Commission for
Communications Regulation

Irish Communications Market

Quarterly Key Data Report

September 2007

Document No:	07/67
Date:	9th September, 2007

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1   Overall Market Data

Data presented in this report is based on quarterly questionnaires completed by authorised operators for the period from 1st April 2007 to 30th June 2007. The report is based on submissions from 63 operators, which represents almost all authorised operator market activity.

1.1   Number of Authorisations

Figure 1.1.1 - Total Number of Authorisations

Total Authorisations	June 2007
No. of fixed and wireless authorisations	312
No. of mobile telephony authorisations	5
No. of broadcasting authorisations (incl. Cable TV, MMDS, Deflectors)	75
Total Number	392

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 392 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]

Share of Overall Market Value

Source: Quarterly Key Data Questionnaire
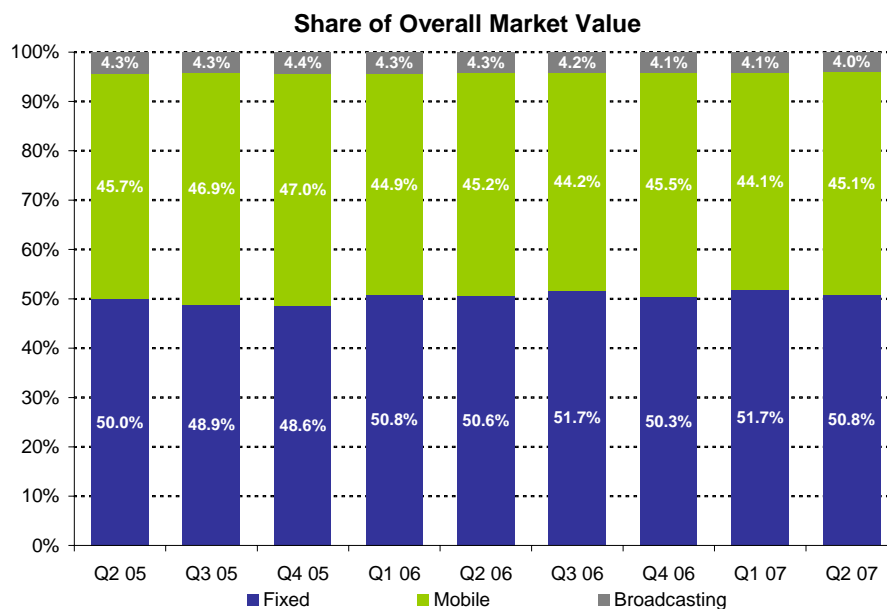
Overall electronic communications network and service revenues at the end of June 2007 were nearly €1.13bn for the quarter, or €4.51bn on an annualised basis. Industry revenue increased by almost 0.6% in the quarter and by 6.6% compared to Q2 2006. Increased industry revenue this quarter is driven mainly by growth in the mobile industry.

In Q2 2007 fixed line revenues accounted for 50.8% of total electronic communications revenues, just under a 0.9% decrease since last quarter. In contrast the mobile industry's share of revenue increased from 44.1% in Q1 2007 to 45.1% in Q2 2007.

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[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).

1.3 Overall Call Volumes

Figure 1.3.1 - Share of Total Voice Call Volumes (Minutes)[3]

Share of Overall Call Volume
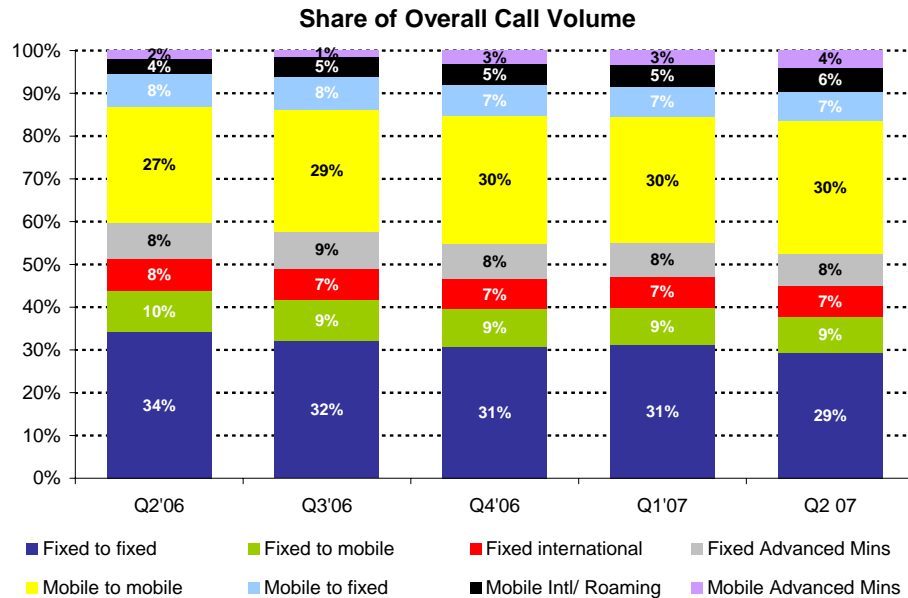
Source: Quarterly Key Data Questionnaire

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 4.48 billion minutes, a marginal increase on the previous quarter when total voice minutes were 4.45 billion minutes. Traffic originating on a fixed line network accounted for 52% of all voice minutes, while mobile originating voice minutes accounted for the remaining 48%.

Figure 1.3.2 – Fixed and Mobile Originating Voice Minutes

Minute Type	Q2 07 Minutes	Quarterly Change Q1'07-Q2'07	Year-on-Year Change Q2'06-Q2'07
Fixed Originating Minutes	2.35bn	-4%	-9%
Mobile Originating Minutes	2.13bn	6%	22%

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[3] 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.

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[4] 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 May 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 07/67a.

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 residential and national business call baskets remained in the same ranked positions as in February 2007, at rank 9 and 6 respectively. The national business basket has ranked at 6th position consistently since February 2006. The international residential and international business baskets dropped one rank each since February 2007 to 4th position.

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[4] 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

Ireland's Position in the Various PSTN Baskets Relative to EU19: Feb'06 - May'07

Source: Teligen

Nat. Residential — Nat. Business — Int'l Residential — Int'l Business
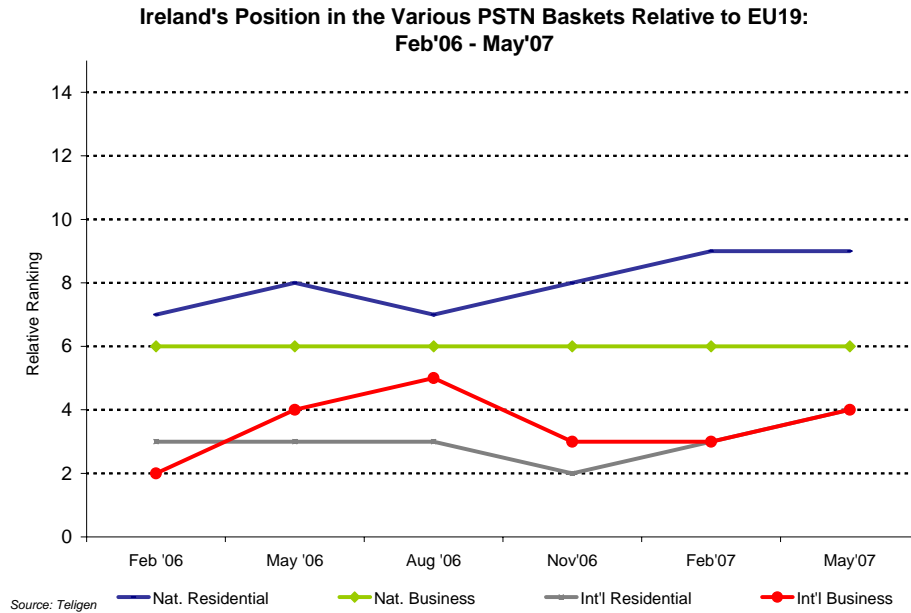
1.4.2 Mobile Baskets

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 user basket was the only basket where the rank improved this quarter, from 8th to 7th among the 19 EU-member states analysed. The medium user post-paid basked dropped three places from 8th to 11th position, while the low user and high user post-paid baskets dropped by one place each from 10th to 11th place and 8th to 9th place respectively.

Figure 1.4.2 – Ireland's Position in Various Mobile Baskets

Ireland's Position in the Various Mobile Baskets Relative to EU19: Feb'06 - May'07

Source: Teligen

Low User- (post paid) — Medium User (post paid) — High User (post paid) — Pre-paid
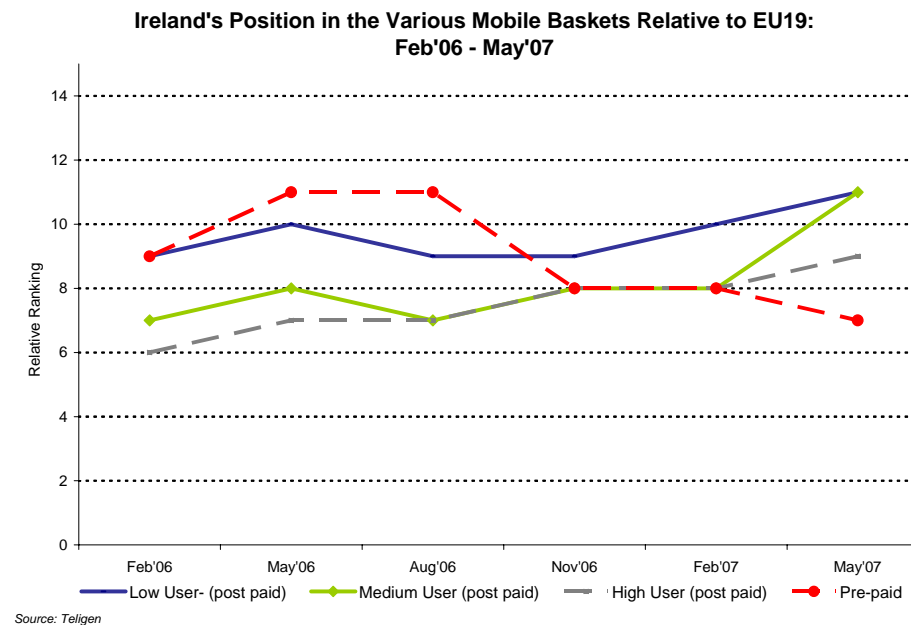
2   Fixed Market Data

2.1   Total Fixed Line Revenues

Fixed line revenues totalled nearly €573 million in Q2 2007, a decrease of nearly 1% since last quarter. In real terms, there were increases in the retail broadband and interconnection categories. 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.[5]

Figure 2.1.1 – Profile of Fixed Line Revenues

Profile of Fixed Line Revenues Q2'05 - Q2'07

Source: Quarterly Key Data Questionnaire
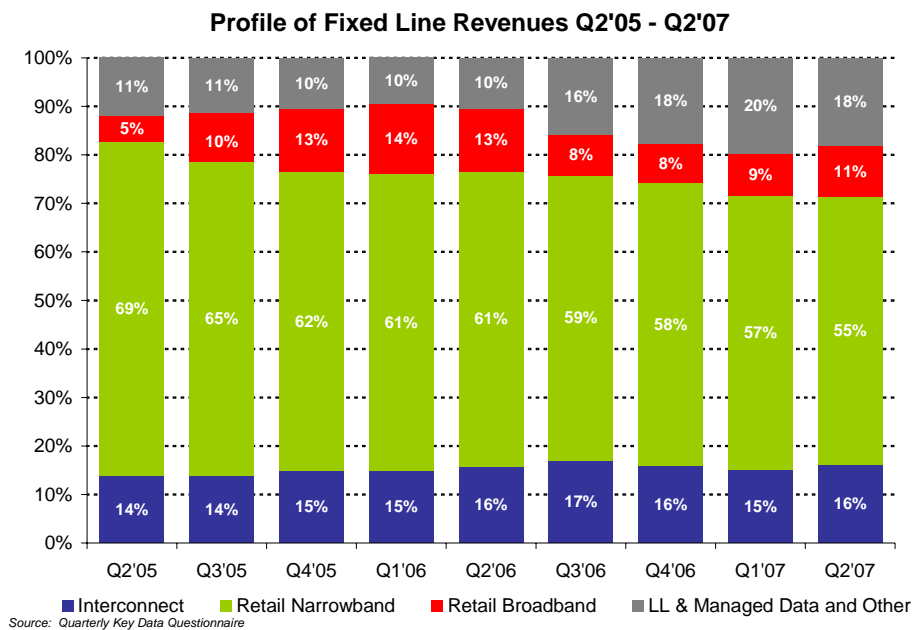
2.1.1   Authorised Operators' Share of Overall Fixed Line Revenues

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.

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[5] 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 have since been reported separately. Other revenues include Packet Switch services revenue, ATM, Frame, other IP data revenues

Figure 2.1.2 – Operator Share of Fixed Line Revenues

Operator Share of Fixed Line Revenues Q2'07

Source: Quarterly Key Data Questionnaire
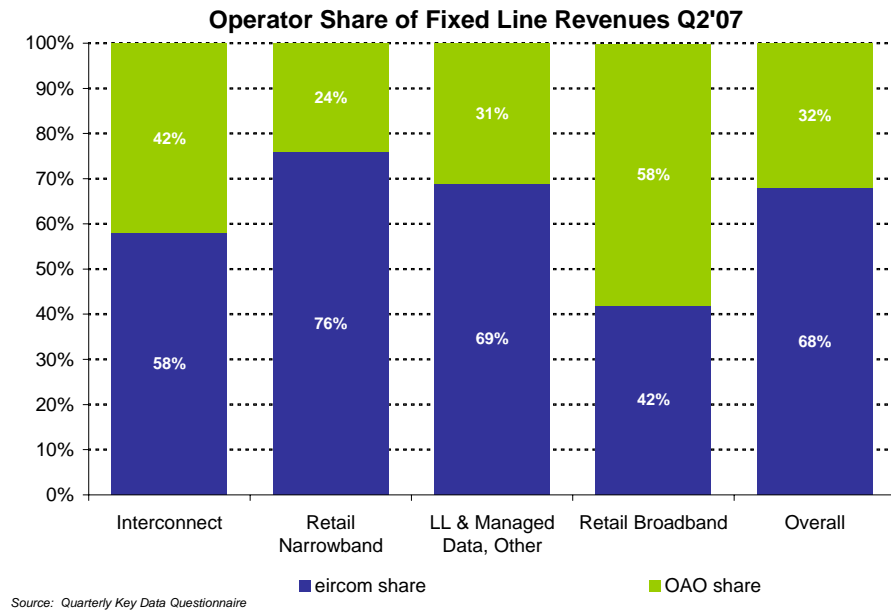
Eircom's overall share of fixed line market revenue has seen a quarterly decline of 2%, and a 6% decline since the same period last year. The reported decline is predominantely a result of increased OAO activity in the market, but may also be impacted by ongoing improvements in the quality of data received by all operators in their responses to the Quarterly Report questionnaire.

Figure 2.1.3 – Eircom's Market Share

Eircom's Market Share Q2 2006 - Q2 2007
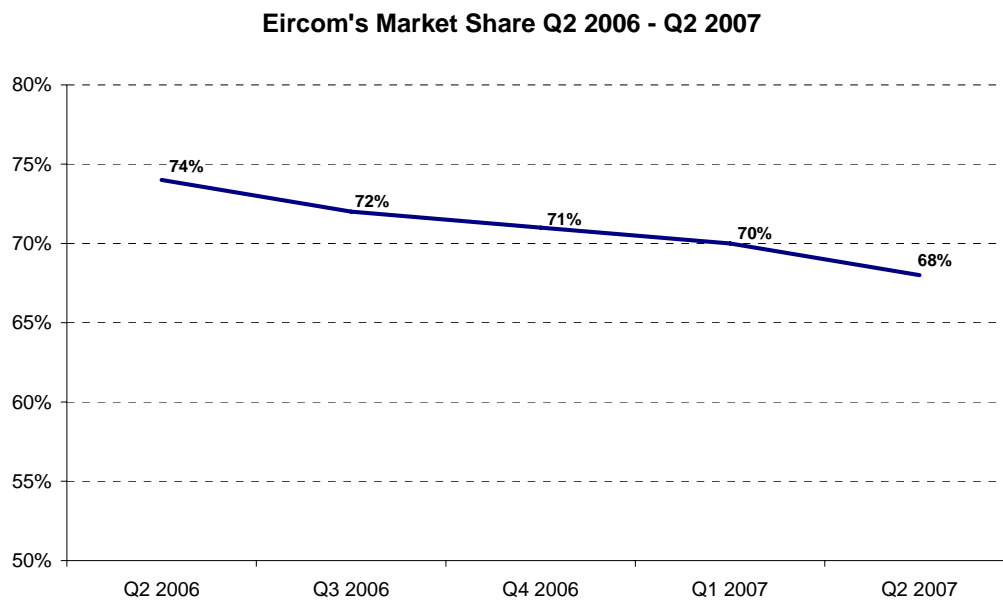
Figure 2.1.4 outlines revenue market share in Q2 2007 by breaking out the total fixed market in terms of shares held by the incumbent fixed line operator, the top 5 OAOs, and all other OAOs of fixed line revenue. After Eircom - the largest revenue earning operator in the market - with 68% market share, ComReg estimates that the next five largest operators in terms of revenue contribute a further 22% of industry revenue, with the remaining 10% generated by all other operators in the fixed line market. Figure 2.1.4 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

Revenue Market Share of Fixed Line Operators, Q2 2007
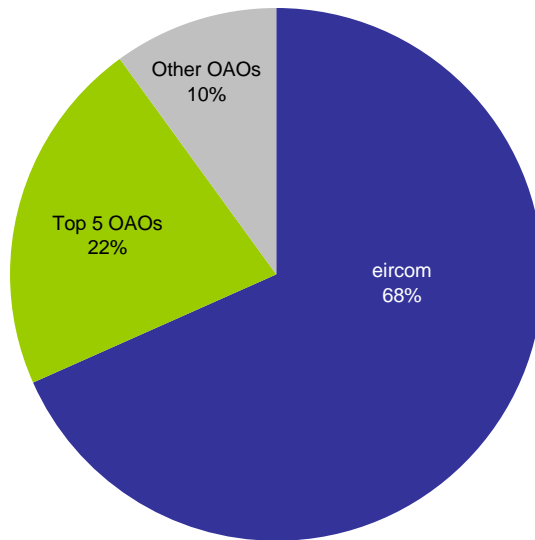
2.2 Fixed Line Access

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[6]. There were just over 2.1 million direct and indirect PSTN and ISDN access paths in the Irish market in Q2 2007, a marginal increase since Q1 2007. 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 473,000 in Q1 2007, a slight decrease since Q2 2007. Indirect access accounts for 22% of all access paths in the fixed market, a decrease of 1% since Q1 2007.[7]

Figure 2.2.1 - Fixed Access Paths

Direct & Indirect Narrowband Access Paths

	Q2 2006	Q3 2006	Q4 2006	Q1 2007	Q2 2007
Total Indirect	462,601	489,214	473,618	476,756	472,725
Total Direct	1,591,802	1,595,529	1,623,437	1,625,695	1,631,848

Source: Quarterly Key Data
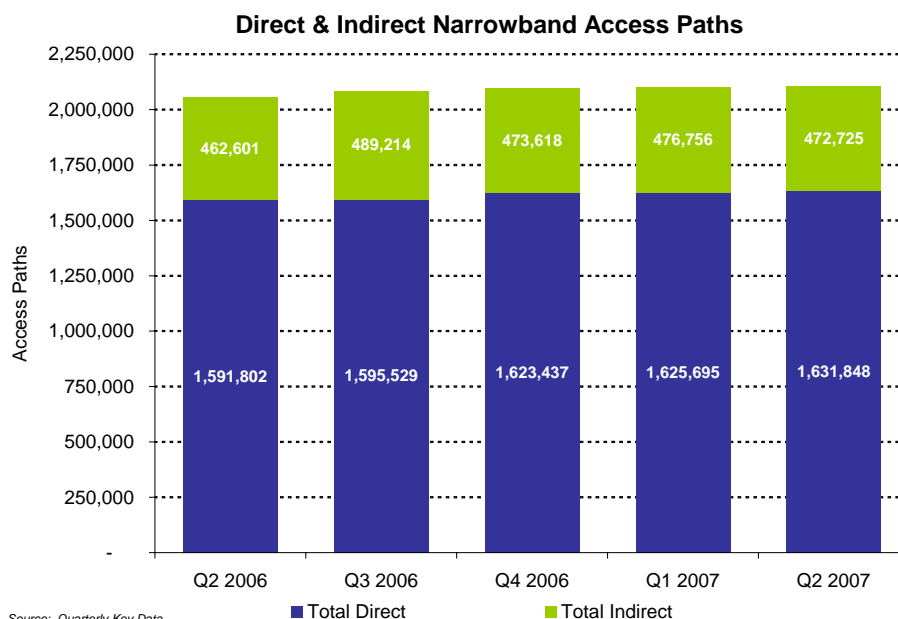
2.2.2 Indirect Access Lines

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 Q2 2007, there were just over 406,000 active lines, enabling OAOs to provide services to customers by reselling elements of Eircom's copper network. The

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[6] 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.
[7] 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.

number of indirect access lines has decreased by 1% in overall terms this quarter. The annual growth in the number of indirect access lines for the 12 months to the end of June 2007 was 2%. 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 75% of indirect access lines compared to 39% in Q2 2005.

Figure 2.2.2 - Indirect Access Lines[8]

Carrier Pre-Select and Wholesale Line Rental

Source: Quarterly Key Data Questionnaire
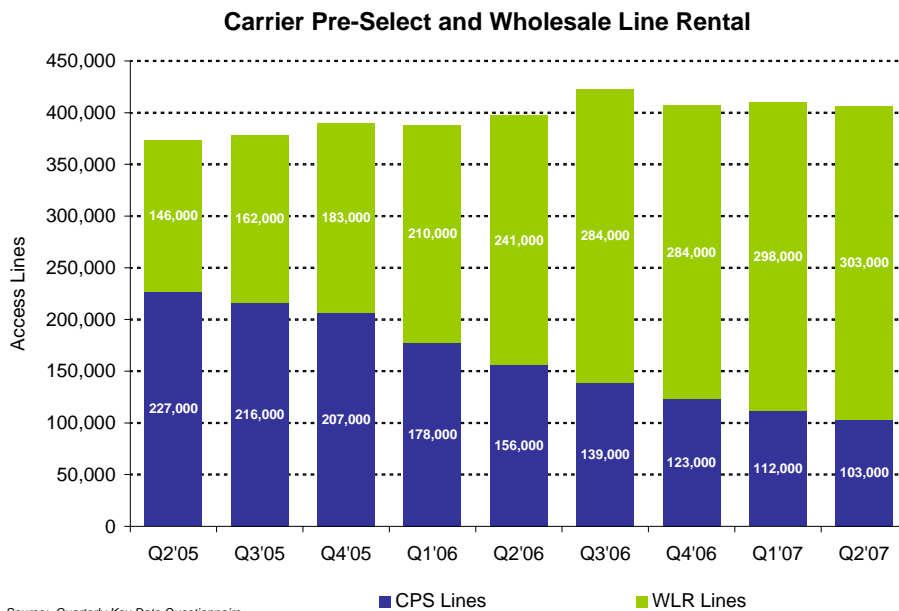
2.3 Fixed Voice Call Volumes

Fixed call traffic in Q2 2007 was just over 2.35bn minutes, a decrease of 4% since Q1 2007, and a fall of 9% since Q2 2006. Figure 2.3.1 illustrates trends in fixed voice call minutes since Q2 2005. This decrease in fixed line minutes could be due to the increased use of mobile phones for voice telephony. Another factor which may impact fixed voice volumes over the telecoms network is the use of voice over internet services, such as those offered by Skype.

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 Q2 2006 and Q2 2007. This is also reflected in the proportion of total fixed line voice traffic categorised as domestic minutes. In Q2 2006 domestic traffic minutes accounted for 57% of fixed line voice traffic, while in Q2 2007 this share of overall

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

minutes had fallen to 56%. 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.

Figure 2.3.1 – Fixed Voice Call Volume[9]

Call Volume by Type

Quarter	Domestic Minutes	International Outgoing Minutes	Mins to Mobile	Other/ Advanced Minutes
Q2 2007	56%	14%	16%	14%
Q1 2007	57%	13%	16%	14%
Q4 2006	56%	13%	16%	15%
Q3 2006	56%	13%	16%	15%
Q2 2006	57%	13%	16%	14%
Q1 2006	59%	12%	16%	13%
Q4 2005	62%	12%	17%	10%
Q3 2005	61%	11%	17%	11%
Q2 2005	61%	11%	17%	11%

■ Domestic Minutes ■ International Outgoing Minutes ■ Mins to Mobile ■ Other/ Advanced Minutes

Source: Quarterly Key Data Questionnaire

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[9] 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.

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.[10]   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 May 2007 Ireland remains in 9th position, six places better than the EU average in terms of price for this basket.

Figure 2.4.1.1 - OECD National Residential Basket – May 2007[11]
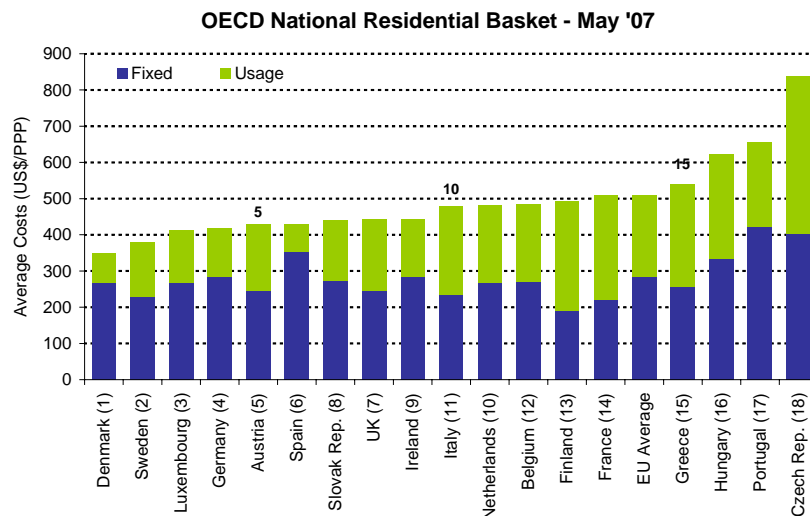
OECD National Residential Basket - May '07

Source: Teligen
To note: The numbers in brackets represent each Member State's respective rankings as at February 2007

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

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

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 – May 2007
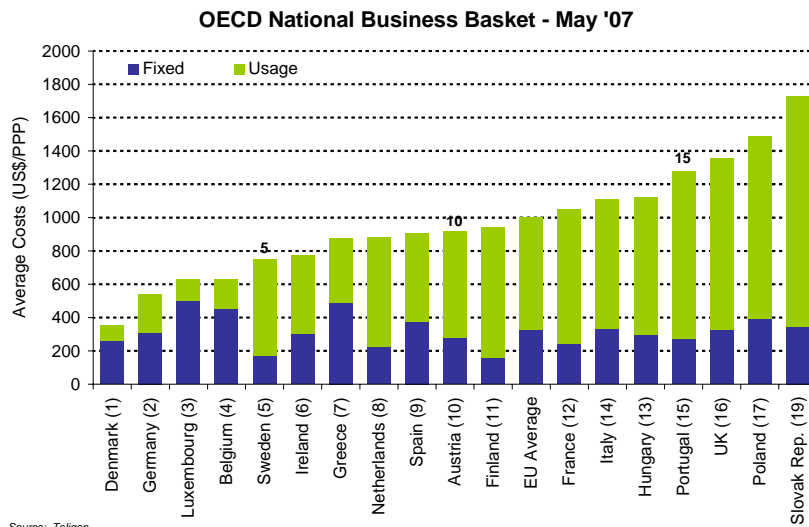
OECD National Business Basket - May '07

Source: Teligen
To note: The numbers in brackets represent each Member State's respective rankings as at February 2007

2.4.3 OECD International Residential Basket

Figure 2.4.3.1 shows that Ireland is ranked in 4th 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, and is six places better than the EU average in terms of price.

Figure 2.4.3.1 - OECD International Residential Basket – May 2007[12]

Source: Teligen
To note: The numbers in brackets represent each Member State's respective rankings as at February 2007

2.4.4 OECD International Business Basket

Ireland drops one rank place to 4th among EU countries analysed in the international business basket, and is five places ahead of the EU average in terms of price.

Figure 2.4.4.1- OECD International Business Basket – May 2007

Source: Teligen
To note: The numbers in brackets represent each Member State's respective rankings as at February 2007
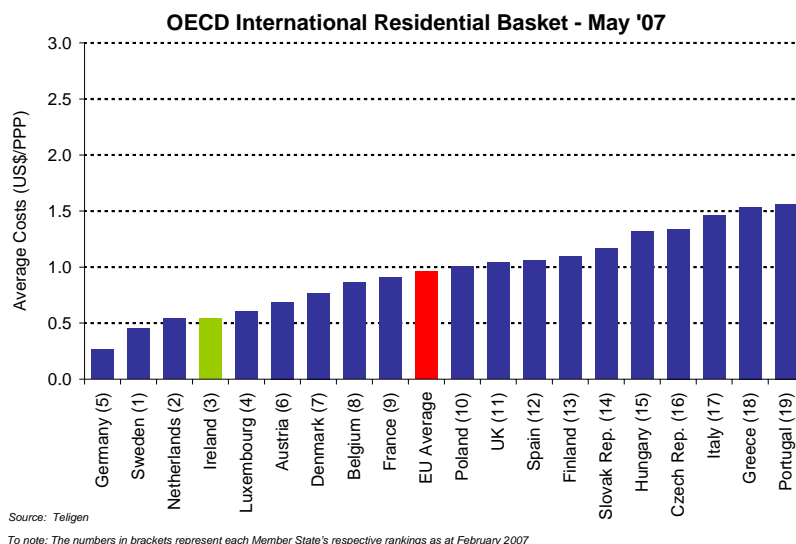
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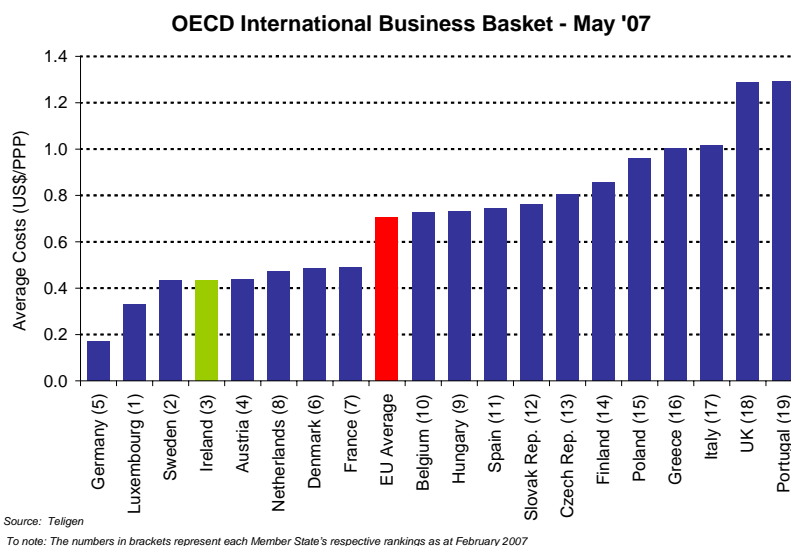
[12] Residential tariffs include VAT. VAT rates vary between member states.

3   Internet and Broadband

3.1   Total Internet Subscriptions

At the end of Q2 2007, there were a total of almost 1.1 million active internet subscriptions in Ireland[13].   Table 3.1.1 shows the total number of narrowband and broadband subscriptions to internet services in Ireland.   Please note that for the first time in the Internet and broadband section, ComReg provides an estimate for the number of mobile broadband users in Ireland.   Figures for mobile broadband are included in the "Other Broadband" category in Table 3.1.1. As a result of the inclusion of this new data, there are no comparable growth rates included for "Other Broadband" or "Total Internet" this quarter.

Table 3.1.1 – Total Number of Active Internet Subscriptions in Ireland

Subscription Type	Q2 07 Subs	Quarterly Growth Q1'07-Q2'07	Year-on-Year Growth Q2'06-Q2'07
Metered Narrowband	340,500	-7%	-30%
Flat Rate Narrowband	61,800	-14%	-19%
ADSL Broadband[14]	472,700	+8%	+72%
Other Broadband[15]	225,000	n/a	n/a
Total Internet Subscriptions	**1,100,000**	**n/a**	**n/a**

Figure 3.1.2 profiles internet subscriptions in Ireland using the classifications of subscription type outlined in figure 3.1.1.   Broadband subscriptions, either using copper-based DSL services, or alternative broadband platforms now account for 63% of all internet subscriptions.   Please note that "Other Broadband Subscriptions" in Figure 3.1.2 contains a ComReg estimate for mobile broadband subscriptions. Figure 3.1.2 provides a profile for the periods Q2 2005- Q1 2007 for historical trend purposes; however, please note that the inclusion of mobile broadband subscriptions in Q2 2007 means quarter on quarter comparisons should be drawn between the current period and other quarters profiled in Figure 3.1.2.

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[13] Please note that ComReg includes internet subscriptions using mobile 3G datacards and HSDPA modems for the first time in this Report. Data for mobile broadband subscriptions is estimated.

[14] 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.

[15] Other Broadband includes cable broadband, fixed wireless access, fibre, satellite and mobile broadband connections

Figure 3.1.2 – Profile of Active Internet Subscriptions in Ireland

Narrowband Metered, Narrowband Flat-rate, DSL and Other Broadband Subscriptions

Source: Quarterly Key Data Questionnaire
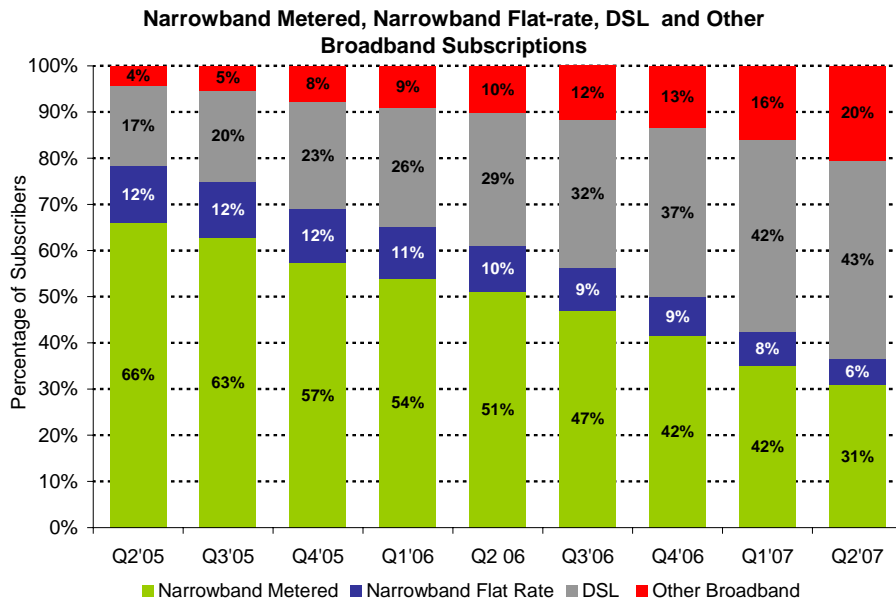
Figure 3.1.3 provides a historical view of the growth of total internet subscriptions in Ireland, and the migration from narrowband to broadband subscriptions since the start of 2003. Mobile broadband subscriptions are included in this chart for the first time, and while previous data is included for historical trend purposes, it should be noted that data presented for Q2 2007 is not directly comparable to previous periods. In addition to an overall growth in internet subscriptions, there has been a significant migration of internet subscriptions from narrowband to broadband lines.

Figure 3.1.3 – Narrowband and Broadband Subscriptions Growth in Ireland

Narrowband and Broadband Subscriptions Growth

Source: ComReg
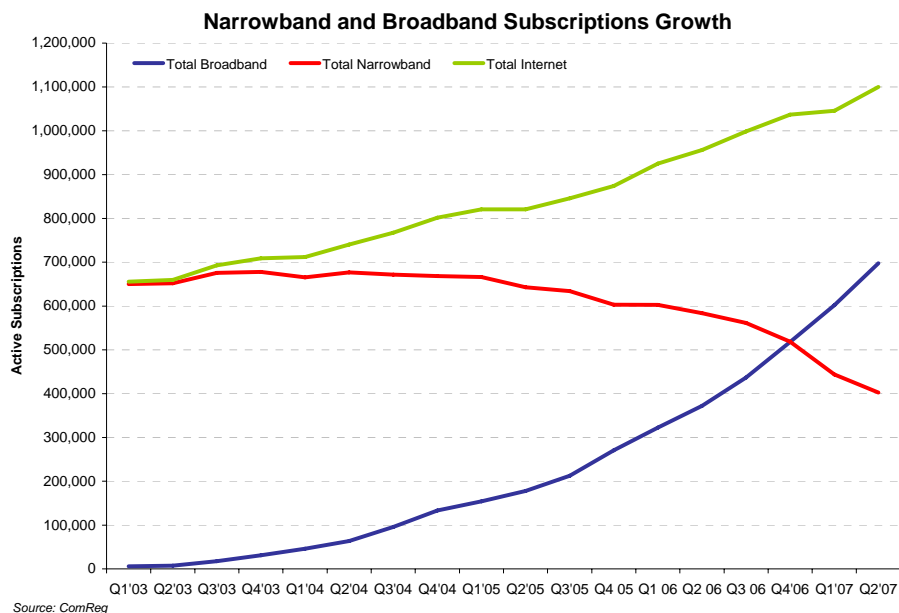
The CSO recently published household PC, internet and broadband usage statistics based on Census 2006 data[16]. Their analysis suggests that PC, Internet and broadband penetration are not evenly distributed throughout Ireland, with Leinster and Munster reporting higher household usage figures than Connaught and Ulster. Figure 3.1.4 profiles PC, Internet and broadband usage by province.

Figure 3.1.4 – PC, Internet and Broadband Household Penetration, Census 2006 data.

PC, Internet and Broadband Household Penetration (Census, 2006)

Source: Census, CSO, 2006
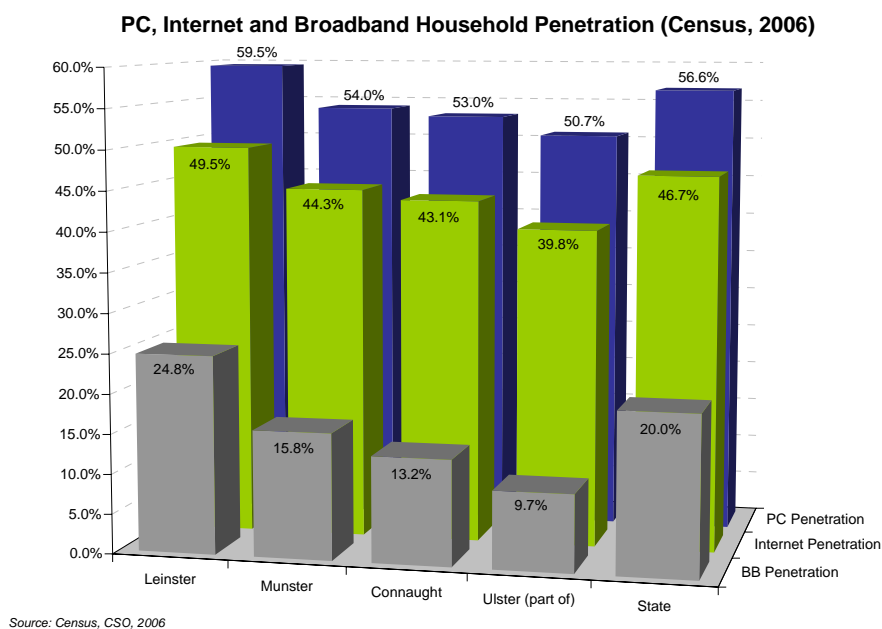
Figure 3.1.5 profiles only those internet subscriptions delivered over the copper telecoms network. It includes an analysis of metered or pay-as-you-go narrowband subscriptions, flat-rate narrowband subscriptions and DSL subscriptions. There were almost 875,000 active internet subscriptions over the copper telecoms network at the end of June 2007, a marginal fall in the total number of copper-based subscriptions since Q1 2007. DSL accounted for 54% of copper-based internet subscriptions, while metered narrowband subscriptions accounted for a further 39% of internet subscriptions over copper. This is the first time that broadband internet access over the copper-based telecom has exceed narrowband connections. Flat rate narrowband internet subscriptions make up the remaining 7% of copper-based internet subscriptions.

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[16] Further information on PC, internet and broadband usage by household based on Census 2006 data can be found at the following link: http://www.cso.ie/census/interactive_tables.htm

Figure 3.1.5 – Percentage of Copper Based Internet Subscriptions

Narrowband Metered, Narrowband Flat-rate, DSL Subscriptions

Source: Quarterly Key Data Questionnaire
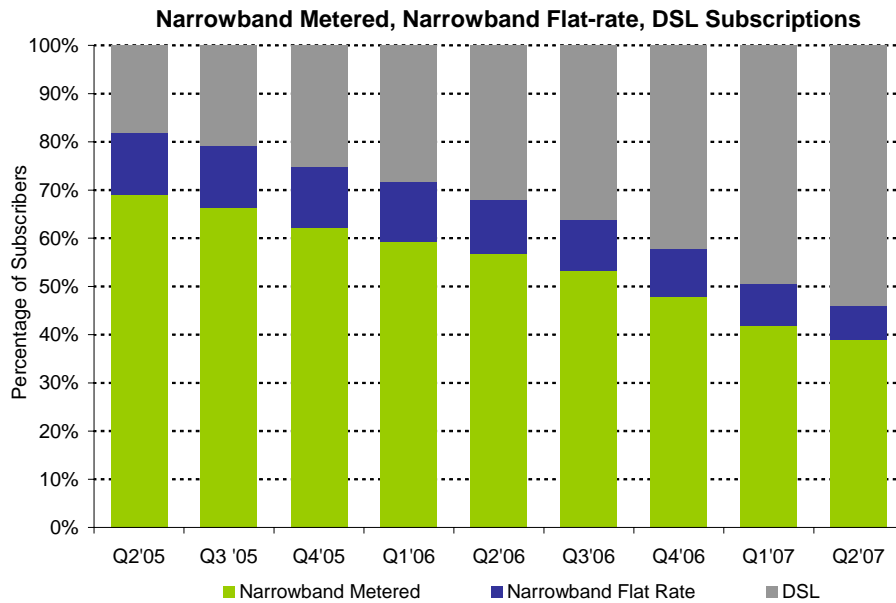
3.2 Provision of DSL Access

Figure 3.2.1 examines the provision of DSL access. DSL broadband services are provided to subscriptions 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 67% of all DSL subscriptions in June 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 June 2007, 29% of all DSL lines were provided by OAOs to subscriptions using wholesale bitstream, and a further 4% of DSL lines were provided to subscribers by OAOs using local-loop unbundling. At the end of June 2007 there were just over 18,600 local loops unbundled.

Figure 3.2.1 - Provision of DSL Access

Source: Quarterly Key Data Questionnaire
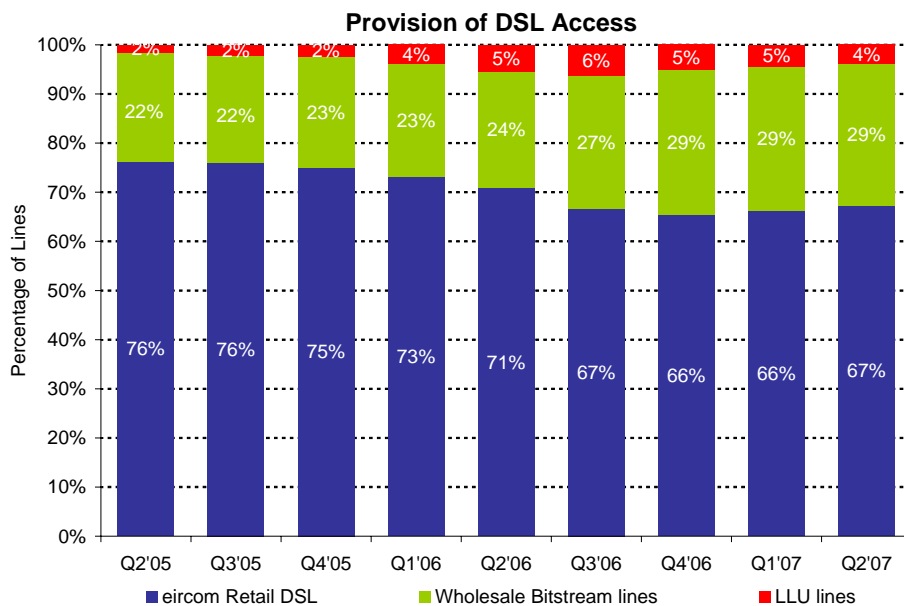
Eircom's market share of retail DSL lines has increased by 1% in Q2 2007 compared to the previous quarter. In the past twelve months however, Eircom's share of retail DSL subscriptions has declined by 4%. More information on Eircom's market share of the total broadband market is analysed in section 3.3 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[17] and growth rates by Platform

Platform	Q2 07 Subs	Quarterly Growth Q107- Q207	Year-on-Year Growth Q206- Q207
DSL	472,700	8%	72%
Cable	68,900	7%	73%
FWA	102,500	9%	95%
Other[18]	8,900	21%	94%
Sub-Total	653,000	8%	75%
Mobile Broadband	45,000	n/a	n/a
Total	698,000	n/a	n/a

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[17] ComReg notes that the data provided in this section relates to active subscriptions reported by operators. It does not account for multiple active subscriptions to broadband offerings by individual subscribers

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

Since the beginning of this year the availability of High Speed DownLink Packet Access or HSDPA has been providing mobile broadband access at speeds between 1.4 and 3.6 Mb to a growing number of Irish consumers. By the end of June 2007 ComReg estimates that there are around 45,000 subscriptions to this service. In order to fully reflect the range of broadband services available to customers in Ireland, ComReg therefore intends to include this data in its overview of the market going forward. However country to country comparisons will continue to exclude this figure at this time. Both the European Commission and the OECD have indicated that they intend to shortly start collecting data on mobile BB and this should provide the basis for comparative data across in the near future.

At the end of June 2007, there were 698,000 broadband subscriptions in Ireland including subscriptions to mobile broadband services which are included in this report for the first time. Growth in subscriptions to other platforms slowed this quarter with 51,000 net additional subscriptions to DSL, cable, FWA, fibre and satellite customers.

DSL remains the largest broadband access platform in terms of subscriptions, accounting for 68% of all broadband subscriptions, while other platforms account for the remaining 32% of connections. Figure 3.3.2 illustrates the growth in total broadband subscriptions in the Irish market since Q2 2005. Mobile broadband subscriptions are included in Figure 3.3.2 for the first time. Therefore total subscriptions levels presented in Figure 3.3.2 are not directly comparable with previous periods.

Figure 3.3.2 – Broadband Subscriptions by Platform
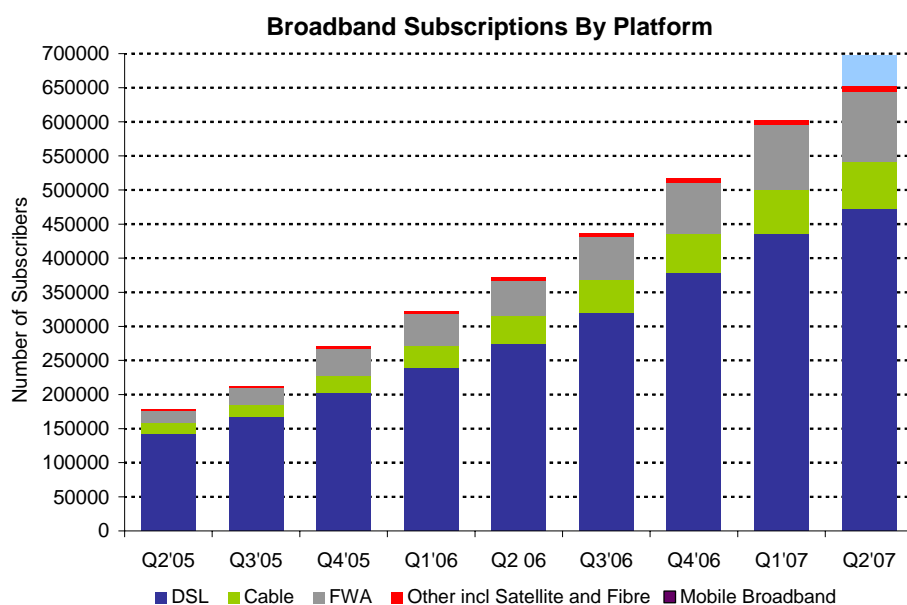
Source: Quarterly Key Data Questionnaire

Figure 3.3.3 breaks down broadband subscriptions to provide an estimate of the proportion of business and residential subscriptions to DSL, cable, fixed wireless, fibre and satellite subscriptions broadband subscriptions only. ComReg does not currently have data on the business and residential customer base of mobile broadband, and therefore it is not included in Figure 3.3.3. At the end of June 2007, 75% of broadband subscriptions on these platforms were residential broadband subscriptions. The platform with the highest percentage of residential subscriptions is cable broadband, while satellite and fibre broadband lines have the highest percentage of business customers within its 8,900 broadband subscriptions.

Figure 3.3.3 – Broadband Subscriptions by Subscriber Type
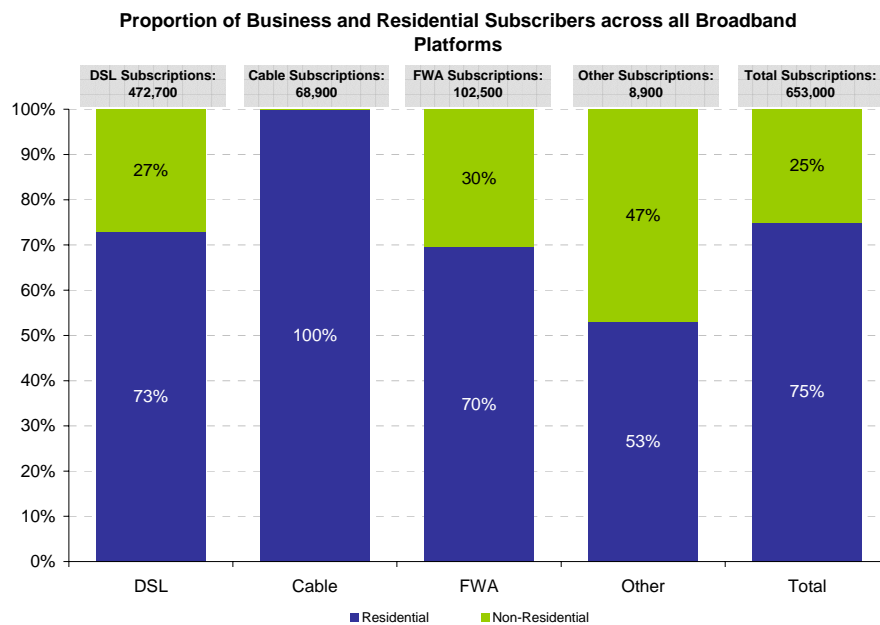
Figure 3.3.4 illustrates Eircom's market share of total broadband subscriptions when compared to other authorised operators' (OAO) share of overall broadband subscriptions, including DSL and alternative access technologies. For the first time this quarter, mobile broadband subscriptions are included in this analysis and are contained within the "Other Broadband" subscriptions in Figure 3.3.4.

In this period, Eircom held a 46% market share of all broadband subscriptions. DSL provided by OAOs using either Bitstream or LLU represented a further 22% of all broadband subscriptions. The remaining 32% of subscriptions was held by operators on alternative broadband platforms which includes cable broadband, fixed wireless, fibre, satellite and mobile broadband subscriptions.

Please note that data for Q2 2007, which includes mobile broadband for the first time, means that direct comparisons on market share between Q2 2007 and previous periods can not be made; they are included here for illustrative purposes of previous trends.

Figure 3.3.4– Market share of Total Broadband Market

Market Share of Total Broadband Market

Source: Quarterly Key Data

■ DSL retailed by eircom   ■ DSL retailed by OAOs   ■ Other Broadband Platforms
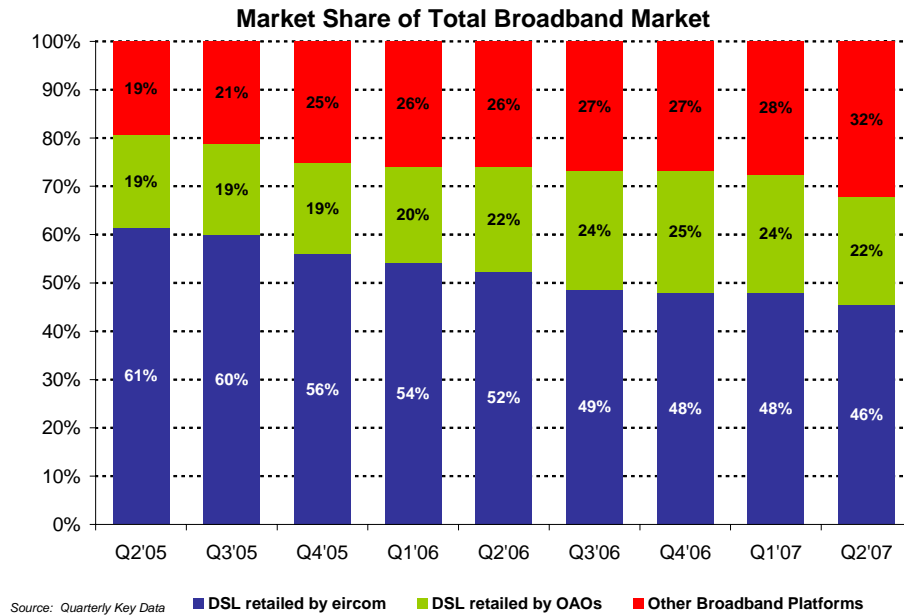
In presenting broadband penetration benchmarks for European countries, ComReg uses either OECD or ECTA[19] data based on the most recently published statistics at the time of publication. ComReg provides broadband data for Ireland to both organisations. Figure 3.3.5 illustrates broadband penetration rates calculated by the ECTA on a per capita basis at the end of March 2007[20]. ECTA calculated Ireland's broadband penetration at 14.3% in March 2007, compared to an average of 18.1% across the EU25 countries monitored. ComReg estimates that Irish broadband penetration (including mobile broadband) in June 2007 was 16.48%[21].

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[19] European Competitive Telecommunications Association

[20] http://www.ectaportal.com/en/upload/File/Broadband%20Scorecards/Q107/FinalBBScQ107.xls

[21] 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. Penetration rate at the end of June 2007 without the inclusion of mobile broadband is 15.42%

Figure 3.3.5 – ECTA Broadband Penetration Rates

European Broadband Penetration Rate, ECTA (March 2007*)
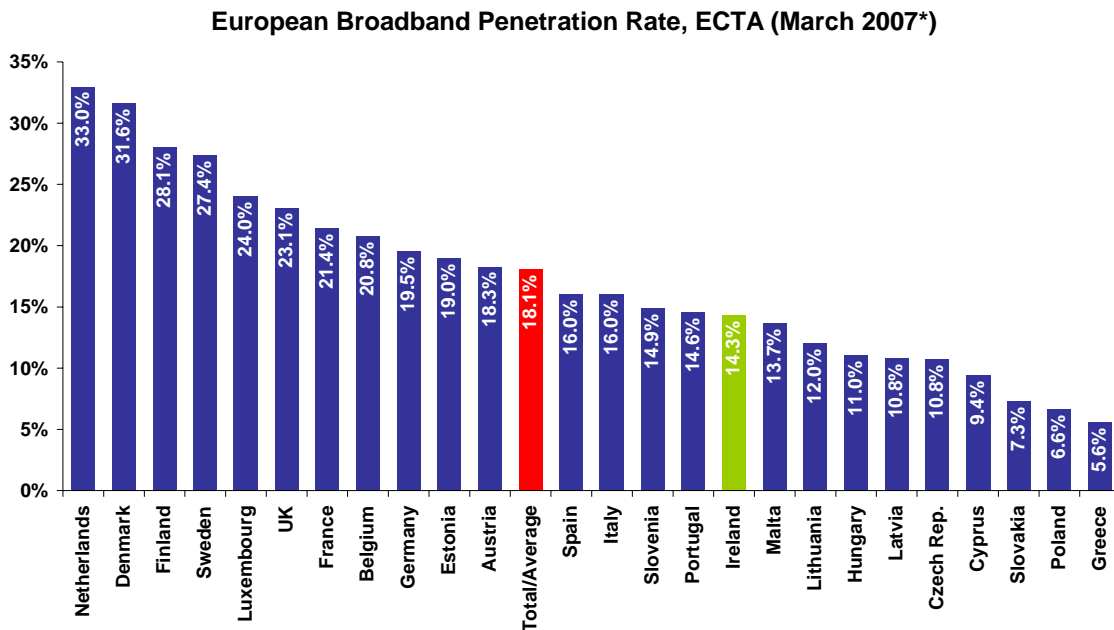
Source: ECTA
*Note: *Data for Cyprus and Denmark is from September 2006*

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 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. Internet 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[22].

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.

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[22] 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

	Q2 2007	Q1'07-Q2'07 Growth	Q2'06-Q2'07 Growth
WiFi Hotspots	1,214	-4%	n/a
WiFi Access Points	2,345	+3%	n/a

3.5 ADSL Pricing Data[23]

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[24].

Figure 3.5.1 – Lowest Monthly Rental ADSL Basket- May 2007

DSL Basket - May '07

Source: Teligen
To note: The numbers in brackets represent each Member State's respective rankings as at February 2007

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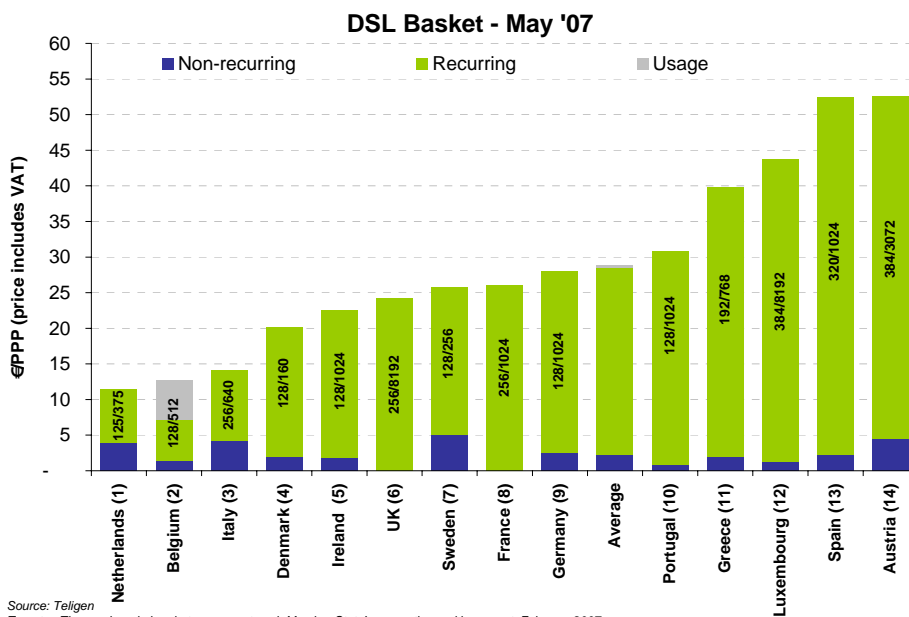
[23] This section does not include broadband tariff packages that are offered as special promotions. All tariffs are inclusive of VAT. VAT rates vary between Member States.

[24] ComReg Document 07/67a

Ireland was ranked in 5th place again in the DSL basket in May 2007, and is currently 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 – May 2007[25]
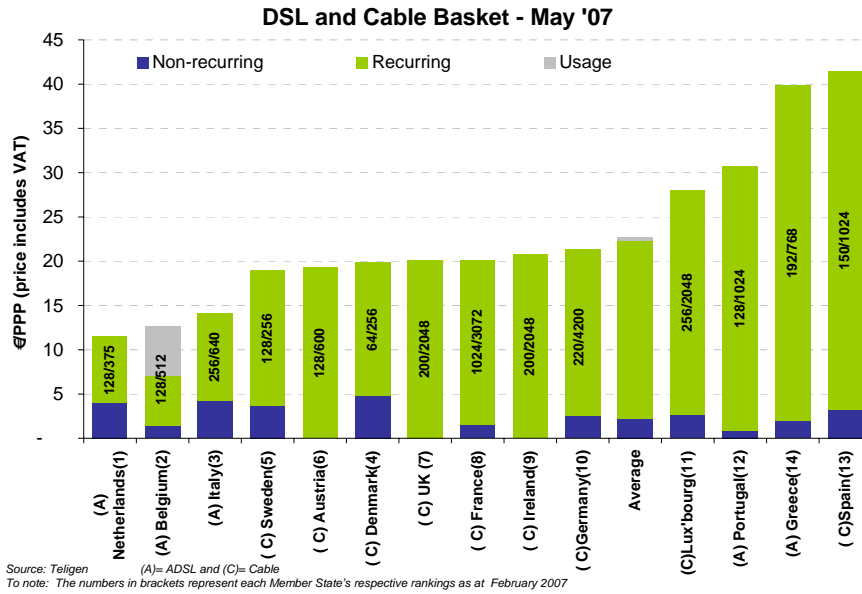
Ireland is ranked in 9th place in this basket, two places less expensive than the EU average price in this basket. In Ireland, this product is the Cablenet Broadband Easy product offered by Chorus.

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[25] 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

Mobile Penetration Q2 2003- Q2 2007

Source: Quarterly Key Data Questionnaire
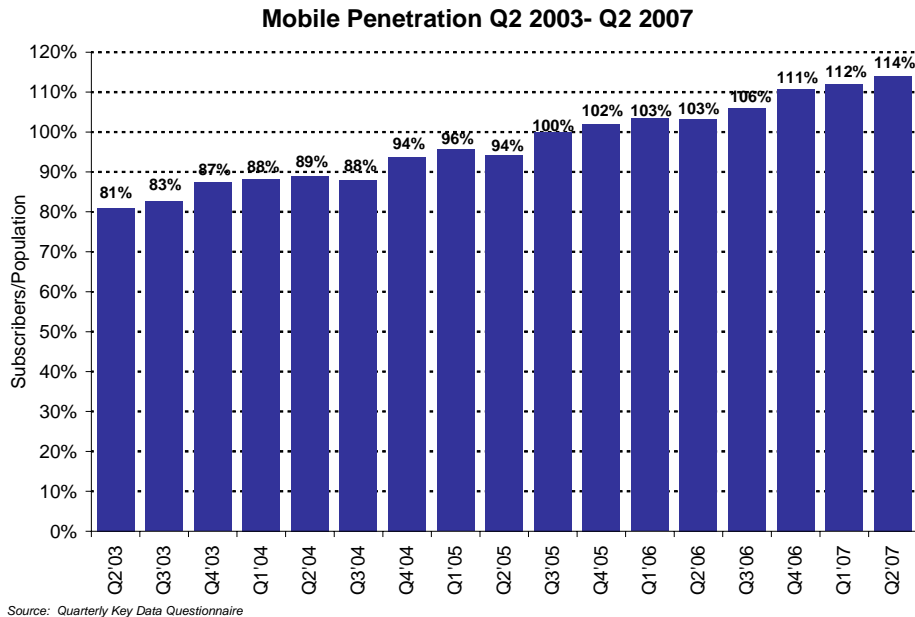
At the end of June 2007, there were over 4.8 million 2G and 3G mobile subscriptions in Ireland[26]. Figure 4.1.1.1 illustrates the growth in mobile penetration since 2003 and notes that at the end of June 2007, mobile penetration based on population in Ireland was 114%. Mobile penetration is recognised as the standard metric internationally to describe the adoption of mobile services, and is calculated based on the number of active SIM cards[27] 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 actual mobile usage using this metric.

Figure 4.1.1.2 illustrates national mobile penetration rates across the EU15 in June 2007. Mobile subscription numbers analysed were sourced from the Yankee Group, while population figures for the countries analysed were sourced from 2006 Eurostat

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[26] 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.

[27] 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 Q2 2007 was estimated at 113%[28].

Figure 4.1.1.2 – European Mobile Penetration Rates

European Mobile Penetration - June 2007

Source: Eurostat, Yankee Group
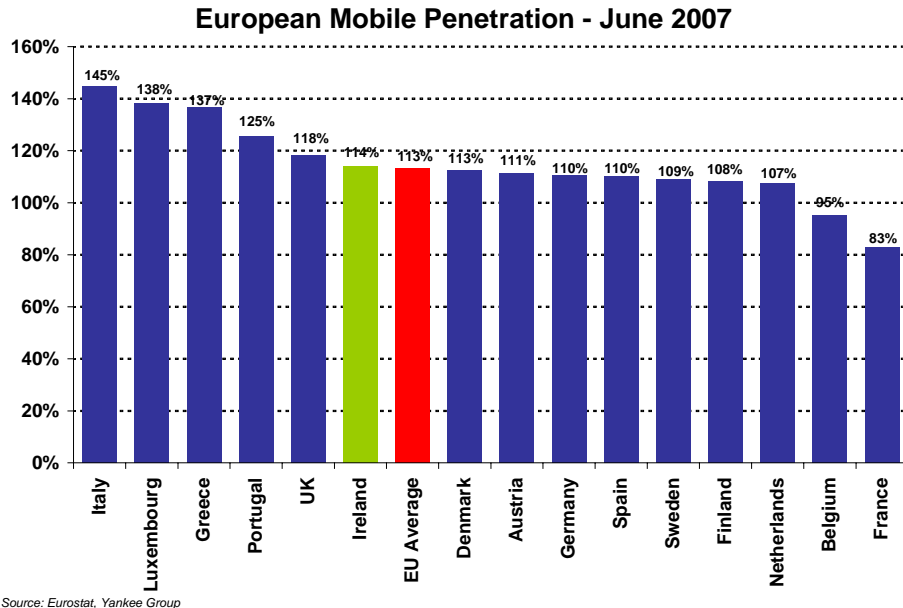
4.1.2   The Profile of Mobile Subscriptions in Ireland

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 illustrates the mobile subscription base in Ireland classified by the proportion of pre-paid and post-paid subscriptions on both 2G and 3G networks at the end of June 2007. In Q2 2007, pre-paid subscriptions accounted for 74% of all active mobile subscriptions, a proportion of overall subscriptions that has remained relatively stable since Q2 2005.

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

Mobile Subscriptions- Prepaid and Postpaid (Q2'05 - Q2'07)
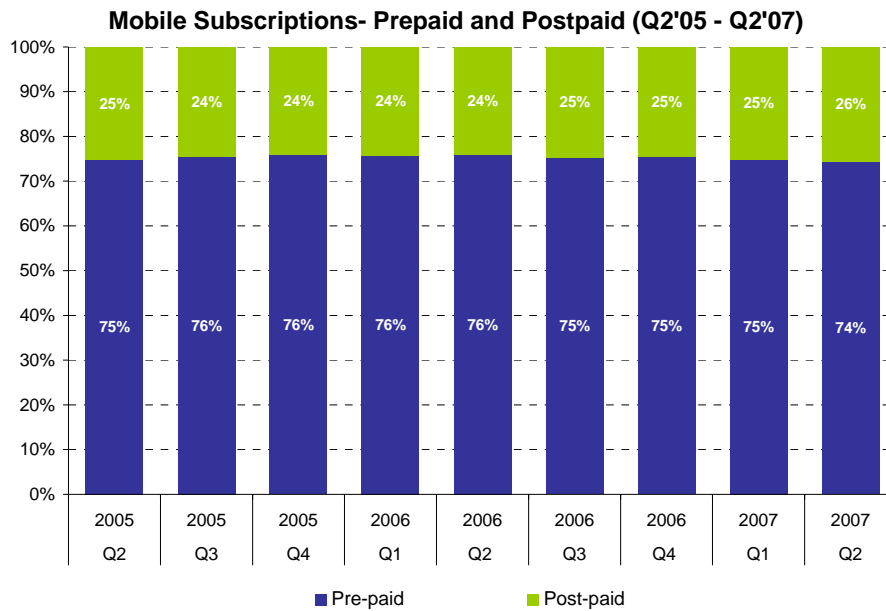
Source: Quarterly Key Data Questionnaire

Figure 4.1.2.2 indicates the pre-paid and post-paid subscription profile of each of the mobile operators in the Irish mobile market. 3 Ireland's customer profile is being reported for the first time in Figure 4.1.2.2. O2 has the highest proportion of post-paid customers with 31% of its subscriptions in the post-paid category. Meteor reports the largest proportion of pre-paid subscriptions, with 89% of their subscriptions base choosing to use the pre-paid payment option.

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

Pre-paid/Post-paid Subscriber Breakdown by Operator - Q2 2007
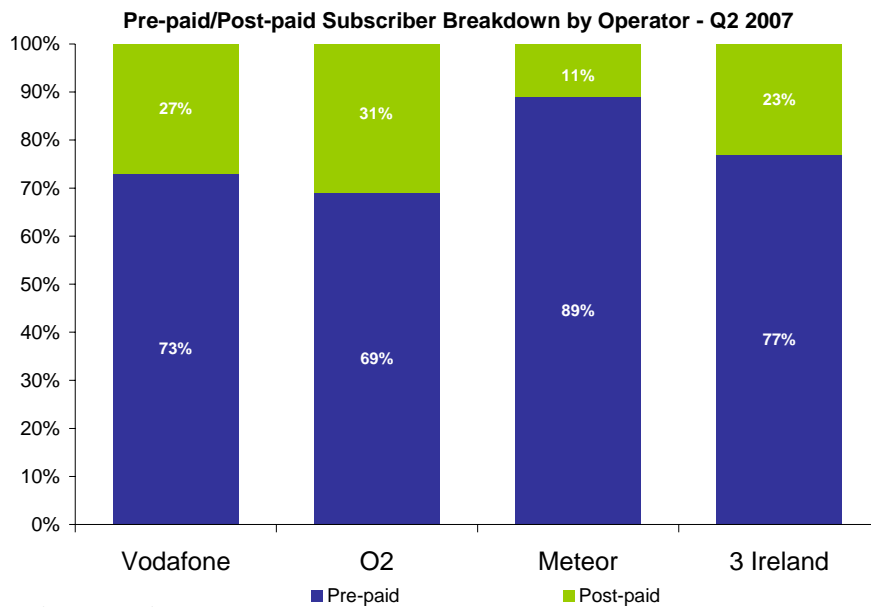
Source: Quarterly Key Data Questionnaire

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 Q2 2005. Total retail mobile voice traffic totalled over 2.1 billion minutes in Q2 2007, a 6% growth in voice volumes since the previous quarter, and a 22% increase in voice volumes since the same period in 2006. Mobile originating minutes now account for 48% of all voice traffic in the Irish telecommunications markets. The total number of SMS messages sent by mobile users in Ireland totalled 1.79 billion in Q2 2007. Growth in SMS messaging remains relatively stable quarter on quarter, although volumes of quarterly SMS messaging have increased by 28% on the same period in 2006. If the total volume of text messages is averaged over all active subscriptions, an average of 123 SMS messages were sent per subscription, per month in Q2 2007, compared with 106 in the same period last year.

Figure 4.2.1.1 – SMS, MMS and Call Minutes
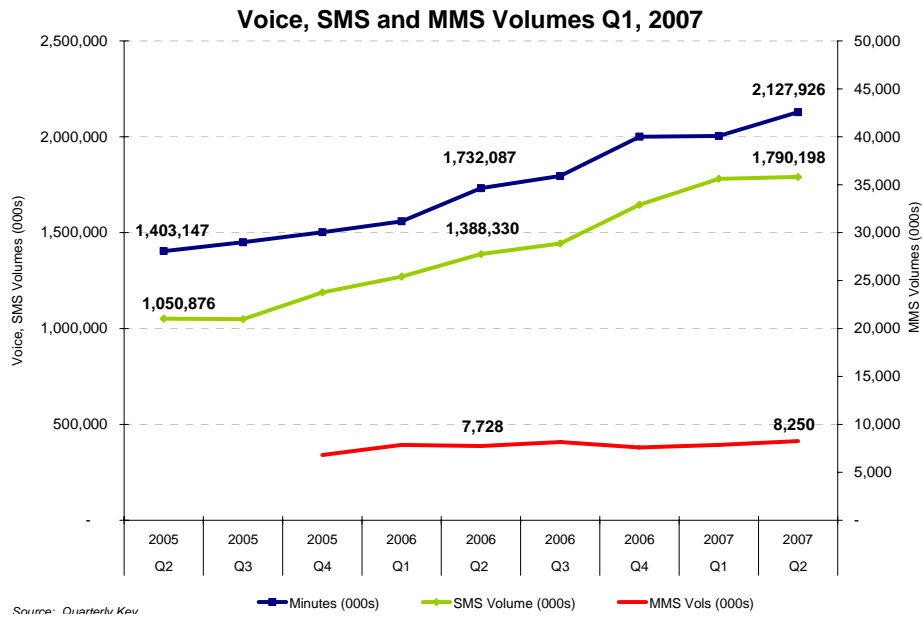
The number of MMS messages, or multimedia messages such as picture messages, sent in the quarter remains relatively low compared to voice minutes and SMS volumes. There were just over 8.2 million MMS messages sent during the quarter.

4.3 Mobile Revenues

Mobile retail revenues for the quarter were in excess of €509 million, a 3% increase since Q1 2007, and a 7% increase in retail revenues since Q2 2006. Figure 4.3.1 outlines mobile retail revenues for the period Q2 2005 to Q2 2007. Revenues attributable to data services such as SMS and MMS accounted for 18% of all retail revenues in Q2 2007[29].

Figure 4.3.1 – Mobile Revenue Q1 05- Q1 07
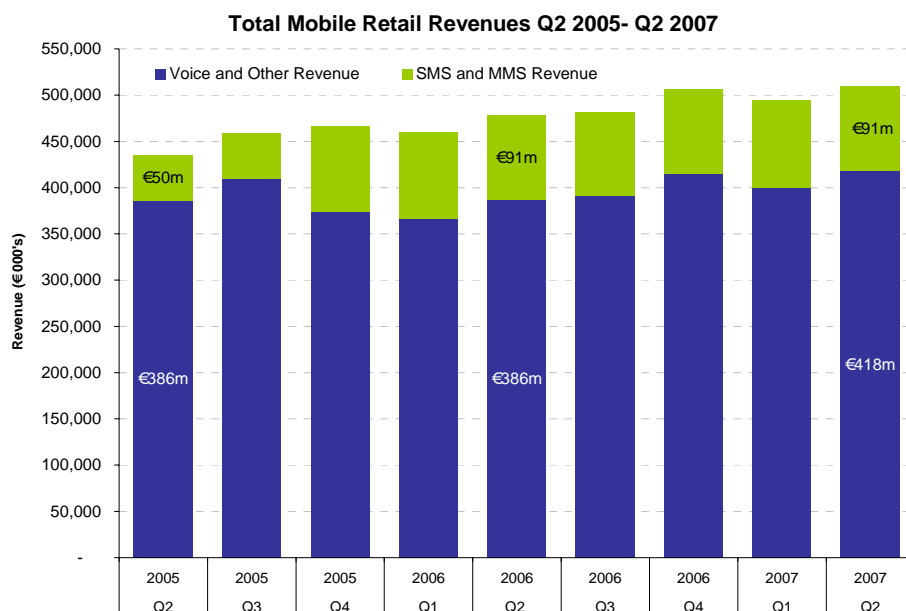
Figure 4.3.2 outlines the percentage of mobile revenues attributable to all data revenues in the Irish market compared to a number of other EU-15 markets. This benchmarking data is calculated independently by the Yankee Group, and includes data revenues not only from SMS and MMS messaging, but also data revenues from GPRS data services and 3G data services. Irish mobile operators have the 3rd highest level of data revenues among those countries analysed, with 22%[30] of revenue attributable to data revenues, unchanged since Q1 2007, and a 1% increase in the proportion of revenues from data services on Q2 2007.

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[29] Data revenues identified by ComReg in this analysis include only revenues attributable to SMS and MMS messaging services.

[30] Data revenues identified by the Yankee Group include revenues from SMA, MMS, GPRS and 3G data services.

Figure 4.3.2 - Data Revenues as % of Total Mobile Revenue[31]

Data Revenues as a % of Total Mobile Revenues Q2, 2007
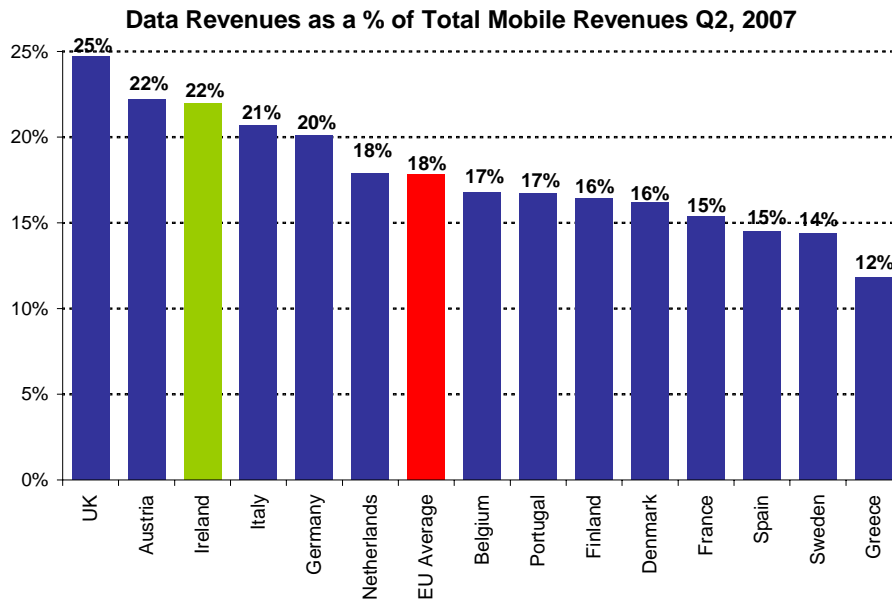
Source: Yankee Group

Figure 4.3.3 compares ARPU (average revenue per user) across several EU countries[32]. 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 €44.07 per month in Q2 2007, a 6% decline in ARPU since the same period in 2006. This fall in ARPU is reflective of a general decrease in monthly revenue per user across all EU-15 member states within the period. Mobile ARPU in Ireland still remains the highest among the EU member states monitored, and substantially higher than the EU average of €29.40.

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

[32] 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 – Q2 2007

European ARPU Compared - Q2 2007

Source: Yankee Group
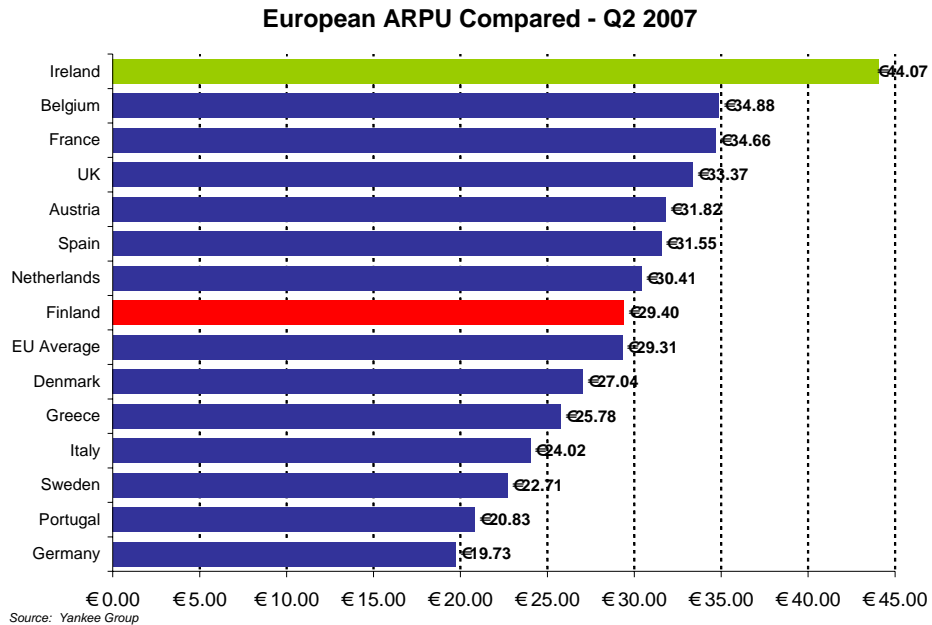
4.4 *Average Minutes of Use*

Mobile monthly ARPU is a function of both the price of mobile services and the level of usage of mobile services. The most frequently used metric to determine levels of mobile telephony usage is monthly minutes of use. ComReg has collected monthly minutes of use data from all operators in the Irish market since Q1 2007. Further information on the definition and calculation of average minutes of use by ComReg is detailed in the explanatory memorandum which accompanies this report[33]. Average minutes of use in Ireland for Q1 2007 was 232 minutes per month, compared to 224 minutes per month in Q1 2007.

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[33] ComReg Document 07/67a

Figure 4.4.1 – Minutes of use growth rates

Country	MoU Q107	MoU Q207	Quarterly Change Q107-Q207
Ireland	224	232	+3.6%
France	245	245	0%
Germany	101	104	+3%
Italy	131	133	+1.5%
Portugal	118	119	+1%
Spain	190	193	+1.6%
UK	160	163	+1.9%

The Yankee Group has provided ComReg with data which provides estimates of monthly minutes of use in a number of other mobile markets in other European countries. Figure 4.4.2 compares weighted average minutes of use and ARPU in each of these markets.

Figure 4.4.2 – Minutes of Use and ARPU Comparison, Q2 2007

Minutes of Use and ARPU Comparison, Q2 2007

Source: ComReg, Yankee Group
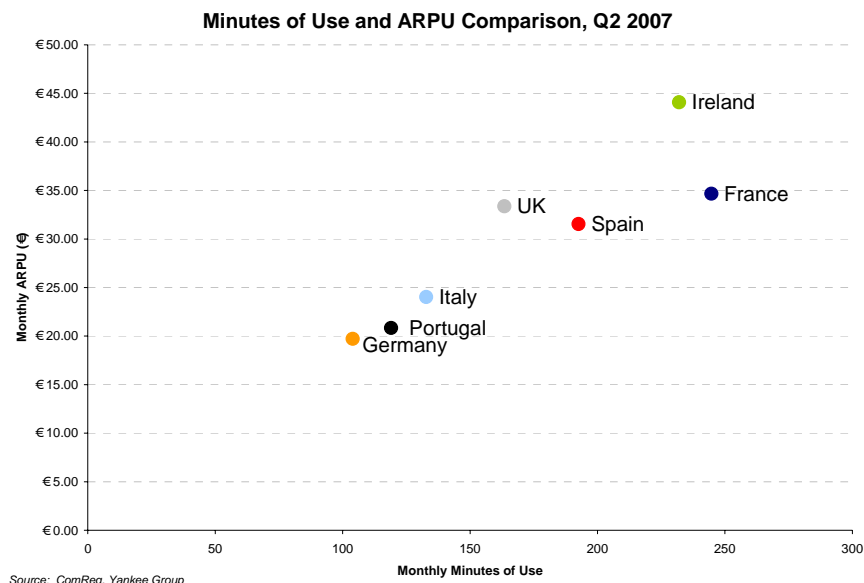
The scatter chart shows that Ireland has the highest level of monthly spend on mobile telephony services, and second highest voice minute usage among the countries analysed.

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4.5 Competition in the Mobile Market

4.5.1 Mobile Market Shares- By Subscription and Retail Revenues

Previously, market share data presented in this report examined the market share attributable to the top three mobile operators based on active subscriptions and quarterly retail revenues. For the first time this quarter, ComReg presents market share information for 3 Ireland, who entered the market in July 2005. Figure 4.4.1.1 outlines mobile market share based on the number of active subscriptions reported by each operator. It should be noted that while a historical picture of market share is presented in these charts, market share figures presented for Q2 2007 are not comparable with data previously presented. Prior to Q2 2007 market shares were based on Vodafone, O2 and Meteor's cumulative revenue and subscription bases, rather than the market as a whole which would have included 3 Ireland. It should be further noted that while 3 Ireland's market share is presented as a percentage of all market subscriptions in Ireland; 3 Ireland operates only in the 3G sector. 3 Ireland currently accounts for 2.8% of the total active mobile subscription base in Ireland.

Figure 4.4.1.1 – Market Share – Number of Subscriptions

Market Share by Subscription Q2 2005- Q2 2007

	2005 Q2	2005 Q3	2005 Q4	2006 Q1	2006 Q2	2006 Q3	2006 Q4	2007 Q1	2007 Q2
Meteor	10.7%	11.5%	13.4%	14.6%	15.6%	16.5%	17.4%	17.9%	18.1%
3 Ireland									2.8%
O2	39.9%	38.8%	38.0%	37.3%	36.6%	36.0%	35.4%	35.2%	33.8%
Vodafone	49.4%	49.7%	48.6%	48.1%	47.8%	47.6%	47.2%	46.9%	45.3%

Source: Quarterly Key Data

■ Vodafone ■ O2 ■ Meteor ■ 3 Ireland
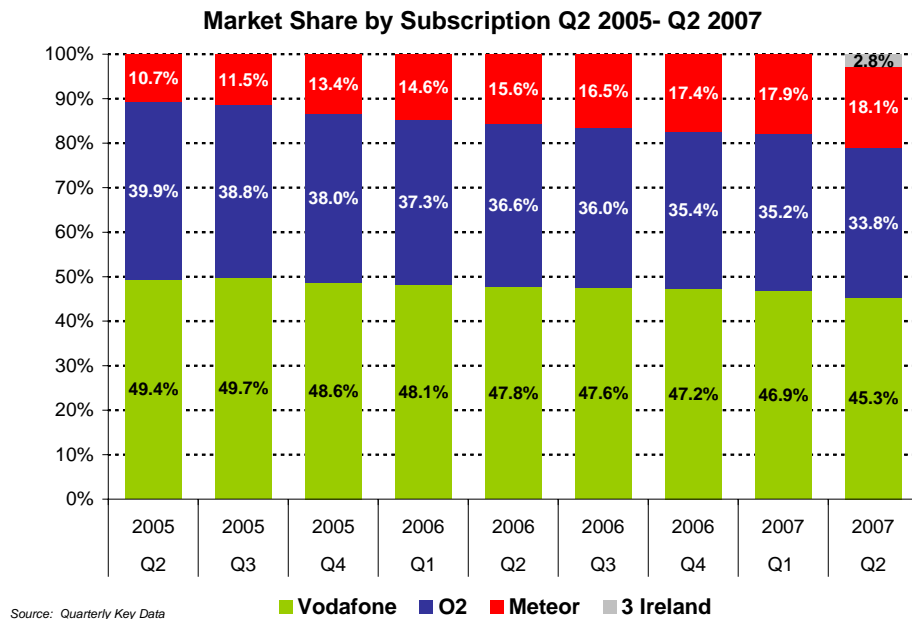
Figure 4.4.1.2 provides market shares for all mobile operators in the Irish market. 3 Ireland accounted for 3% of mobile industry retail revenues in Q2 2007.

Figure 4.4.1.2 – Market Share – Revenue

Market Share by Revenue Q2 2005- Q2 2007

Source: Quarterly Key Data Questionnaire
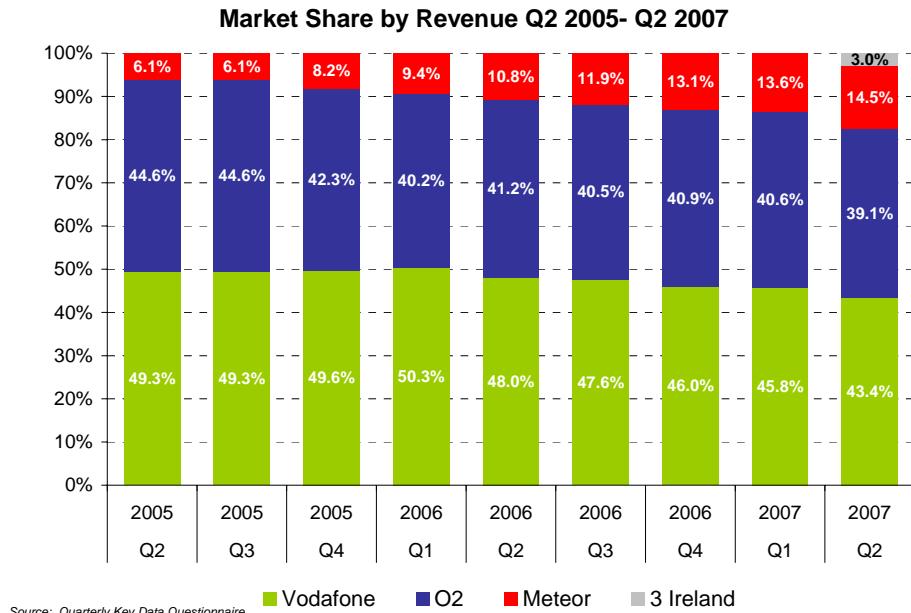
4.5.2 Switching in the Mobile Market

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 944,000 people have used MNP to switch operator since June 2003. In Q2 2007 almost 86,000 numbers were ported to another operator; based on data since June 2006, an average of around 80,000 numbers are ported each quarter.

Figure 4.4.2.1 – Mobile Numbers Ported

Mobile Numbers Ported

Source: Quarterly Key Data Questionnaire
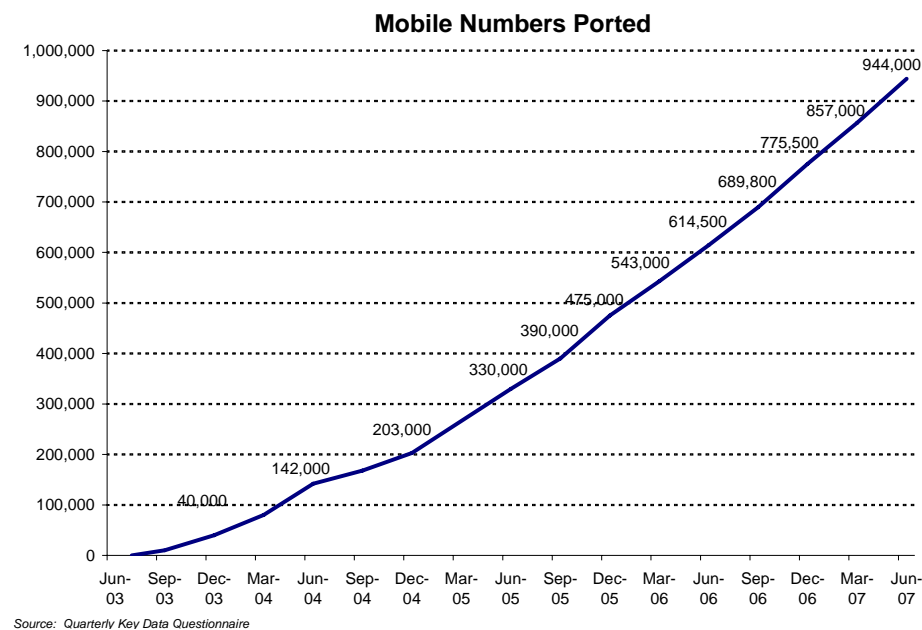
4.6 Mobile Pricing Data[34]

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 subscription 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.

4.6.1 Low User Post Paid Mobile Basket[35]

Ireland is ranked in 11th place out of the 19 EU countries analysed, having fallen from 10th position in February 2007, and remains three places behind the EU average in terms of price.

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

Source: Teligen
To note: The numbers in brackets represent each Member State's respective rankings as at February 2007

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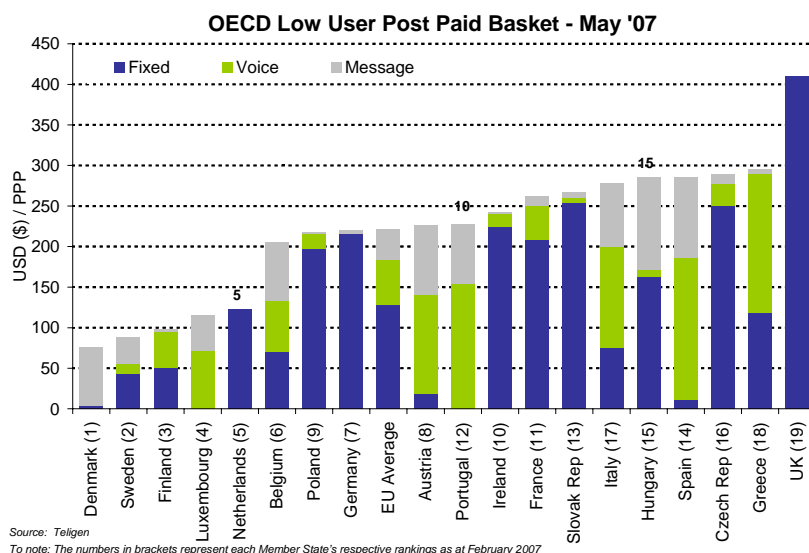
[34] The 'Fixed' component of price refers to the standard charges imposed by operators, regardless of the amount of calls made (i.e. connection and rental). Teligen's calculation of this figure is made up of: Installation Charge/5 + Rental charge for 1 year. The 'Voice' component of price refers to 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.

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

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4.6.2 Medium User Post Paid Mobile Basket

Ireland's position in this basket is 11th among the 19 EU countries monitored this quarter; in February 2007 it was ranked in the 8th position. Ireland is now 3 places more expensive than the EU average in this basket. Both Ireland and France have dropped in relative ranking this quarter, a result of ranking and price improvements in Italy, Poland and Greece. Prices in both Ireland and France remain relatively unchanged this quarter.

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

Source: Teligen

To note: The numbers in brackets represent each Member State's respective rankings as at February 2007
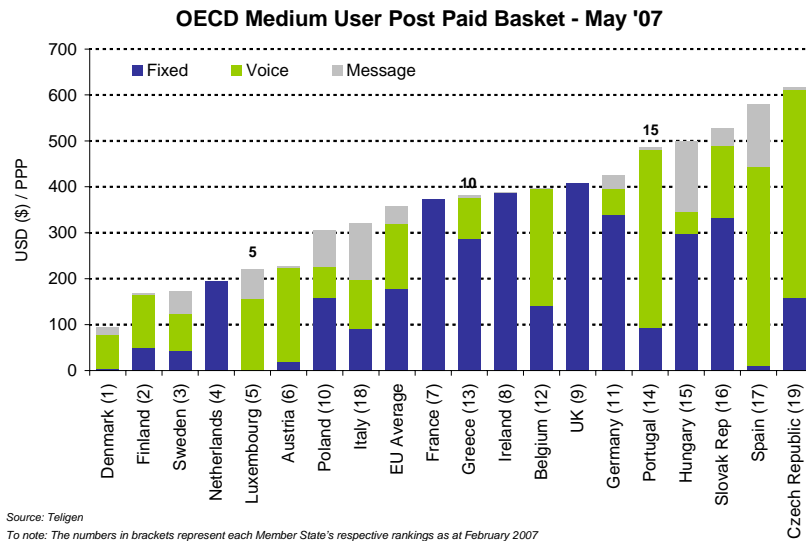
4.6.3 High User Post Paid Mobile Basket

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

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

OECD High User Post Paid Basket - May '07

Source: Teligen
To note: The numbers in brackets represent each Member State's respective rankings as at November 2006
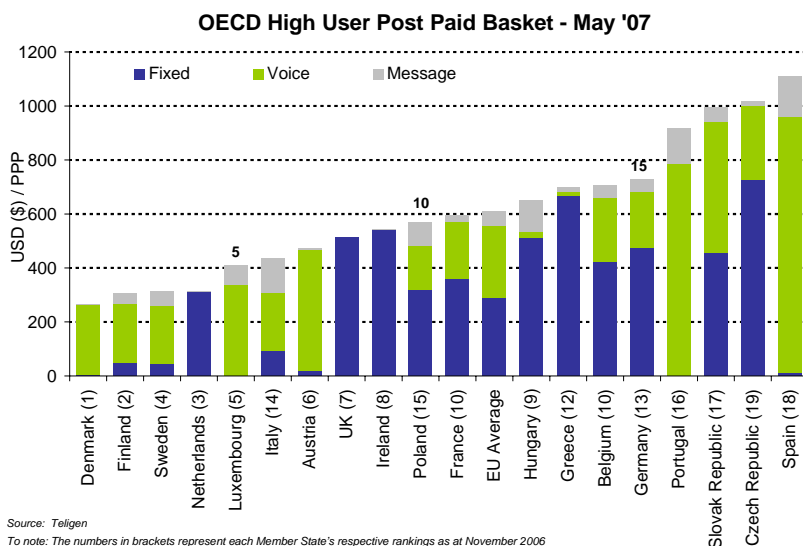
4.6.4 Pre-Paid Mobile Basket[36]

Ireland is ranked in 7th place in the pre-paid basket this quarter, a one place improvement since February 2007, and is now six places ahead of the EU average.

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

OECD Pre-Paid Basket - May '07

Source: Teligen
To note: The numbers in brackets represent each Member State's respective rankings as at February 2007

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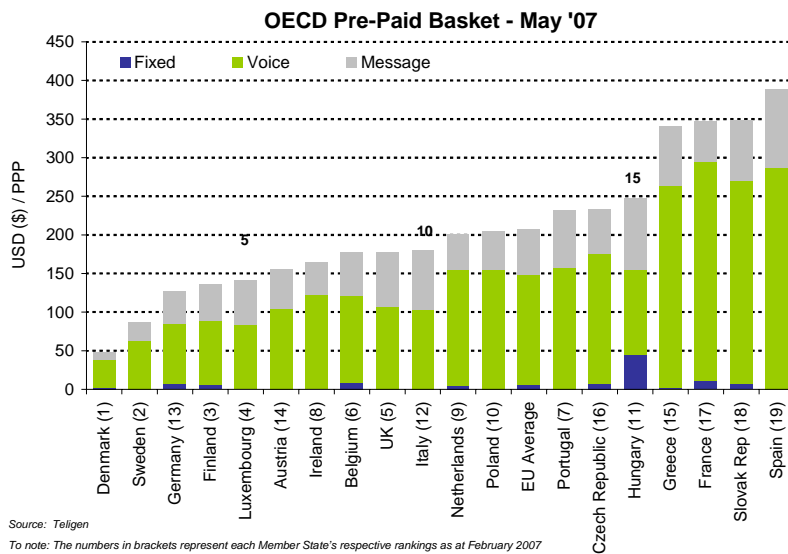
[36] The OECD has found that there is little difference between the average pre-paid usage and low-user post-paid usage. Thus, the pre-paid and low user post paid baskets are based on the same usage assumptions.

5   Broadcasting

5.1   Overall Broadcasting Market

The broadcasting analysis provided in this report uses operator data in conjunction with CSO estimates[37] 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[38] 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 June 2007 there were approximately 565,000 subscriptions to cable[39]/MMDS[40] television services in Ireland. For the same period BSkyB reported 497,000 Irish satellite[41] TV subscribers. The total number of pay TV households in Ireland (cable/MMDS and satellite) is 1.062 million. Pay-TV households account for 73% of all homes with a television.

Figure 5.1.1 – Broadcasting Subscriptions and growth rates by Platform

Platform	Number of Subscriptions	Quarterly Change Q107-Q207	Annual Change Q206-Q207
Cable/MMDS	565,000	-1%	+1%
Satellite	497,000	+3%	16%
Free-to-View	396,000	-2%	-8%

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.

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[37] ComReg uses the most up to date figure for TV households as per CSO figures when calculating penetration of Pay TV services. 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. The report indicates that there are a total of 1.483 million households in Ireland.

[38] 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.

[39] 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.

[40] 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.

[41] 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 - Delivery of Broadcasting Services

Broadcasting Market Breakdown Q2 2005 - Q2 2007
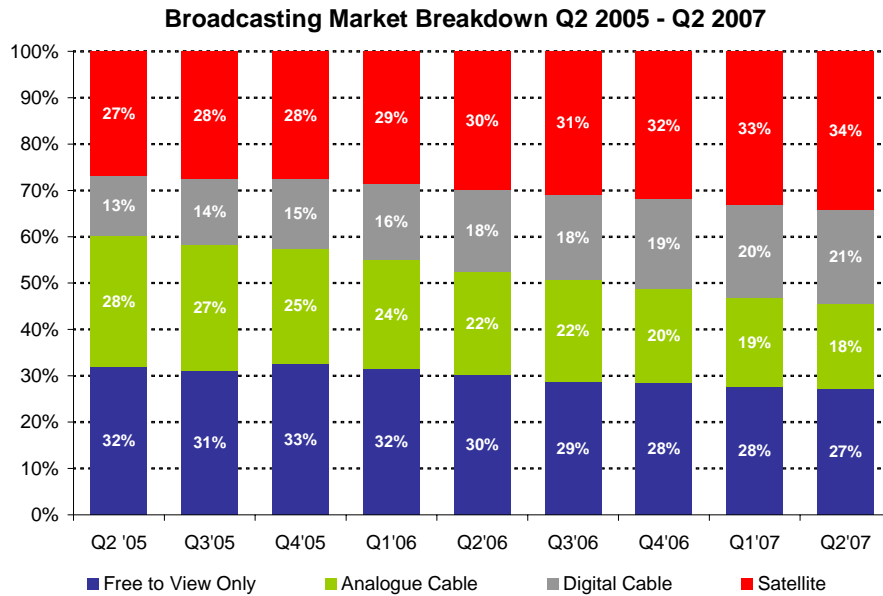
Source: Quarterly Key Data Questionnaire, BSkyB

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 those who pay for digital TV, provided via either a digital cable service or satellite service. In Q2 2007, 75% of all those subscribing to a paid television service in Ireland had a digital subscription; an increase of 2% since Q1 2007 and a year-on-year increase of 7% since Q2 2006.

Figure 5.2.1 - Pay TV Market (Analogue and Digital)

PayTV Market- Analogue and Digital Subscribers Q2'05 - Q2'07

Source: Quarterly Key Data Questionnaire, BSkyB

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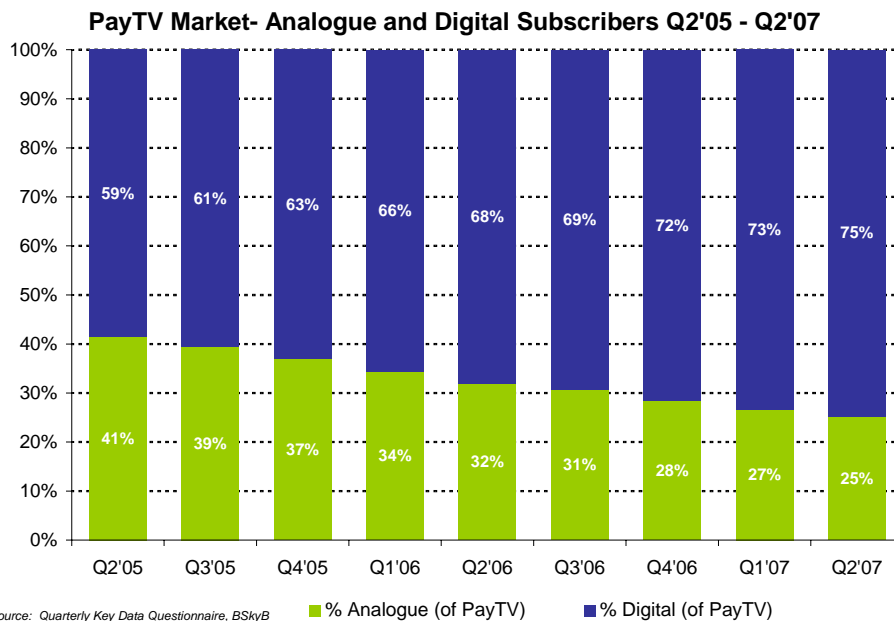
5.3 Digital TV

At the end of June 2007, there were over 794,000 digital TV subscribers which include cable/MMDS and satellite customers. Fifty four 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 increased 1% this quarter, with 63% of digital TV households now using a satellite service to receive digital TV services.

Figure 5.3.1 - Digital TV (Cable and Satellite Breakdown)

Digital TV (Cable and Satellite Breakdown) Q2'05 - Q2'07

Quarter	Sky (% Digital Subs)	Cable/MMDS (% of Digital Subs)
Q2'07	63%	37%
Q1'07	62%	38%
Q4'06	62%	38%
Q3'06	63%	37%
Q2'06	63%	37%
Q1'06	63%	37%
Q4'05	65%	35%
Q3'05	66%	34%
Q2'05	68%	32%

Source: Quarterly Key Data Questionnaire, BSkyB
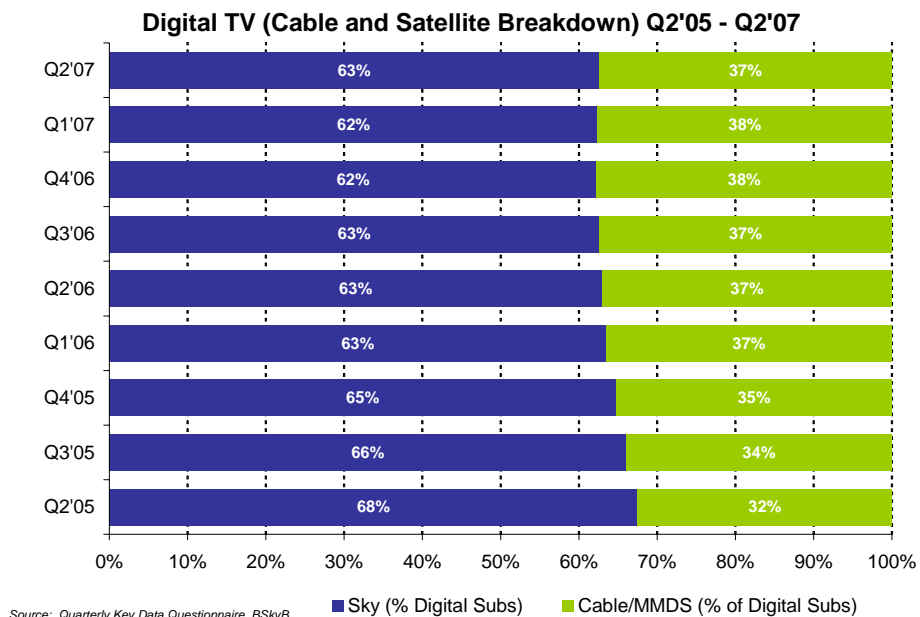
6   Emerging Trends – Digital Broadcasting

The drive towards a digital transformation continues to affect both television and radio broadcasting throughout Europe. By the end of the decade, the 'switchover' from analogue to digital television will have commenced here, and many households will have access to digital programme content, which should include access to more programme services, greater interactivity and an overall enhanced television viewing experience. The European Commission has recommended a target for complete switch from analogue to digital throughout Europe by 2012 so Ireland's progress with DTT (Digital Terrestrial Television) is important. Trials are currently in operation in a number of regions throughout Ireland in order to test both DAB (Digital Audio Broadcasting) and DTT for an eventual national roll-out of both.

6.1   What is Digital Broadcasting?

Digital broadcasting is the practice of using digital data rather than analogue waveforms to carry broadcasts over television channels or assigned radio frequency bands.

Digital Audio Broadcasting (DAB): The Digital Audio Broadcasting (DAB) System created within the Eureka 147 Project under the European Framework was developed in order to provide a new digital transmission system for radio which would surmount the deficiencies of the conventional analogue radio. DAB is broadcast on terrestrial networks, and is received using an antenna. The traditional analogue radio signal can be subject to interference and signal distortion, particularly if on the move. This interference is normally aggravated by numerous factors such as mountains, high-rise buildings, electrical equipment and weather conditions. However, DAB uses these effects as reflectors creating multipath reception conditions to optimize receiver sensitivity. Since DAB always selects the strongest regional transmitter automatically, the listener will always be at the focal point of the incoming radio signals.

Digital Terrestrial Television (DTT): DTT uses digital technology to deliver a greater number of channels and an enhanced quality of picture and sound. It is transmitted on radio frequencies through the airwaves in a similar fashion to standard analogue television rather than via a satellite dish or cable connection. It differs from standard analogue television primarily in its use of digital multiplexing which enables reception of multiple channels on the space occupied by a single analogue channel, thus freeing up spectrum. DTT is received via a digital set-top box or an integrated receiving device which decodes the signal received through a standard antenna.

6.2 Features and Benefits

DAB and DTT:

Reduced Interference and Improved Reception: DAB can provide listeners with interference free reception, easy to use receivers and potential for wider listening choice through many additional stations. DAB overcomes the multi-path interference suffered by analogue radio signals. You receive digital quality radio programmes, even on the move, without interference or signal distortion that beleagured analogue radio. DAB is broadcast on terrestrial networks, and you are able to receive it using solely a tiny non-directional stub antenna connected to DAB radio. Similarly DTT provides viewers with an overall enhanced television viewing experience with more picture services, interactivity and standard and high definition formats.

More User Friendly: DAB facilitates ease of use by automatically tuning to all the available stations and offering a list of all the stations. A DAB receiver includes a small display which provides information about the audio content including text, graphics, data and video. Some stations offer up-to-the-minute news, sports and weather which scroll across the display and in some radios it is possible to pause and rewind a live broadcast. The technology is still being improved and more facilities will be offered in the future such as improved recording functions. With DTT the digital signal is decoded using a set-top box receiver which is connected from an aerial directly into the back of a video or television. The programme services received by the set-top box are displayed using a menu to facilitate ease of use. This menu also displays the programme guide and related programme information.

Greater choice: DAB and DTT use spectrum more efficiently than analogue, thus making it possible to broadcast more programme services. This will inevitably provide listeners and viewers with a greater choice of broadcasting content. DAB and DTT carry multiplexes of programme services i.e. they carry a number of programme services at any one time in same amount of spectrum as their analogue counterparts. Interactive services are also available with DTT where home banking, home shopping and access to the internet as well as data services and high definition television (HDTV) can be accommodated. A full DTT offering (say, 5 or 6 multiplexes of content) typically provides up to 50 television channels as well as a choice of radio stations and enhanced teletext.

6.3 DAB and DTT in Ireland

According to a new industry group, Digitalradio.ie, 36% of Ireland's population will soon be able to receive up to 18 radio stations as part of a digital radio trial.   In January of 2006, RTÉ began a three month trial DAB service in both Dublin and the North east, following this, RTÉ's four existing stations (RTÉ Radio 1, RTÉ 2fm, RTÉ Lyric fm and RTÉ Raidió na Gaeltachta) and Today FM began a simulcast on DAB trial Multiplex. Since initial trials, the number of stations currently available on the DAB test signal has grown to 15 incorporating 98FM, Digital Audio Productions, FM104, Newstalk 106 – 108FM, Phantom 105.2, Q102, RTÉ Radio, Spin 1038 and Today FM and 5 more stations will be added by both RTÉ Radio and Digital Audio Productions. For further information on the DAB trials please visit the following site: www.digitalradio.ie

Currently, the total number of pay TV households in Ireland is at 73%, with a drop of 2%, from the last quarter, in free-to-view subscribers[42]. It would appear that this is consistent with the trends across Europe[43], with pay tv by digital means becoming more prevalent. However, free-to-view viewers account for 396,000 households, which still accounts for 27% of total tevelivision households in Ireland. In line with the European Commissions directed 'switchover' from analogue TV by 2012, Ireland has already taken steps to allow for the development of DTT. Viewers in Ireland have shown a strong demand for multichannel television driven to a large extent by the availability of UK channels. DTT will cater for subscribers currently availing of free-to-view services from RTÉNL's analogue terrestrial transmission network.. Analogue terrestrial transmission services in Ireland currently consist of RTÉ1, RTÉ2, TG4 and TV3, an independent commercial station regulated by the Broadcastign Commission of Ireland (BCI), along with associated teletext services. DTT offers the possibility for a greater array of services.

The Broadcasting (Amendment) Act 2007 was enacted earlier this year and commenced on 15 May, 2007. This Act sets out the legislative framework for future licensing of digital broadcasting (DAB and DTT) services in Ireland and provides a mechanism for the switch-off of analogue terrestrial TV services. It will facilitate the introduction of DTT and the enhancement of competition in the delivery of digital television to the Irish consumer.   It provides for the licensing of national DTT multiplexes by ComReg to RTÉ and to the Broadcastign Commission of Ireland (BCI). The first multiplex licences are expected to be issued in 2007/2008 with 1 to RTÉ and

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[42] ComReg 07/** Broadcasting Section: Current Quarterly Report.

[43] http://ec.europa.eu/information_society/policy/ecomm/todays_framework/digital_broadcasting/index_en.htm

up to 3 to the BCI. Further licences are likely to be issued when spectrum becomes available after analogue terrestrial TV broadcasting is switched off.

The DTT platform has an important role, in conjunction with other platforms, in ensuring that Irish consumers will have a choice of digital broadcasting solutions available to them before analogue terrestrial TV broadcasting is switched off.

Ireland launched a DTT Trial in August 2006. This is the first such trial of its kind in Ireland and was launched at the instigation of the Minister for Communications, Marine and Natural Resources. It is planned that this trial will continue over a two-year period, during which time DTT broadcasts from a variety of sources, will be transmitted from the Three Rock site in Dublin and the Clermont Carn site in County Louth, to 1000 homes on the east coast between Dublin and Dundalk. The purpose of the trial is to identify any possible issues associated with the transition from analogue to digital broadcasting as well as allowing feedback to the Department. Further information on the trials can be accessed on the DCENR website at the following link: http://www.dcmnr.gov.ie/Broadcasting/