed connections. However the roll-out of broadband has also driven growth in the overall number of internet subscriptions in Ireland, from 656,000 in Q1 2003 to over 1 million subscribers in Q1 2007.

Figure 3.1.3 – Narrowband and Broadband Subscriptions Growth in Ireland

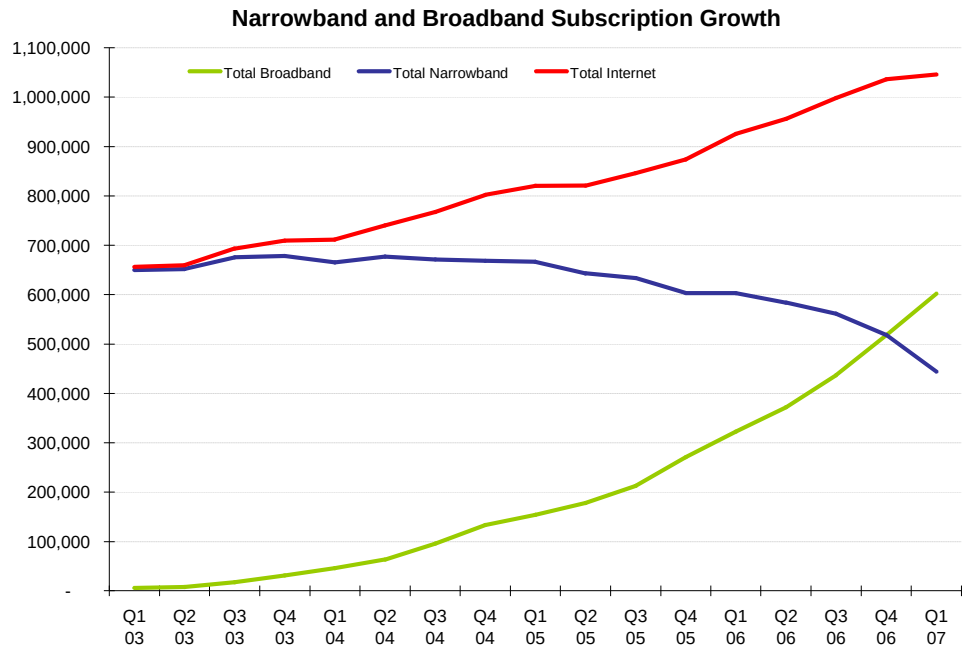
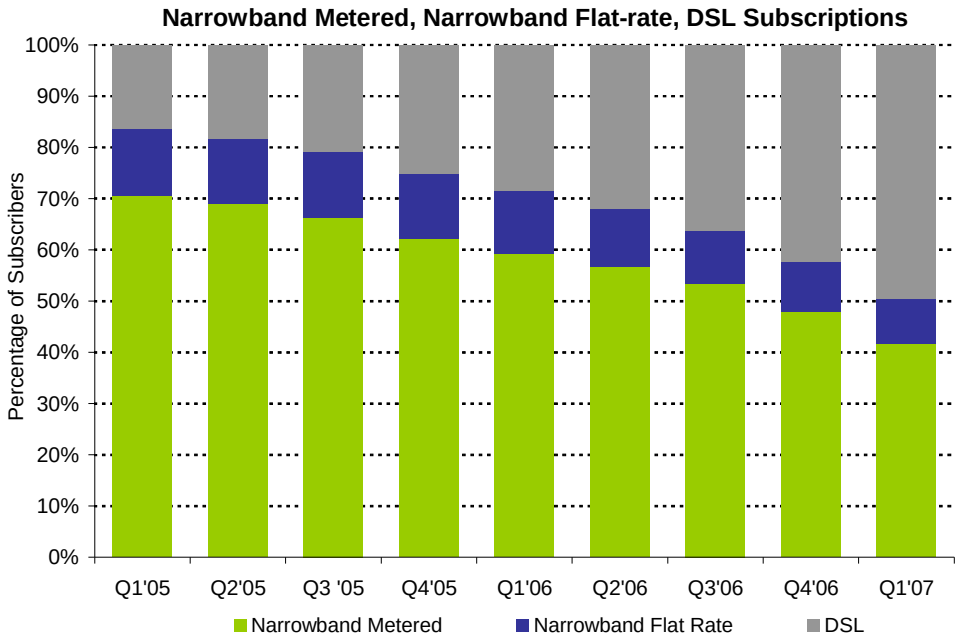


Figure 3.1.4 profiles only those internet subscriptions delivered over the copper telecoms network. It includes an analysis of metered or pay-as-you-go narrowband subscriptions, flat-rate narrowband subscriptions and DSL subscriptions. There were almost 880,000 active internet subscriptions over the copper telecoms network at the end of March 2007. DSL accounted for 50% of copper-based internet subscriptions, while metered narrowband subscriptions accounted for a further 42% of internet subscriptions over copper. Flat rate narrowband internet subscriptions make up the remaining 8% of copper-based internet subscriptions.

Figure 3.1.4 – Percentage of Copper Based Internet Subscriptions

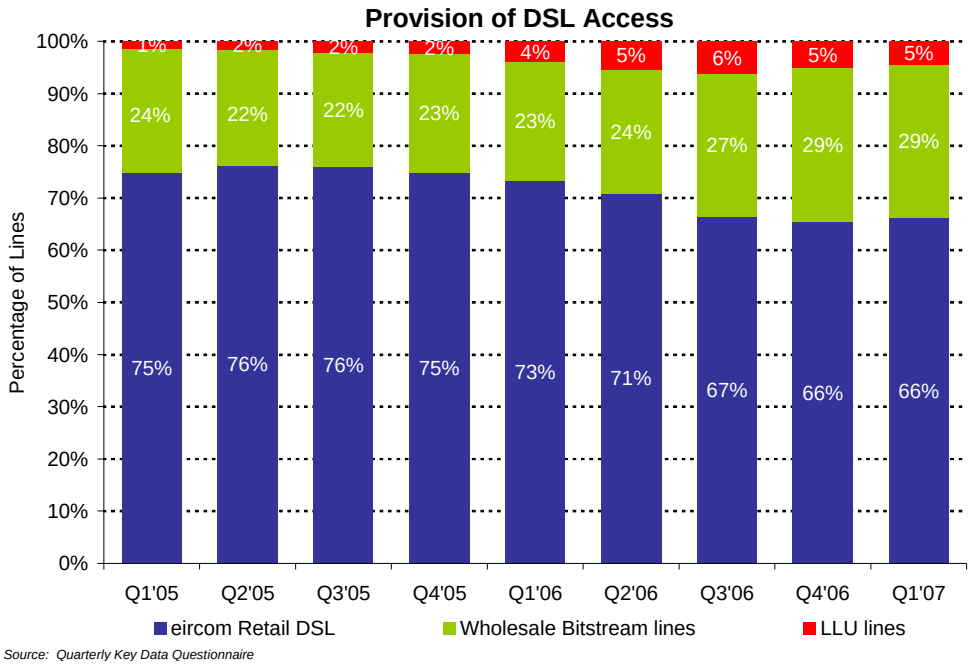


Source: Quarterly Key Data Questionnaire

3.2 Provision of DSL Access

Figure 3.2.1 profiles the provision of DSL access. DSL broadband services are provided to subscribers by operators using three alternative methods of access. DSL may be provided directly to the consumer by *eircom* using direct access to its network; this accounted for 66% of all DSL subscriptions in March 2007. DSL may also be provided by alternative operators (OAOs) who use either wholesale bitstream, which enables OAOs to resell *eircom*'s DSL service, or by offering DSL-based broadband using local-loop unbundling (LLU). At the end of March 2007, 29% of all DSL lines were provided by OAOs to subscribers using wholesale bitstream, and a further 5% of DSL lines were provided to subscribers by OAOs using local-loop unbundling. At the end of March 2007 there were just over 19,300 local loops unbundled, a marginal decline in lines since Q4 2006.

Figure 3.2.1 - Provision of DSL Access



Source: Quarterly Key Data Questionnaire

eircom's market share of retail DSL lines remains unchanged in Q1 2007 compared to the previous quarter as they retain 66% share of retail DSL subscriptions. In the past twelve months, *eircom's* share of retail DSL subscriptions has declined by 7%. More information on *eircom's* market share of the total broadband market is analysed in section 3.3 below.

3.3 Provision of Broadband Services

Figure 3.3.1 summarises the total number of broadband subscriptions at the end of the quarter by access technology.

Figure 3.3.1 – Broadband Subscriptions and growth rates by Platform

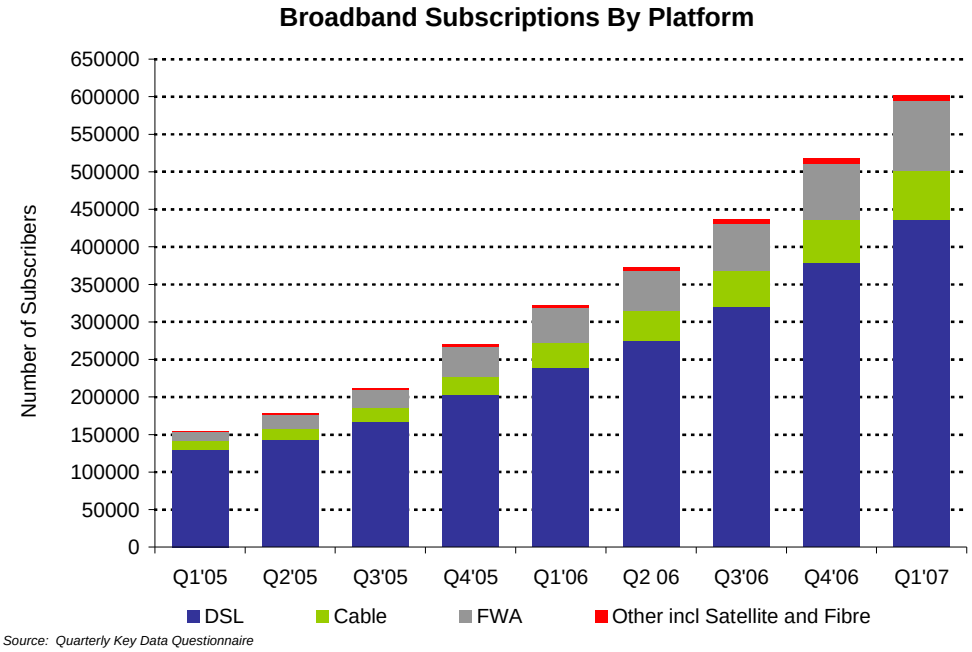
Platform	Q1 07 Subs	Quarterly Growth Q406- Q107	Year-on-Year Growth Q106- Q107
DSL	436,000	15%	83%
Cable	64,500	15%	98%
FWA	94,100	24%	98%
Other[16]	7,400	4%	112%
Total	602,000	16%	87%

At the end of March 2007, there were 602,000 broadband subscriptions in Ireland. The period January to March saw the highest number of net additional broadband subscriptions

[16] Other Broadband includes Satellite and Optical Fibre broadband subscriptions

to date, with more than 84,000 additional subscriptions reported by operators in the period, an average of 7,000 additional subscriptions a week. DSL remains the largest broadband access platform in terms of subscribers, accounting for 72% of all broadband subscriptions, while other platforms account for the remaining 28% of connections. Figure 3.3.2 illustrates the growth in total broadband subscriptions in the Irish market since Q1 2005.

Figure 3.3.2 – Broadband Subscriptions by Platform



Source: Quarterly Key Data Questionnaire

Figure 3.3.3 breaks down broadband subscriptions to provide an estimate of the split of subscriptions between business and residential subscribers. In Q1 2007, the proportion of broadband subscriptions classified as residential or consumer subscriptions is estimated as 75% of total broadband subscriptions, a 2% increase since last quarter. ComReg estimates that there are around 450,000 residential sector broadband subscriptions in Ireland. This equates to a broadband household penetration rate of 30%, compared to 25.4% last quarter. The increasing proportion of broadband subscriptions accounted for by consumer or residential subscriptions suggests that growth within the broadband market is currently being driven by consumers choosing to have a broadband subscription at home.

Figure 3.3.3 – Broadband Subscriptions by Subscriber Type

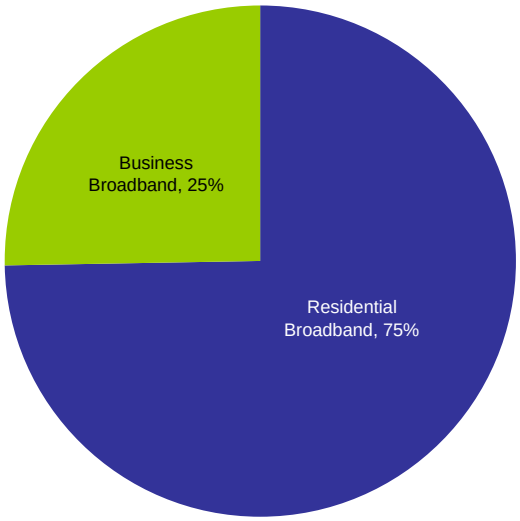
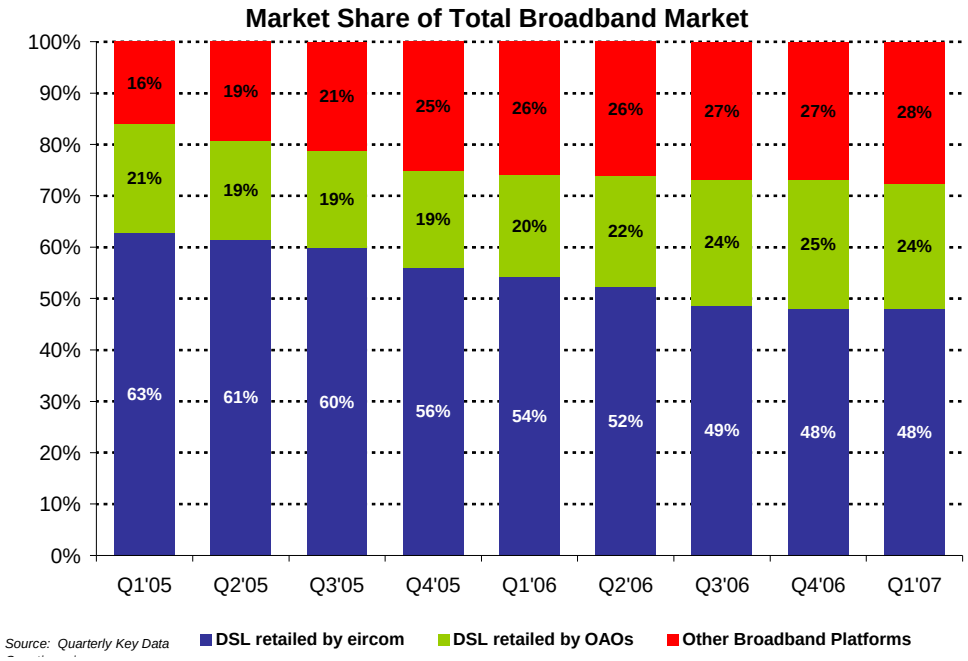


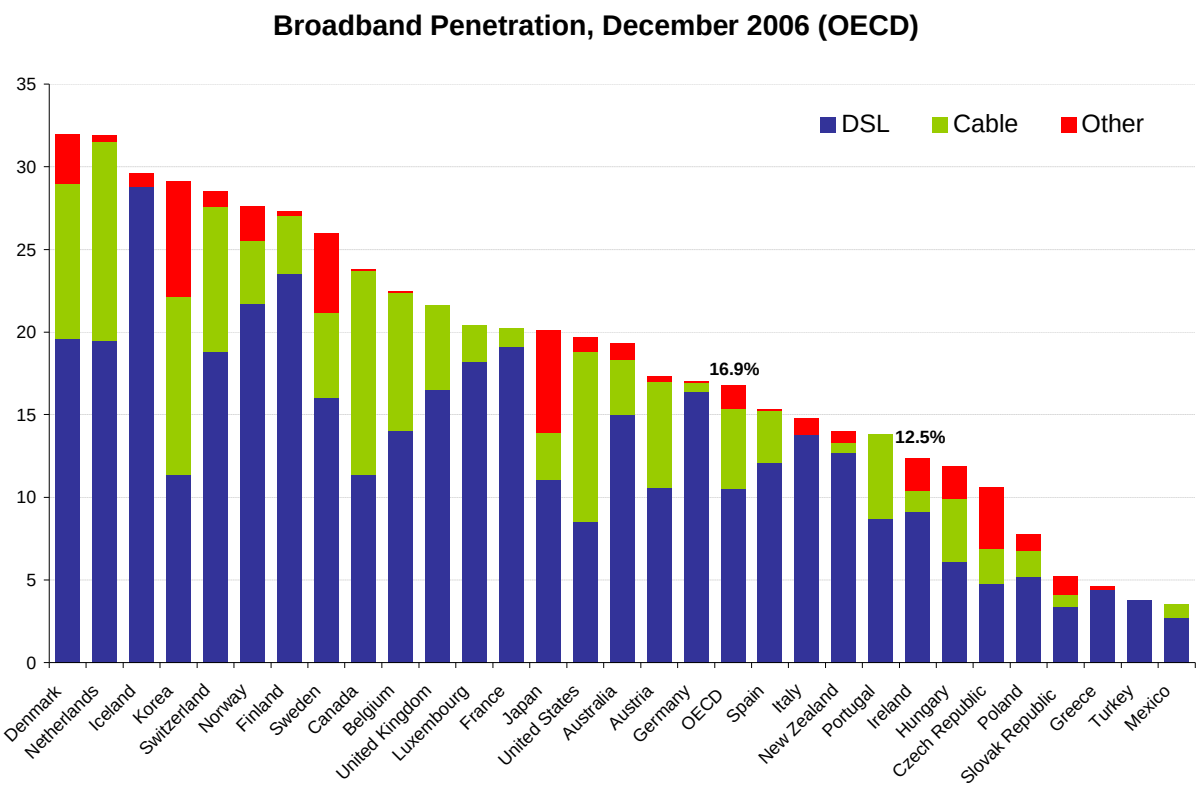
Figure 3.3.4 illustrates *eircom's* market share of total broadband subscriptions when compared to other authorised operators' (OAO) share of overall broadband subscriptions, including DSL and alternative access technologies. In this period, *eircom* held 48% market share of retail broadband subscriptions, unchanged since Q4 2006, and down by 6% since Q1 2006. DSL provided by OAOs using either Bitstream or LLU represented a further 24% of all broadband subscriptions. The remaining 28% of subscriptions was held by operators on alternative broadband platforms such as cable and fixed wireless access.

Figure 3.3.4– Market share of Total Broadband Market



In presenting broadband penetration benchmarks for European countries, ComReg uses either OECD or ECTA[17] data based on the most recently published statistics at the time of publication. ComReg provides broadband data for Ireland to both organisations. Figure 3.3.5 illustrates broadband penetration rates calculated by the OECD on a per capita basis at the end of December 2006[18]. The OECD calculated Ireland's broadband penetration at 12.5% in December 2006, compared to an OECD average of 16.9%. ComReg estimates that Irish broadband penetration in March 2007 was 14.2%[19].

Figure 3.3.5 – OECD Broadband Penetration Rates



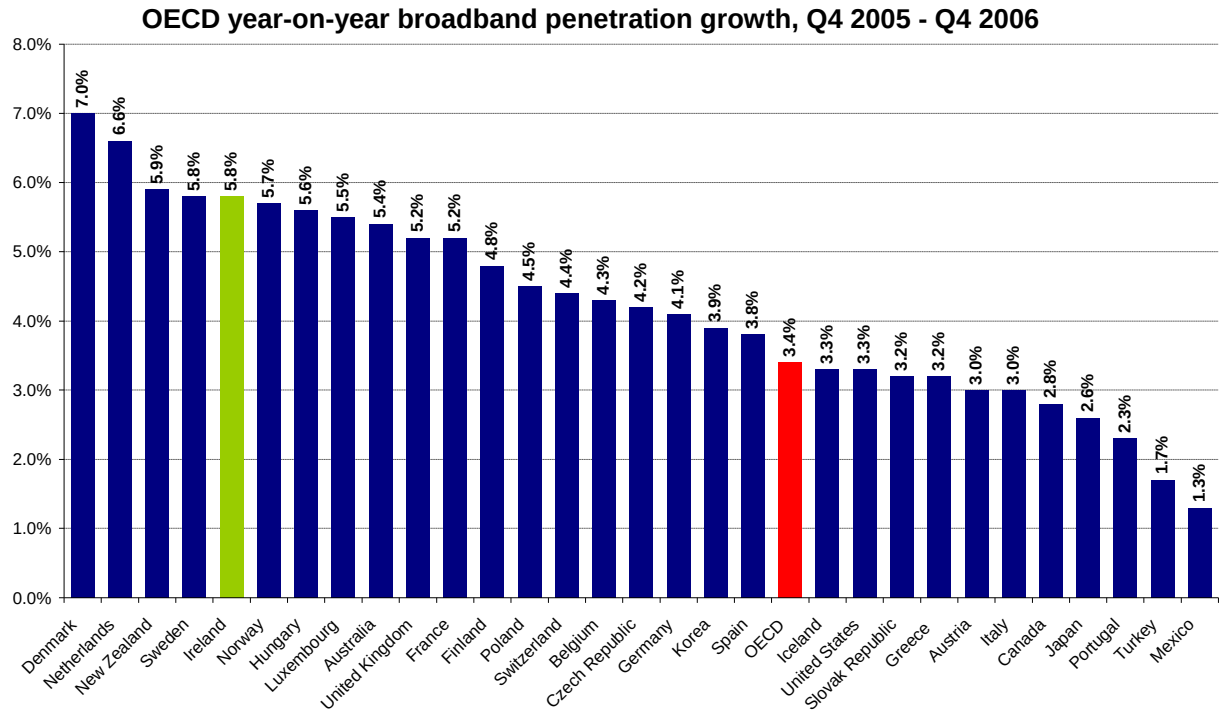
Over the past year the number of broadband subscribers in the OECD increased by 26%, from 157 million in December 2005 to 197 million in December 2006. This growth increased broadband penetration rates in the OECD from 13.5% in December 2005 to 16.9% at the end of December 2006. Figure 3.3.6 shows annual per capita growth in broadband penetration, and indicates that Ireland was among those countries with strongest per-capita subscriber growth in 2006 along with Denmark, the Netherlands, New Zealand and Sweden. Each of these countries added more than 5.8 subscribers per 100 inhabitants during the past year.

[17] European Competitive Telecommunications Association

[18] http://www.oecd.org/dataoecd/37/39/38449070.xls

[19] The broadband penetration rate is calculated based on total broadband subscriber numbers for DSL, Cable, FWA, and other broadband as a percentage of the total population of 4.235 million based on the 2006 Census; source: CSO.

Figure 3.3.6 – OECD Broadband Penetration Growth: Dec 2005 – Dec 2006



3.4 WiFi Broadband Access

ComReg also provides data on the provision of public and private broadband services over WiFi, as such access provides an alternative means of internet access for those users without internet access at home and/or a supplementary means of access for users who are temporarily away from their home or office . ComReg presents data on the WiFi market based on the number of WiFi hotspots and access points located nationally. Broadband hotspots are typically public wireless access points where a computer, usually a laptop, can connect to the internet. A WiFi hotspot can be made up of one or more WiFi access points[20]. In Ireland, as in many countries, WiFi hotspots tend to be found in airports, hotel lobbies and cafés and restaurants. In most cases, the user pays for high-speed internet access at an access point, based either on a vouchered payment for a specific amount of time online or a recurring monthly subscription. There are a number of providers of these services in Ireland including Bitbuzz, *eircom*, BT Ireland and Wireless Projects. ComReg will continue to assess the appropriate WiFi metrics for the Irish market and analyse growth rates in WiFi broadband access as part of its on-going review of the broadband sector.

[20] A WiFi access point is a base station through which WiFi users can access the internet

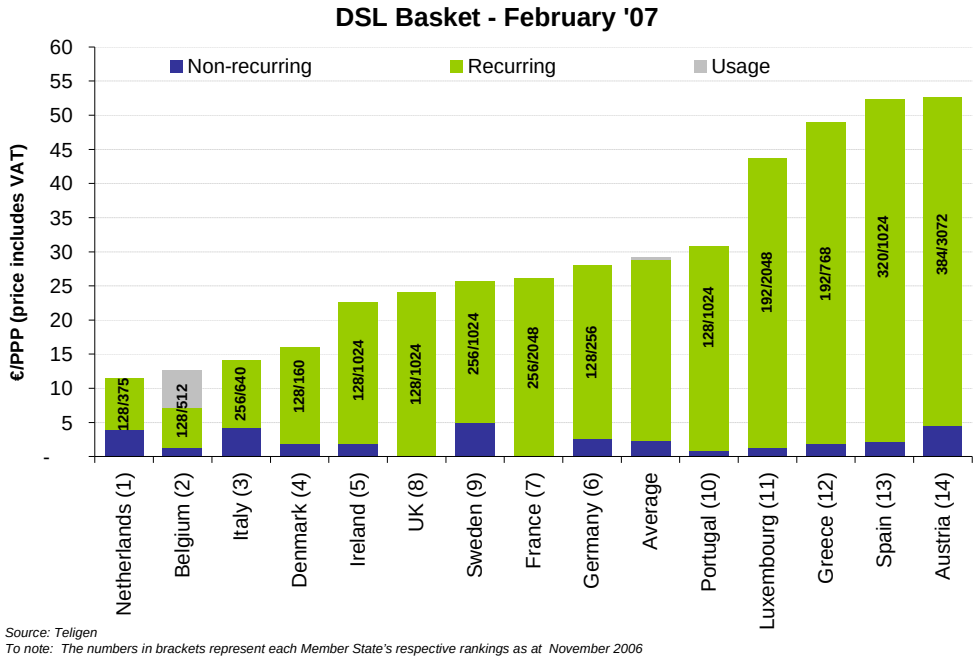
Figure 3.4.1 – WiFi Hotspots and Access Points

	Q1 2007	Q4'06-Q1'07 Growth	Q1'06-Q1'07 Growth
WiFi Hotspots	1,271	+3%	n/a
WiFi Access Points	2,267	-1%	n/a

3.5 ADSL Pricing Data[21]

ComReg has commissioned Teligen to produce independent benchmarking of broadband prices in the residential and business markets across a number of EU member states. In order to ensure that services can be adequately compared, the benchmarking model prices a range of DSL and cable services based on defined usage of 25 hours per month, with each session assumed to last for 1 hour. It further assumes a download usage of 10 Gigabytes every month for each service. The data presented in the following two charts illustrates the cheapest product available in each country under these usage assumptions for residential DSL products, and for both DSL and cable offerings. Details on the upload and download speeds for each of the analysed products are included in the figures. Further information on the composition of the broadband baskets can be found in the Explanatory Memorandum which accompanies this report[22].

Figure 3.5.1 – Lowest Monthly Rental ADSL Basket- February 2007



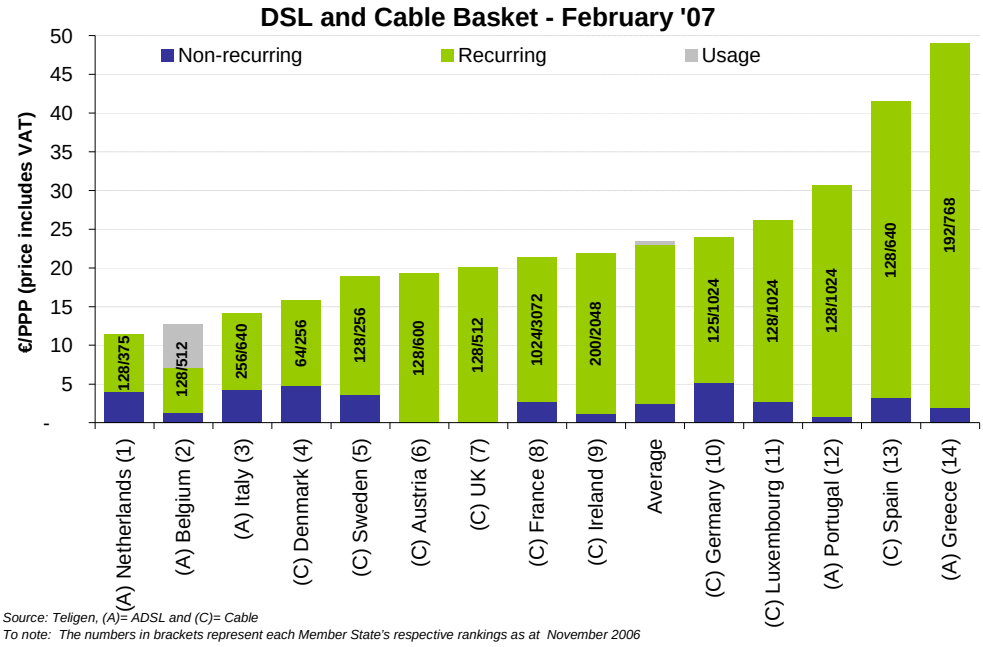
Source: Teligen
To note: The numbers in brackets represent each Member State's respective rankings as at November 2006

[21] This section does not include broadband tariff packages that are offered as special promotions. All tariffs are inclusive of VAT. VAT rates vary between Member States.

[22] ComReg Document 07/34a

Ireland was ranked in 5th place again in the DSL basket in February, that is five places less expensive than the EU average. The Irish package used is *eircom's* Broadband Home Starter package.

Figure 3.5.2 – Lowest Monthly Rental Cable and DSL Basket –February 2007[23]



Source: Teligen, (A)= ADSL and (C)= Cable
To note: The numbers in brackets represent each Member State's respective rankings as at November 2006

Ireland is ranked in 9th place in this basket, one place less expensive than the EU average price for this basket. In Ireland, this product is the Cablenet Broadband Easy product offered by Chorus.

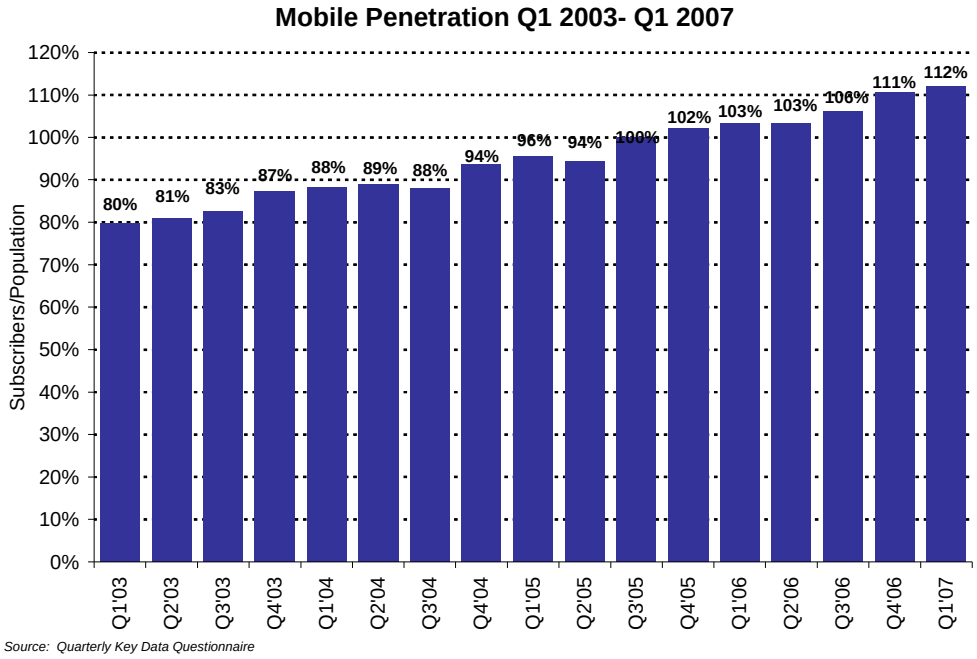
[23] Cable broadband offerings may not be available nationally in all countries. (A) denotes where the package is an ADSL service, (C) denotes where the package is a Cable broadband service

4 Mobile Market Data

4.1 Number of Subscriptions and Penetration Rate

4.1.1 Mobile Penetration in Ireland and Europe

Figure 4.1.1.1 – Irish Mobile Penetration Rate



Source: Quarterly Key Data Questionnaire

At the end of March 2007, there were over 4.7 million 2G and 3G mobile subscriptions in Ireland[24]. Figure 4.1.1.1 illustrates the growth in mobile penetration since 2003 and notes that at the end of March 2007, mobile penetration based on population in Ireland was 112% Mobile penetration is recognised as the standard metric internationally to describe the adoption of mobile services. It is calculated based on the number of active SIM cards[25] per 100 of the population. Given that some mobile users may have used more than one active SIM card during the period, there is likely to be some over-estimation of penetration using this metric.

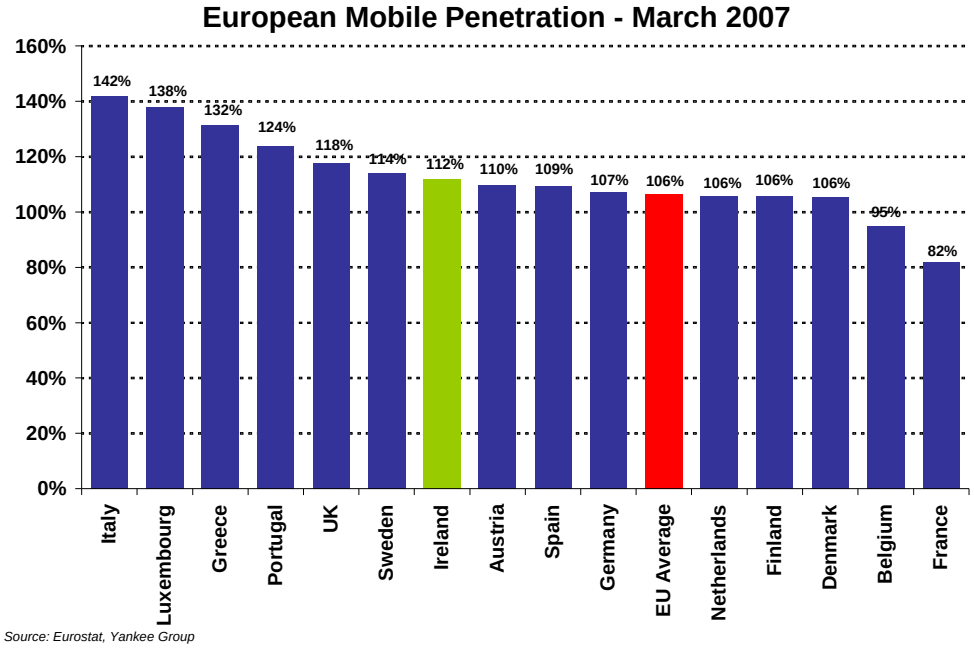
Figure 4.1.1.2 illustrates national mobile penetration rates across the EU in March 2007. ComReg has used a different source for the presentation of EU-15 mobile penetration in this report as figures from Informa's Mobile Communications were unavailable at the time of publication. Mobile subscriber numbers analysed were sourced from the Yankee Group, while population figures for the countries analysed were sourced from 2006 Eurostat

[24] ComReg does not include a separate analysis of the 3G market in this report. Vodafone have reported that by the end of Q1 2007 their 3G customer base totalled 418,427, or 20% of their overall subscriber base.

[25] Vodafone defines an active SIM as one on which a billable event, i.e. made an outgoing call or sent a text, has occurred in the previous 8 months; all other market operators define an active SIM as one on which a billable event has occurred in the previous 3 months.

population estimates for all countries. Average EU penetration across EU-15 member states in Q1 2007 was estimated at 106%[26].

Figure 4.1.1.2 – European Mobile Penetration Rates



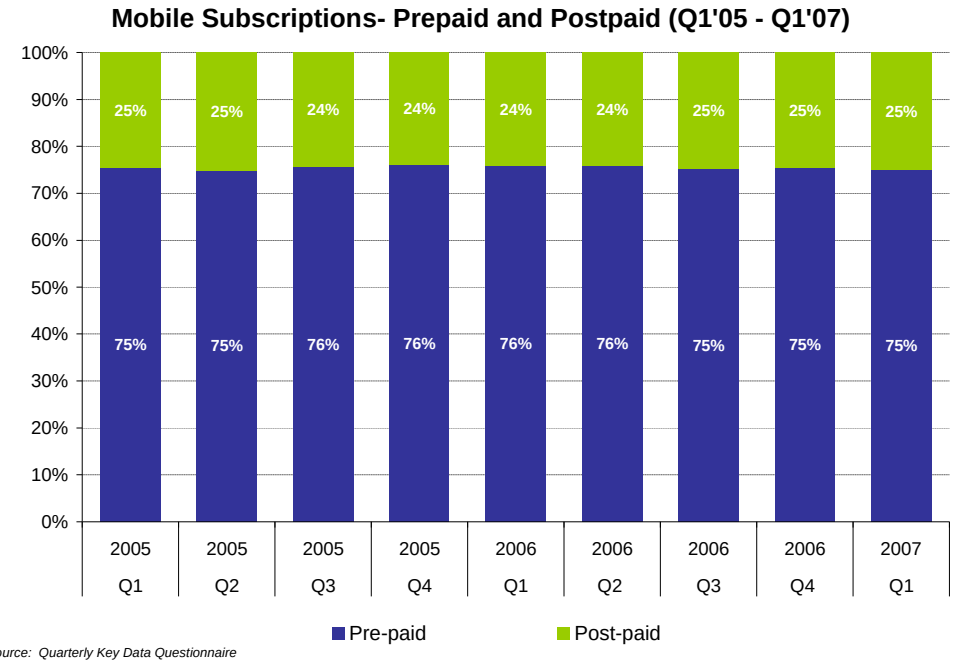
Source: Eurostat, Yankee Group

4.1.2 The Profile of Mobile Subscriptions in Ireland

Mobile subscribers in Ireland pay for their mobile service by either purchasing pre-paid credit, or by receiving a monthly bill from their mobile operator, described in this report as a post-paid payment option. Figure 4.1.2.1 profiles the breakdown of total mobile subscriptions between pre-paid and post-paid subscriptions on both 2G and 3G networks at the end of March 2007. In Q1 2007, pre-paid subscriptions accounted for 75% of all active mobile subscriptions, a proportion of overall subscriptions that has remained relatively unchanged since Q1 2005.

[26] It should be noted that given the different methodologies used in Q4 2006 and Q1 2007, and different third party sources used for the calculation of subscriptions within EU-15 countries, data presented in ComReg Document 07/07 is not comparable with that presented in this report.

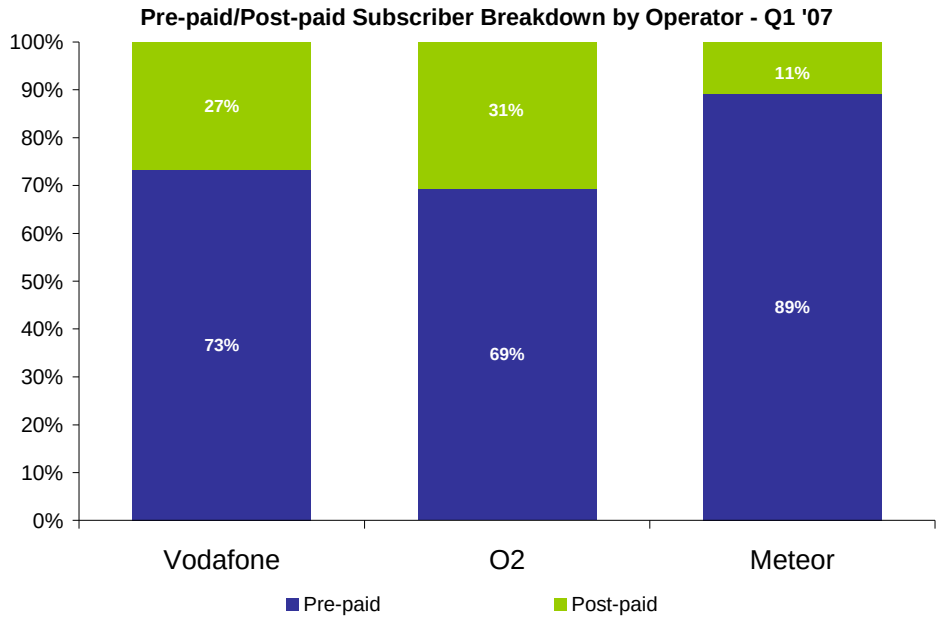
Figure 4.1.2.1 – Proportion of Pre-Paid and Post-Paid Subscriptions



Source: Quarterly Key Data Questionnaire

Figure 4.1.2.2 indicates the pre-paid and post-paid subscription profile of each of the three largest operators in the Irish mobile market. Meteor has increased its proportion of post-paid subscriptions to 11% in Q1 2007; O2 retains the highest proportion of post-paid customers among the three largest operators in the market with 31% of its subscriptions in the post-paid category.

Figure 4.1.2.2 – Profile of Pre-Paid and Post Paid Subscriptions – by Operator



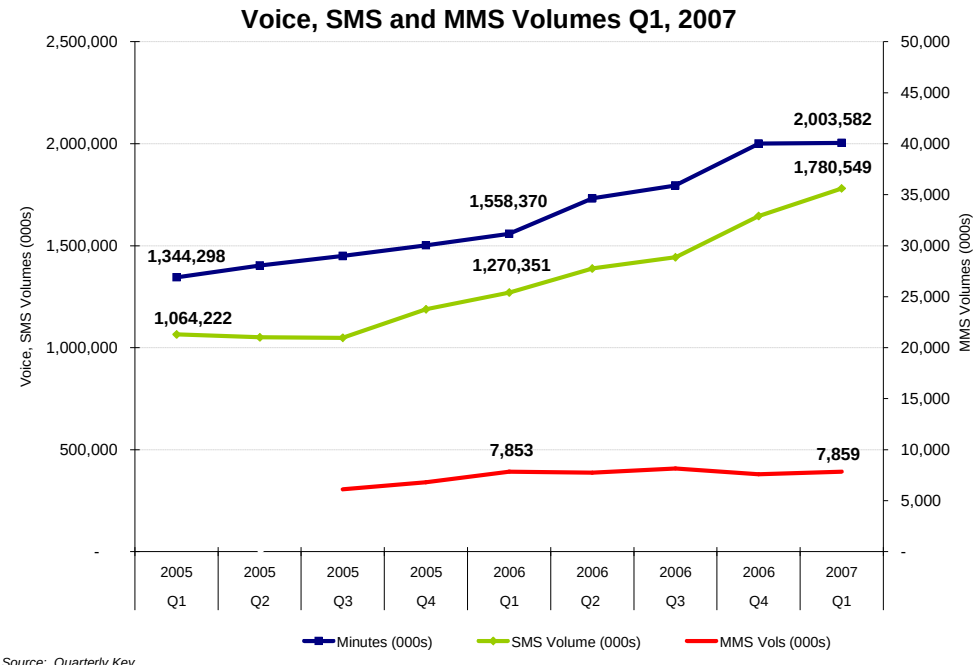
Source: Quarterly Key Data Questionnaire

4.2 Mobile Volumes

4.2.1 Total Voice, SMS and MMS Mobile Traffic

Figure 4.2.1.1 illustrates the growth in voice minutes, SMS, and MMS (Multimedia Messaging Service) messages sent since Q1 2005. The total number of SMS messages sent by mobile users in Ireland totalled 1.78 billion in Q1 2007. Continued growth in the volume of SMS messages is likely to be a result of "free" on-net text messaging[27] and discount text messaging bundles offered by a number of mobile operators in the market. If the total volume of text messages is averaged over all active subscriptions, an average of 125 SMS messages were sent per subscription, per month in Q1 2007, compared with 99 in the same period last year. The number of MMS messages, or multimedia messages such as picture messages, sent in the quarter remains relatively low compared to voice minutes and SMS volumes. There were just over 7.8 million MMS messages sent during the quarter.

Figure 4.2.1.1 – SMS, MMS and Call Minutes



Source: Quarterly Key

Total retail mobile voice traffic totalled over 2 billion minutes in Quarter 1 2007, remaining relatively stable compared to the previous quarter, but having grown by almost 30% in the previous 12 months.

4.2.2 Average Minutes of Use

ComReg has collected data on average minutes of use of Irish mobile subscribers and is reporting this data for the first time in this report. Average minutes of use provides an

[27] On-net text messaging in this context is used to describe a text message sent between two users who both subscribe to the same mobile network operator.

indication of the extent of mobile usage of voice services in Ireland. Further information on how this metric is defined and calculated by ComReg is detailed in the explanatory memorandum which accompanies this report[28]. Average minutes of use in Ireland for Q1 2007 was 224 minutes per month. This figure excludes usage of data services such as text messaging. In future quarters ComReg hopes to publish comparable minutes of use figures from a number of European markets to examine any relationship between minutes of use per subscriber and monthly average revenue per user (ARPU) across European markets.

4.3 Mobile Revenues

Mobile retail revenues for the quarter were in excess of €495 million, a 2% quarterly decline in revenues on the last quarter of 2006, but a 7% increase in retail revenues since Q1 2006. The decline in revenue can be attributed to lower revenue attributable to sales of handsets in this quarter, compared to seasonally high handset sales which inflated overall mobile revenue in the pre-Christmas season, as reported in Q4 2006. Figure 4.3.1 outlines mobile retail revenues for the period Q1 2005 to Q1 2007. Revenues attributable to data services such as SMS and MMS accounted for 19% of all retail revenues in Q1 2007.

Figure 4.3.1 – Mobile Revenue Q1 05- Q1 07

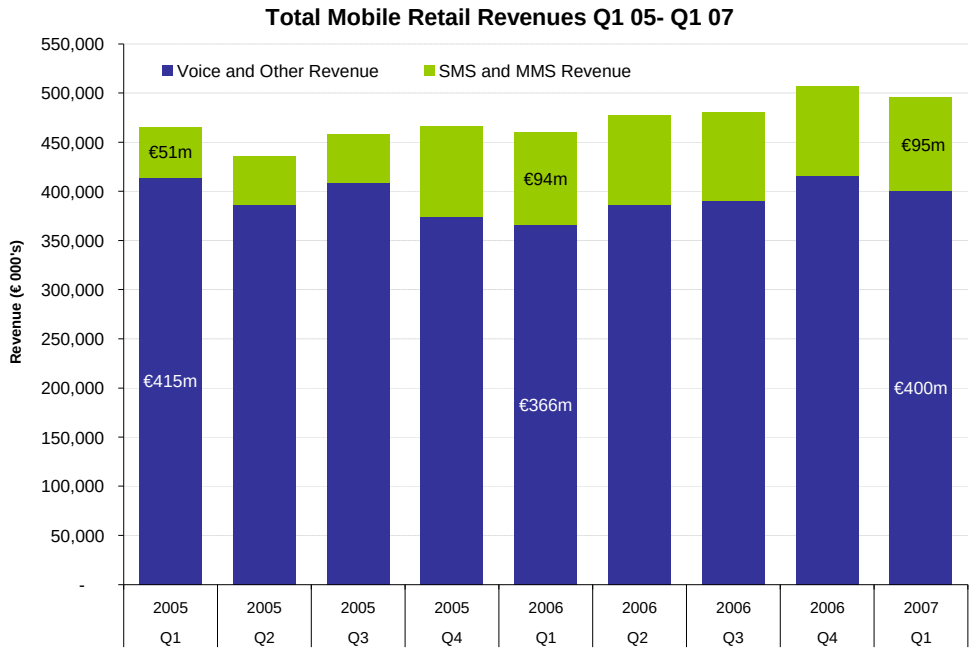
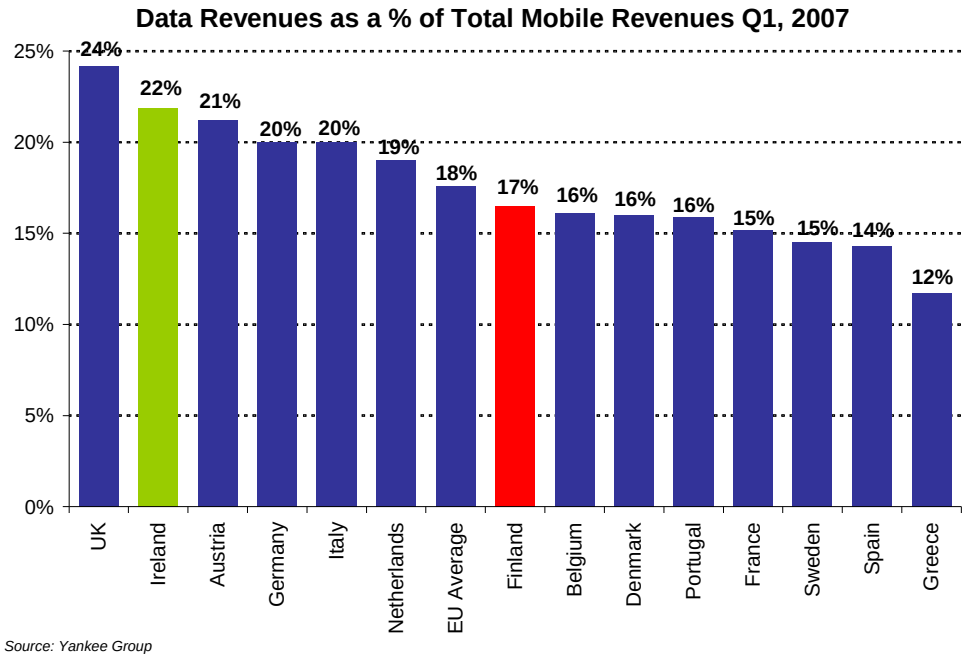


Figure 4.3.2 outlines the percentage of mobile revenues attributable to all data revenues in the Irish market compared to a number of other EU-15 markets. This benchmarking data is calculated independently by the Yankee Group, and includes data revenues not only from SMS and MMS messaging, but also data revenues from GPRS data services and 3G data

[28] ComReg Document 07/34a

services. Irish mobile operators have the 2nd highest level of data revenues among those countries analysed, with 22% of revenue attributable to data revenues, unchanged since Q4 2006, and a 1% increase in the proportion of revenues from data services on Q1 2006.

Figure 4.3.2 - Data Revenues as % of Total Mobile Revenue[29]



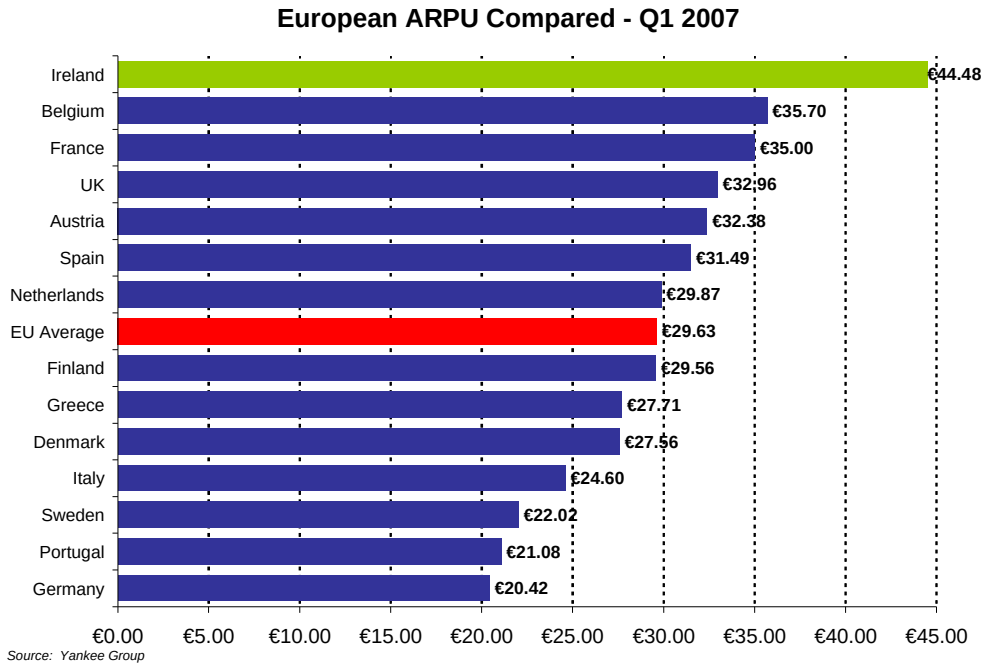
Source: Yankee Group

Figure 4.3.3 compares ARPU (average revenue per user) across several EU countries. Average revenue per user is an indication of average monthly revenue generated by mobile subscribers in each country. Mobile ARPU in Ireland is estimated at €44.48 per month in Q1 2007, a 5% decline since the last quarter, and a 5.8% decline in ARPU since Q1 2006 when ARPU in Ireland was €47.20. Monthly ARPU figures across European countries have also fallen since Q1 2006, with the EU Average ARPU declining by 3.4% in the last 12 months, from €30.67 in Q1 2006 to €29.63 in Q1 2007. Mobile ARPU in Ireland still remains the highest among the EU member states monitored, and substantially higher than the EU average of €29.63[30].

[29] Note that the graph relates to EU-15 countries except Luxembourg where no data was available.

[30] As far as possible, ARPU figures are obtained directly from operators. Where unavailable, ARPU is calculated by dividing annual service revenues by the mid-term installed base (the sum of the opening and closing customer bases for the period divided by two). Once the Yankee Group has obtained or calculated all individual ARPU figures, they are applied to each operator's mid-term user base to obtain service revenues by operator, which are then combined to obtain a country total. This total revenue figure is then divided by total mid-term users to derive country-level ARPU. Note that the graph relates to EU-15 countries except Luxembourg where no data was available.

Figure 4.3.3 - European ARPU Compared – Q1 2007



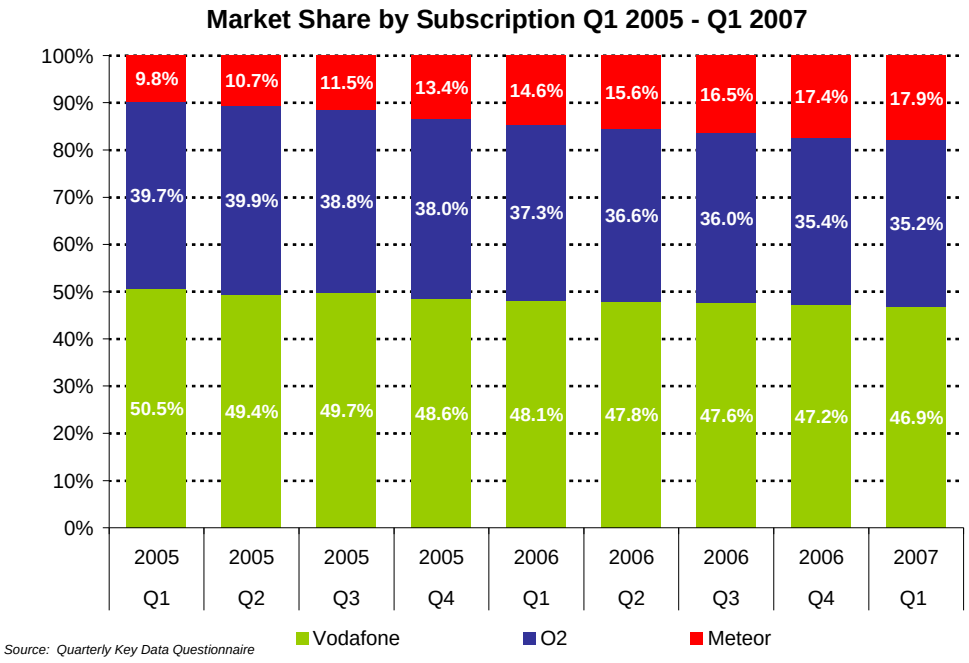
4.4 Competition in the Mobile Market

4.4.1 Mobile Market Shares- By Subscriber and Retail Revenues

Market share data presented in this report examines the market share attributable to the top three mobile operators based on active subscriptions and quarterly retail revenues. Figure 4.4.1.1 outlines mobile market share based on the number of active subscriptions reported by each operator. In line with the long term trend within the mobile market, Meteor's market share continues to grow at the expense of the two larger operators in the market, Vodafone and O2. However, both these operators retain in excess of 80% market share by subscriptions based on this analysis.

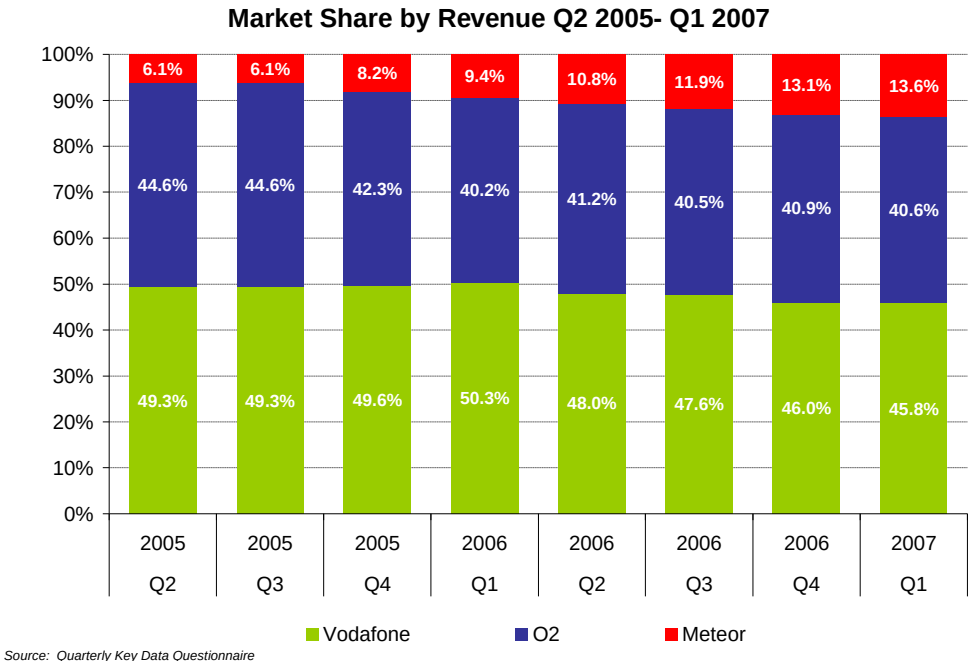
Figure 4.4.1.2 provides market shares for the largest mobile operators based on retail revenue. Reflecting its growth in subscriber market share, Meteor has made gains in its share of total mobile retail revenue for Q1 2007, accounting for 13.6% of mobile revenues generated.

Figure 4.4.1.1 – Market Share – Number of Subscriptions



Source: Quarterly Key Data Questionnaire

Figure 4.4.1.2 – Market Share – Revenue



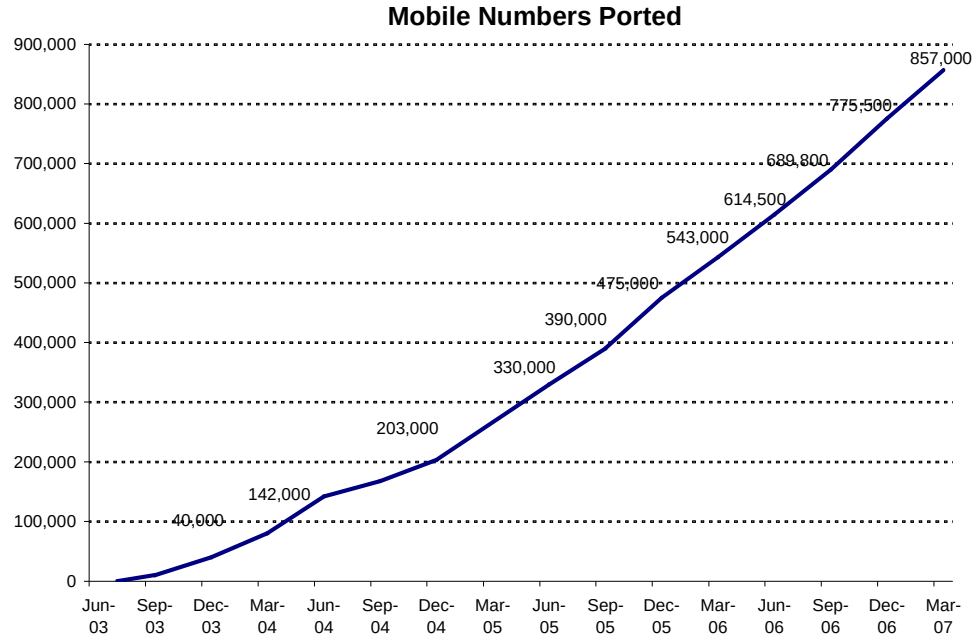
Source: Quarterly Key Data Questionnaire

3 Ireland has been offering commercial services in Ireland since August 2005. In the September 2007 which reports on the Q2 2007 period, ComReg will publish 3 Ireland subscriber and revenue market share information.

4.4.2 Switching in the Mobile Market

Figure 4.4.2.1 illustrates the cumulative total of mobile numbers ported between Irish mobile operators since the launch of Mobile Number Portability (MNP) in June 2003. MNP allows mobile subscribers to switch mobile operator while retaining their mobile number. A total of 857,000 people have used MNP to switch operator since June 2003. In the first quarter of 2007 81,600 mobile subscribers switched mobile operator while retaining their mobile number, compared to almost 86,000 in the previous quarter, and almost 68,000 in Quarter 1, 2006.

Figure 4.4.2.1 – Mobile Numbers Ported



Source: Quarterly Key Data Questionnaire

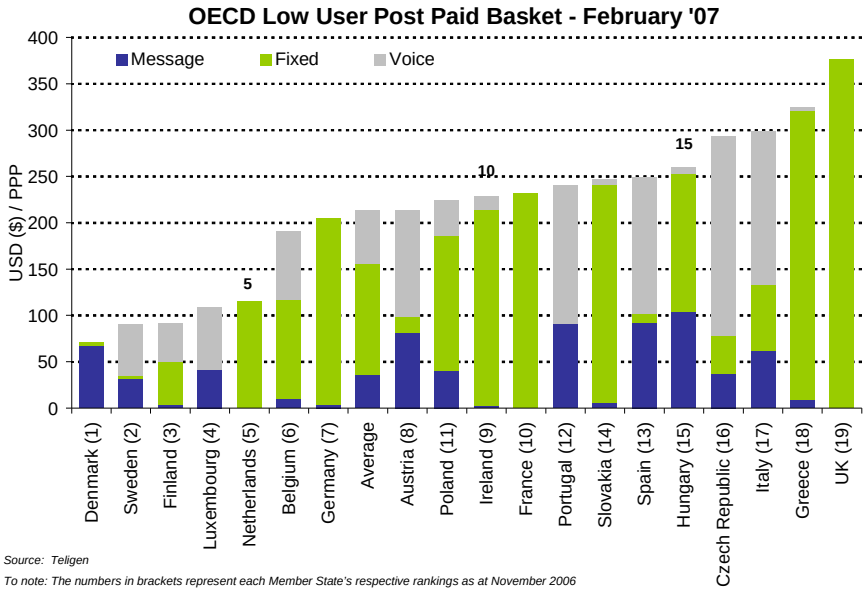
4.5 Mobile Pricing Data[31]

The Teligen mobile baskets presented in this Quarterly Report are based on an OECD-approved methodology using assumptions around specific usage levels for low, medium and high contract and pre-paid subscriber packages. They are calculated and analysed independently by Teligen, using an OECD methodology which includes PPPs (Purchasing Power Parities) to reflect the real cost of mobile services compared to all other costs within a country. While all mobile post-paid tariff baskets presented in the Teligen baskets are currently based on typical 2G services as approved by the OECD, ComReg recognises that there may be other more competitive packages available with 3G handsets.

4.5.1 Low User Post Paid Mobile Basket[32]

Ireland is ranked in 10th place out of the 19 EU countries analysed, having fallen from 9th position in November 2006, and is now three places behind the EU average in terms of price.

Figure 4.5.1.1 - OECD Low User Post Paid Mobile Basket – February 2007



Source: Teligen

To note: The numbers in brackets represent each Member State's respective rankings as at November 2006

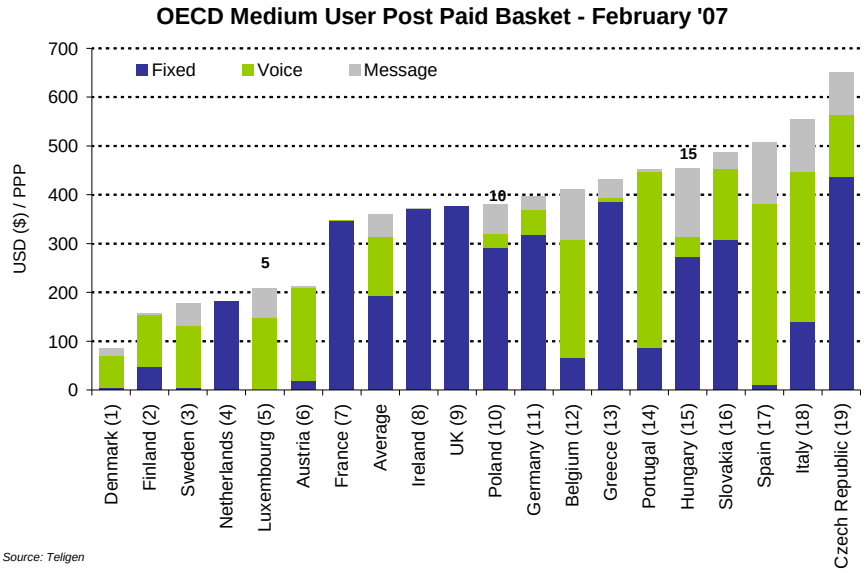
[31] The 'Fixed' component of price refers to the standard charges imposed by operators, regardless of the amount of calls made (i.e. connection and rental). Teligen's calculation of this figure is made up of: Installation Charge/5 + Rental charge for 1 year. The 'Voice' component of price refers to the charges imposed by operators, arising from the number of voice calls made by the user, while "Message" refers to the charges imposed by operators, arising from the number of SMS and MMS messages sent by the user.

[32] All tariffs are inclusive of VAT, rates will vary between Member States

4.5.2 Medium User Post Paid Mobile Basket

Ireland's position in this basket is 8th among the 19 EU countries monitored this quarter, remaining static since November 2006. Ireland ranks one place behind the EU average.

Figure 4.5.2.1 - OECD Medium User Post Paid Mobile Basket – February 2007



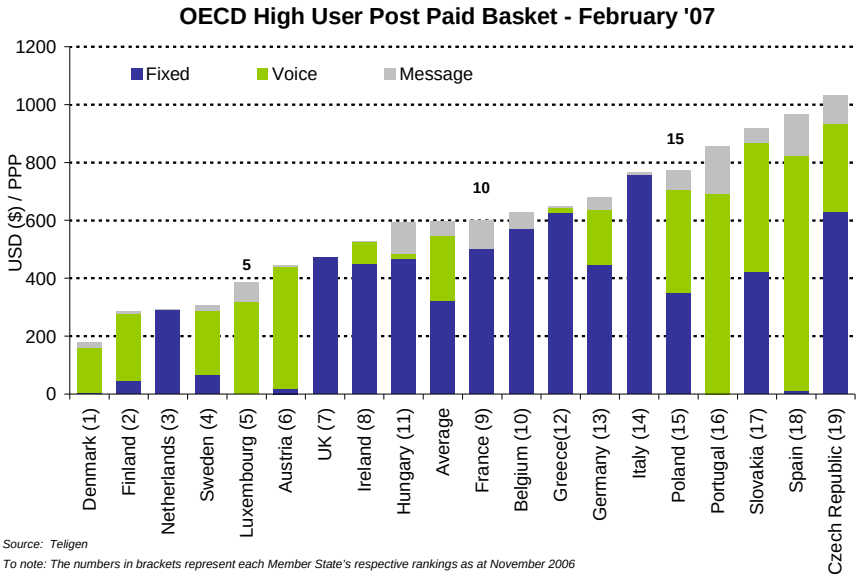
Source: Teligen

To note: The numbers in brackets represent each Member State's respective rankings as at November 2006

4.5.3 High User Post Paid Mobile Basket

In the High-User Post-Paid basket, Ireland remains ranked in 8th place among EU-19 countries analysed. Ireland is currently two places ahead of the average in terms of price.

Figure 4.5.3.1 - OECD High User Post Paid Mobile Basket – February 2007



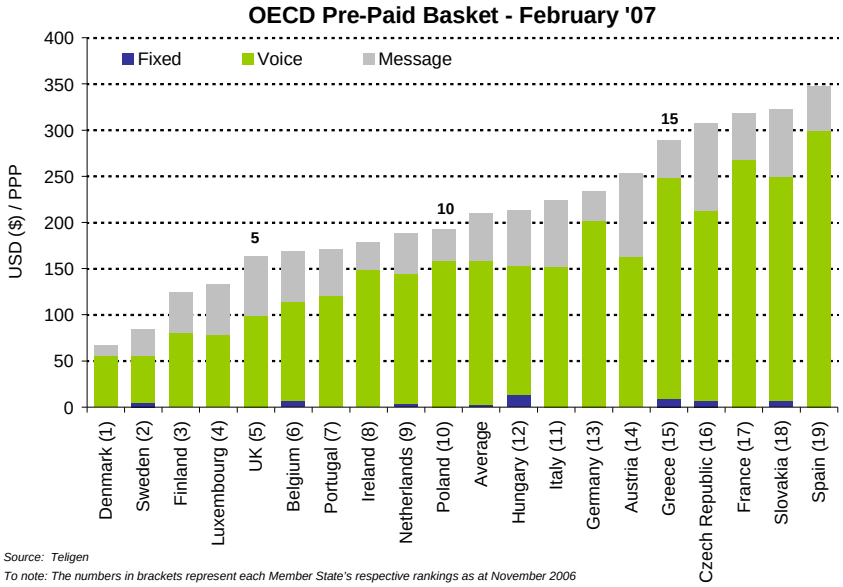
Source: Teligen

To note: The numbers in brackets represent each Member State's respective rankings as at November 2006

4.5.4 Pre-Paid Mobile Basket[33]

Ireland is ranked in 8th place again in the pre-paid basket this quarter, and three places ahead of the EU average.

Figure 4.5.4.1 - OECD Pre-Paid Mobile Basket – February 2007



Source: Teligen

To note: The numbers in brackets represent each Member State's respective rankings as at November 2006

[33] The OECD has found that there is little difference between the average pre-paid usage and low-user post-paid usage. Thus, the pre-paid and low user post paid baskets are based on the same usage assumptions.

5 Broadcasting

5.1 Overall Broadcasting Market

The broadcasting analysis provided in this report uses operator data in conjunction with CSO estimates[34] of the total number of TV households in Ireland. This is particularly relevant in deriving the number of households that use only a Free-to-Air[35] television service. There are 1.46 million TV households in Ireland, based on the CSO's 2006 Information Society report.

Of the total number of TV households at the end of March 2007 there were approximately 571,300 subscribers to cable[36]/MMDS[37] television services in Ireland. For the same period BSkyB reported 484,000 Irish satellite[38] TV subscribers. The total number of pay TV households in Ireland (cable/MMDS and satellite) is 1.06 million. This is a 1% quarterly increase and an 8% increase in pay-TV subscriptions year-on-year. Pay-TV households account for 72% of all homes with a television.

Figure 5.1.1 – Broadcasting Subscribers and growth rates by Platform

Platform	Number of Subscribers	Quarterly Change Q406-Q107	Annual Change Q106-Q107
Cable/MMDS	571,300	-1%	2%
Satellite	484,000	+4%	19%
Free-to-View	403,000	-3%	-10%

Figure 5.1.2 profiles TV households in Ireland based on those households who subscribe to an analogue or digital cable television service, a digital satellite service, or a free-to-air television service.

[34] ComReg attempts to use updated TV household data where available. Until Q3' 005, TV households were estimated at 1.35 million based on CSO data. A figure of 1.43 million was published in the CSO's Information Society and Telecommunications Report, 2005. ComReg has revised this figure based on the latest CSO data published in the 2006 Information Society and Telecommunications report, which reported 1.4583 million TV households in Ireland.

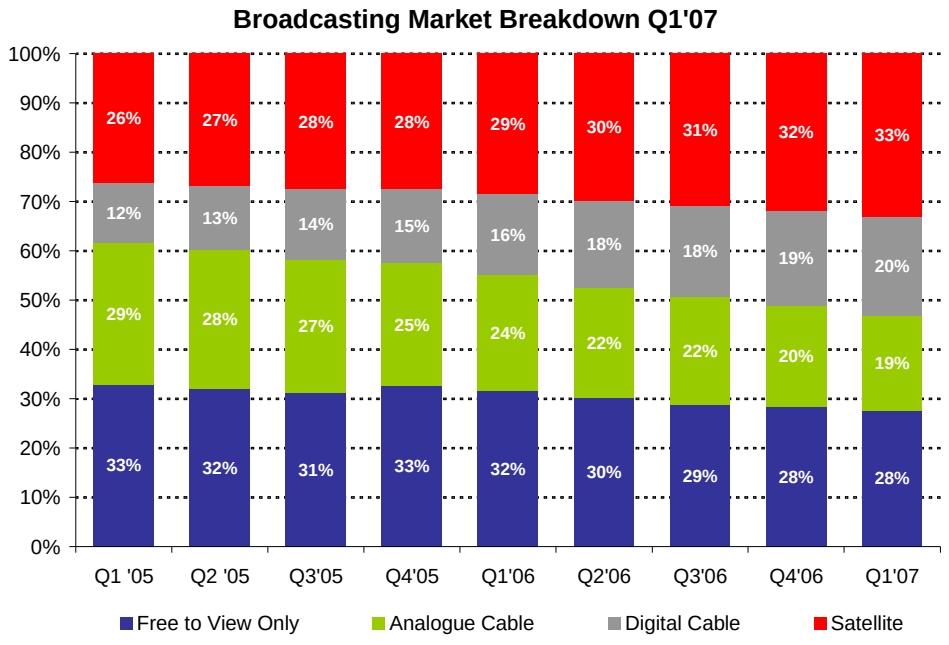
[35] Free-to-Air television broadcasts are sent unencrypted and may be received via any suitable receiver. Although these channels are described as 'free', the viewer does pay for them by payment of a licence fee.

[36] Cable television is a system of providing television to consumers via radio frequency signals transmitted to televisions through fixed optical fibres or coaxial cables as opposed to the over-the-air method used in traditional television broadcasting (via radio waves) in which a television antenna is required.

[37] MMDS (Multichannel Multipoint Distribution Service) is a wireless telecommunications technology, used as an alternative method of cable television programming reception. MMDS is usually used in sparsely populated rural areas, where laying cables is not economically viable.

[38] Satellite television is television delivered by way of communications satellites, as compared to conventional terrestrial television and cable television. Figures for satellite homes are based on Sky's publicly announced figures.

Figure 5.1.2 - Take Up of Broadcasting Services

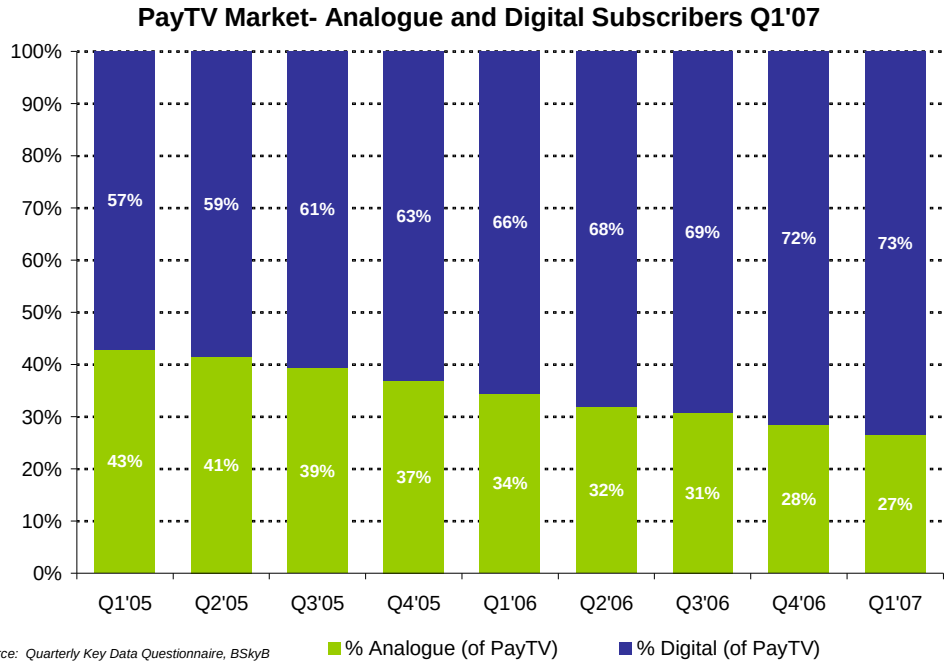


Source: Quarterly Key Data Questionnaire, BSkyB

5.2 Pay TV

Figure 5.2.1 profiles the pay-TV market in Ireland, comparing those who subscribe to an analogue digital service provided by cable operators, and digital TV, provided via either a digital cable service or satellite service. In Q1 2007, 73% of all those subscribing to a paid television service in Ireland had a digital subscription; an increase of 1% since Q4 2006 and a year-on-year increase of 7% since Q1 2006.

Figure 5.2.1 - Pay TV Market (Analogue and Digital)



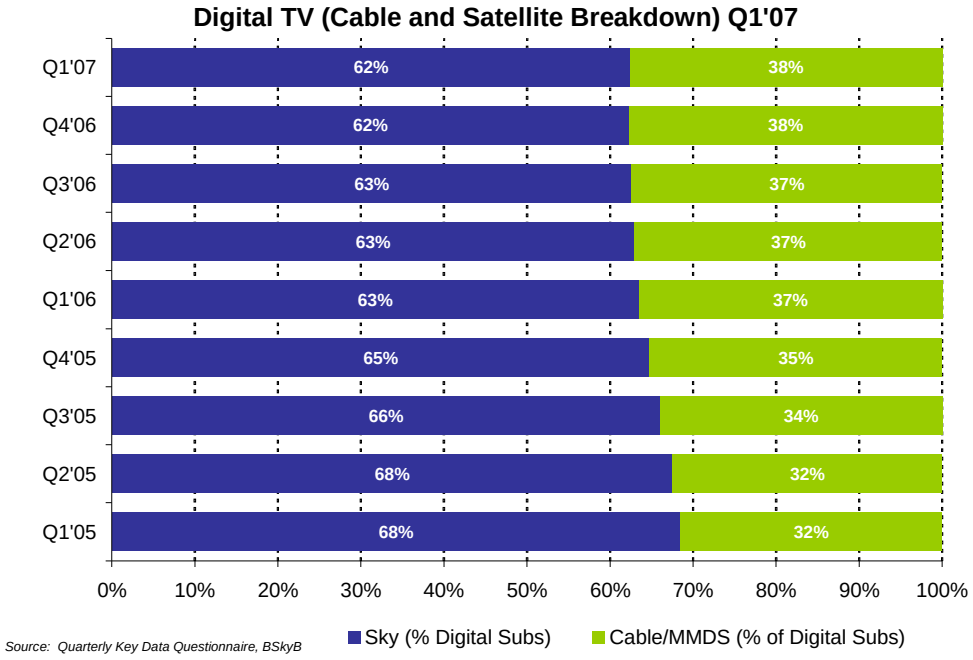
Source: Quarterly Key Data Questionnaire, BSkyB

5.3 Digital TV

At the end of March 2007, there were over 775,500 digital TV subscribers which include cable/MMDS and satellite customers. Fifty three percent of all TV households in Ireland now receive their TV service via a digital television signal, based on either digital cable or satellite.

Figure 5.3.1 profiles the digital TV market, examining the proportion of digital subscribers who receive their TV signal via a satellite subscription compared with those using digital cable. The profile of this group of TV households remains unchanged this quarter, with 62% of digital TV households using a satellite service to receive digital TV. Since Q1 2005, digital cable's proportion of this sector has increased from 32% to 38%.

Figure 5.3.1 - Digital TV (Cable and Satellite Breakdown)



Source: Quarterly Key Data Questionnaire, BSkyB

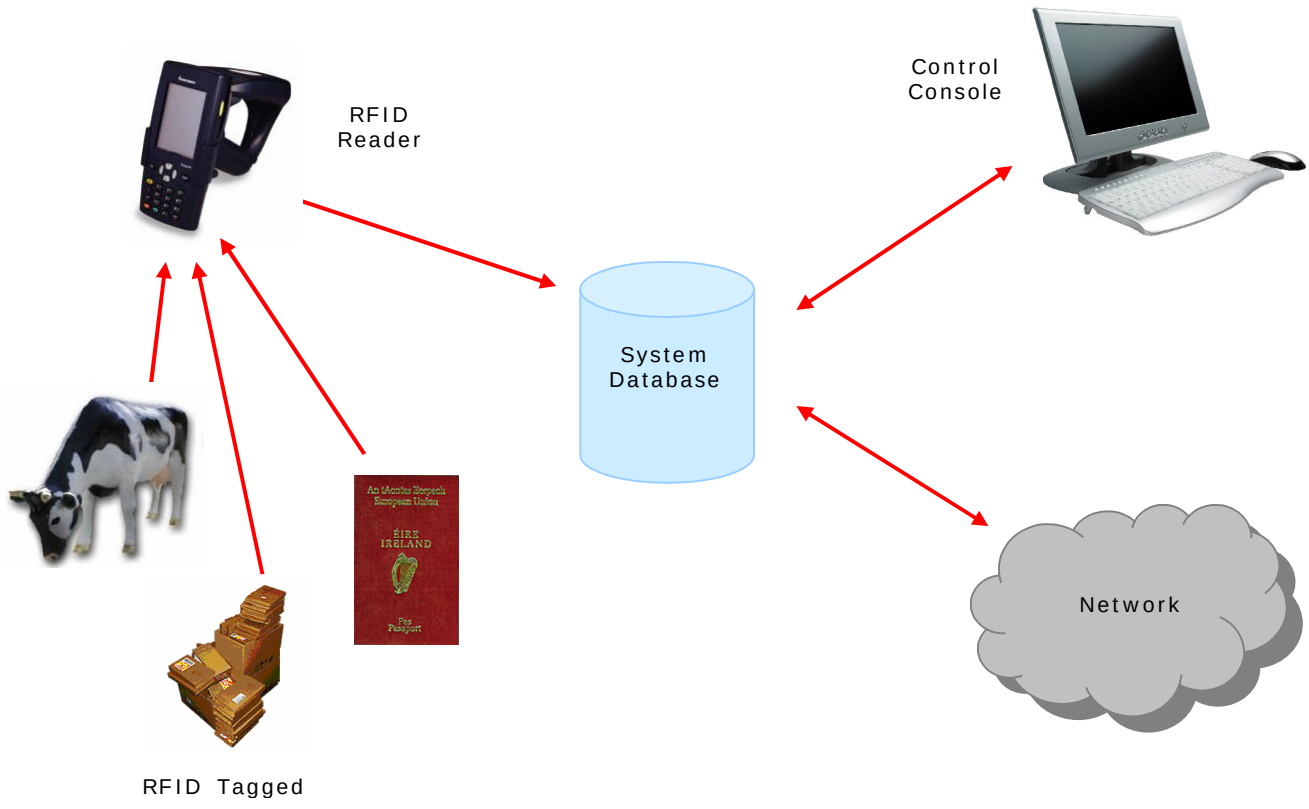
6 Emerging Trends – RFID

The Emerging Trends series in the quarterly report aims to provide information on innovation and emerging technologies within the electronic communication sector. This quarter, Emerging Trends looks at RFID, a radio frequency identification technology and its potential applications.

6.1 What is RFID?

RFID or Radio Frequency Identification is a technology, theoretically similar to bar code identification, that stores and remotely retrieves data using RFID tags or transponders. There are numerous modes of identification but the most common method is to store a serial number on a microchip that is attached to an antenna – collectively these are known as an RFID tag or transponder. The antenna enables the chip to convey the information to a reader which then translates the radio waves into digital information that is passed onto a computer and utilised accordingly.

Figure 6.1.1: RFID interface with telecoms network and database management



6.2 Applications and Benefits

The potential applications of RFID are extensive and have already begun to revolutionise the way business is done. The most common applications to date include usage in the supermarket and retail segments, pharmaceuticals, libraries, automotive sector, animal identification, passports, transport payments, security and product tracking amongst many others. Many companies have invested in RFID to avail of the advantages it offers. The majority of these investments are generally made in closed-loop systems – meaning the goods being tracked stay within the company's own control. However, the use of proprietary systems within a company hampers an open supply chain. In order to negate this, leading corporations, like Wal-Mart[39], mandated the use of RFID technology with all of their top suppliers, thereby ensuring a seamless tracking system from manufacture to point-of-sale.

One of the main advantages of an RFID system over a bar-code system is the ability of a tag to be read, from several meters away without the need for a direct line-of sight. Secondly, while a barcode system can only scan items on an individual basis, an RFID reader can read hundreds of chips almost instantaneously, thus reducing the labour costs associated with scanning bar-codes. Thirdly, RFID tags have greater durability, can be weatherproofed and also have the ability to store unique serial numbers for every individual product manufactured around the world, unlike bar-codes which only identify a manufacturer and product type. Other benefits include reduced warehouse and distribution costs, reduced point-of-sale costs, improved levels of accuracy with stock, improved forecasting and planning, better visibility regarding possible theft of stock, a decrease in administrative error and improved security. While it is unlikely that RFID will ever completely replace the use of a bar-coding system, which is still effective and much less expensive, it is increasingly being adopted by many companies, particularly as the costs decrease and the technology becomes standardised.

6.3 Challenges

6.3.1 Costs

Although RFID technology has existed in a commercial form since the 1960's[40] it has only come into prominence relatively recently. Initially the technology was considered too expensive and too limited to be practical for many commercial applications. One of the major issues inhibiting the take-off of RFID was the issue of costs. While an RFID system can potentially introduce significant savings to a business, companies must consider the total cost of implementation. The cost of tags can range from $0.20 (USD) (passive) to $15

[39] Radio Frequency Identification News and Commentary – RFID Gazette, June 2004
[40] Source: 04/79 Briefing Note Series: Radio Frequency Identification (RFID) Systems – Commission for Communication Regulation, July 2004.

(USD) (active) depending on the amount of processing power they possess, and RFID readers typically cost $1000 (USD) or more. For many companies it is impractical to apply RFID technology to low cost items and typically RFID has been used for higher cost products.

6.3.2 Standardisation

A second issue is the standardisation of the technology. While there are well established standards for low and high frequency RFID systems, the majority of companies have sought to use UHF (Ultra High Frequency) in their supply chain. UHF technology is relatively new and as a result standards are only recently beginning to be established. Again the use of proprietary systems inhibits interoperability between vendors and, while it is possible to create multi-mode RFID tags that can operate in several different frequency bands, these are likely to be more expensive. EPC global – a joint venture set up to commercialise Electronic Product Code technologies – have implemented their own set of standards and intend to submit these protocols to the International Organization for Standardisation (ISO) so that they become internationally recognised, as was achieved with bar-code standardisation.

6.3.3 Privacy

The use of RFID technology has prompted considerable controversy with regard to consumers' privacy rights. Most of the concerns revolve around the fact that RFID tags attached to products remain "live" and there are fears that they may be used for surveillance and other uses unrelated to their supply chain functions. However, this can be mitigated by the use of a "kill command" which will effectively switch the tag off. Many companies use a symbol to indicate that the item contains an RFID tag and these may simply be removed at the time of purchase or, in some cases, via kiosks located near the shops' exits enabling consumers to turn the tag off themselves.

6.4 The Future

Although ubiquitous chipping is still some years away, improvements towards standardizing the industry are slowly making their mark. Larger corporations such as Wal-Mart and Target continue to pave the way and have reached almost 100% compliance from all of their suppliers.[41] Nevertheless, the cost of RFID tags will have to drop if they are to grace a wider range of consumer items. Also, the signal doesn't pass through liquid or metal, which makes a multitude of items difficult to tag. However, research and spending on RFID tags continues and IDC estimates that the aim of reducing the cost of passive tags to $0.05 per

[41] IDC – U.S. RFID for the Retail and Supply Chain Spending Forecast and Analysis, 2003 - 2008

tag should become a reality by 2008. It is predicted that the majority of this growth will emerge within the retail supply chain with the number of RFID tags expected to increase 25 fold from its current number of 1.6 billion to over 33 billion by 2010.[42] It would appear that RFID is here to stay.

[42] EETimes - Report: RFID production to increase 25 fold by 2010, January 2006.