Commission for
Communications Regulation

Irish Communications Market

Quarterly Key Data Report

December 2005

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An Coimisiún um Rialáil Cumarsáide
Commission for Communications Regulation
Abbey Court Irish Life Centre Lower Abbey Street Dublin 1 Ireland
Telephone +353 1 804 9600 *Fax* +353 1 804 9680 *Email* info@comreg.ie *Web* www.comreg.ie

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3. pg 10: paragraph 2.1.2 (eircom market share reported as 79%, revised figure 77%. This restatement is due to a calculation error by ComReg rather than a real movement in eircom's market share)
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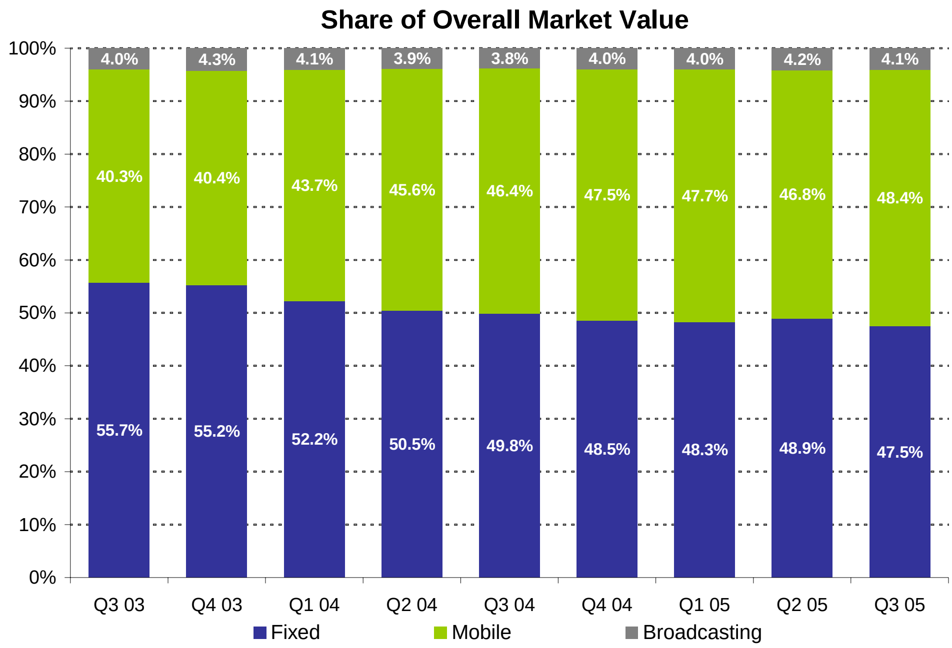
1 Overall Market Data

The data in this review is based on returns from authorised operators for the period starting 1 July to 30 September 2005. The report is based on submissions from 54 operators, which represent approximately 99% of total market activity.

1.1 Overall Electronic Communications Revenues[1]

Figure 1.1.1– Fixed, Mobile & Broadcasting as a % of Total Revenues[2]



Source: Quarterly Key Data Questionnaire

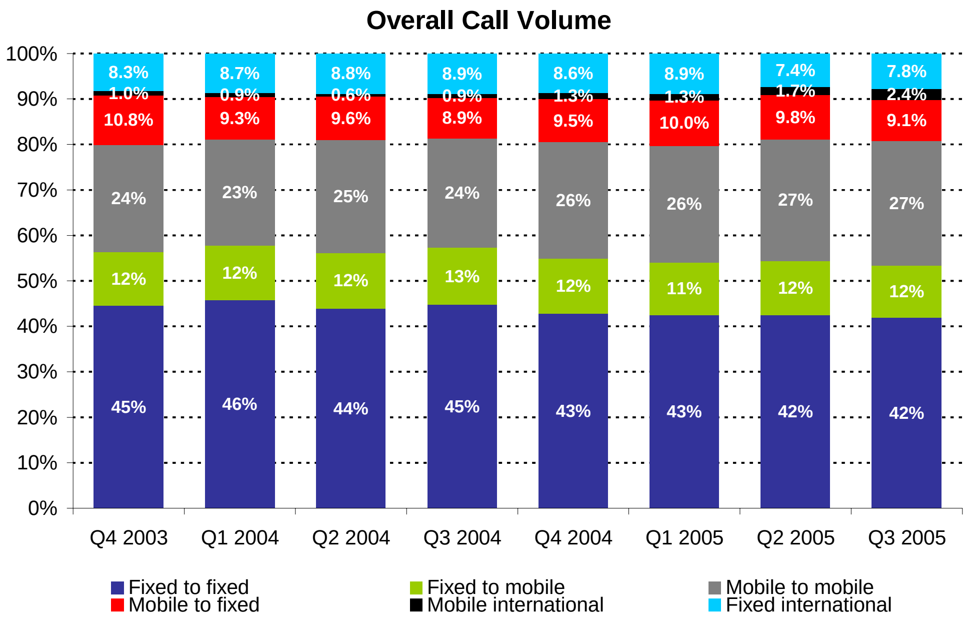
Overall electronic telecommunications network and service revenues at the end of September 2005 were €1.01bn in Quarter 3, 2005 or approximately €4 billion per annum on an annualised basis. Revenue growth this quarter represented a 3% increase on the previous quarter. Figure 1.1.1 shows a breakdown of revenue between each of the main categories of telecommunications services; fixed line revenues now account for 47% of electronic communications revenues, while mobile services have increased their share of industry revenue to 48%. Around 4% of industry revenues remain attributable to the broadcasting sector.

[1] For further detail on terms and definition see ComReg Document Number 05/? 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, broadband and other (including web-hosting, co-location services, directory publication & other services), **mobile** (connection, voice, data services, roaming) and **broadcasting** (including cable/MMDS broadcasting services, connection, rental and other charges).

1.2 Overall Call Volumes

Figure 1.2.1 Share of Total Voice Call Volumes



Source: Quarterly Key Data Questionnaire

Figure 1.2.1 shows the overall percentage of voice calls. The volume of calls which either originated or terminated (or both) on a mobile network has increased over the past two years. A general trend of increased proportions of mobile to mobile and mobile international calling can be observed. Fixed to fixed local and national calls as a proportion of all voice minutes have decreased over the same period, and now represent 42% of voice minutes.

1.3 Number of Authorisations

Figure 1.3.1 Total Number of Authorisations

Total Authorisations	September 2005
No. of fixed and wireless authorisations	302
No. of mobile telephony authorisations	4
No. of broadcasting authorisations (incl. Cable TV, MMDS, Deflectors)	45
Total Number	351

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 such operators. At the date of publication of this report there were 351 authorised undertakings in Ireland. Since the publication of the Quarter 2 report, an additional six authorisations have been granted in the fixed and wireless authorisations category.

1.4 Pricing Overview

The ComReg Quarterly Key Data Report benchmarks prices in various consumer baskets against other EU countries. These results are provided to ComReg by Teligen and are calculated using an OECD-approved methodology for assessing comparative pricing among telecommunications services.

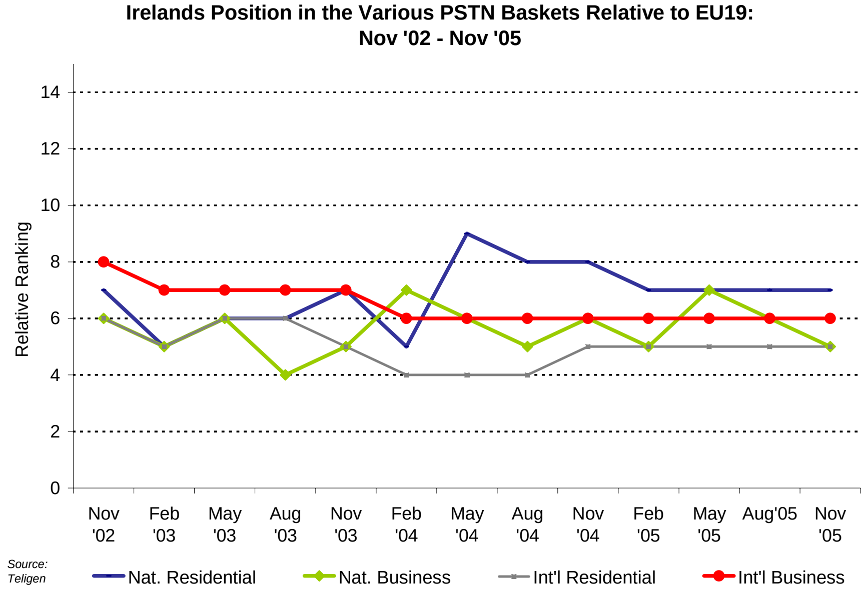
1.4.1 PSTN

Figure 1.4.1 shows the movement in Ireland's position relative to other EU countries in all PSTN baskets since November 2002[3]. Since last quarter, Ireland's relative ranking has remained stable in all baskets, except the national business basket, where the position has improved one place to 5th out of 19 EU countries monitored[4]. This is the second quarterly improvement in Ireland's ranking in this basket. Ireland's relative position is lower than the EU average price in all PSTN baskets.

[3] The basket data measures relative prices in a range of services against a number of EU States

[4] The Explanatory Memorandum accompanying this report outlines the source and selection of countries monitored by the Teligen benchmarking baskets and other information such as PPP rates.

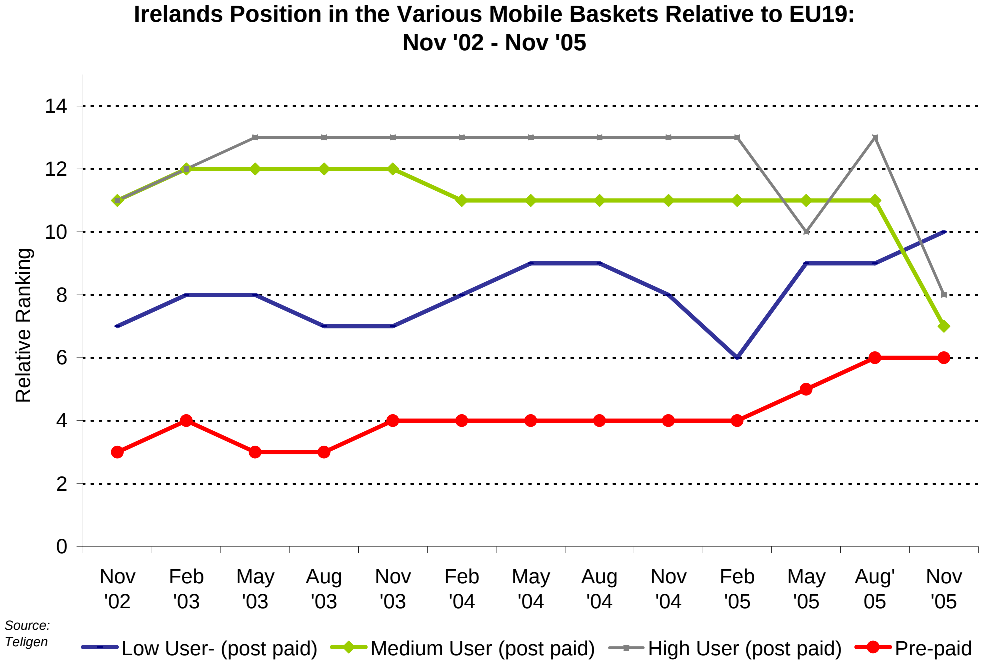
Figure 1.4.1: Ireland's Relative Position for PSTN Baskets: Nov '02 – Nov '05



1.4.2 Mobile

Figure 1.4.2 shows the movement in Ireland's position relative to the EU in all mobile baskets since November 2002. Since August, Ireland's rankings in the low-user post paid basket has increased by one place within the 19 EU countries analysed, and remains higher than the EU average price. The medium and high-user post-paid baskets in contrast improved by 4 and 5 places respectively, based on new tariff packages launched by 02 in late 2005. Ireland's position in the pre-paid basket remained in 6th place.

Figure 1.4.2: Ireland's Relative Position for Mobile Baskets: Nov '02 – Nov '05



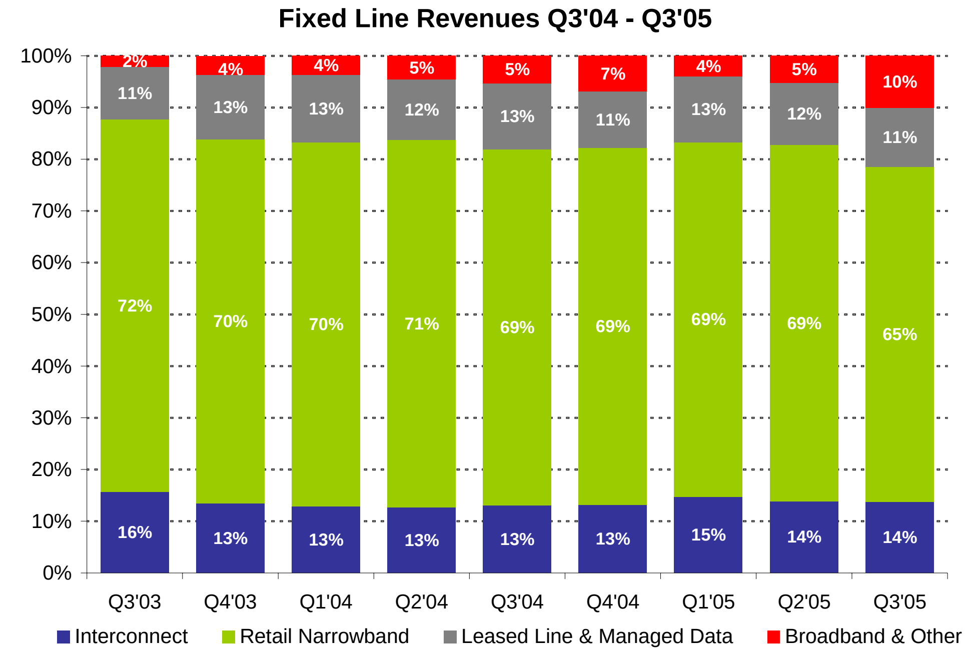
2 Fixed Market Data

2.1 Total Fixed Line Revenues

2.1.1 Total Fixed Line Revenue

Total fixed line revenues are at €478 million this quarter. Broadband revenues generated in the market are now reported within the analysis of fixed line revenues. These are included in the "Broadband and Other" category, and the inclusion of broadband revenues has led to growth in the proportion of revenues from these services.

Figure 2.1.1 Total Revenue Per Service



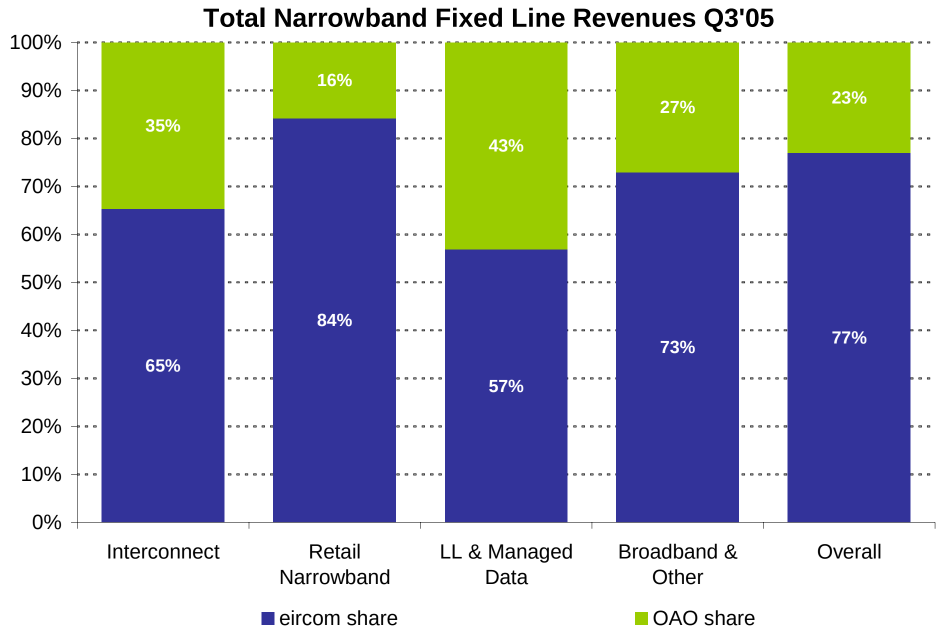
Source: Quarterly Key Data Questionnaire

2.1.2 Other Authorised Operators (OAO) Share of Overall Fixed Line Revenues

Figure 2.1.2 illustrates market share of the incumbent and other authorised operators (OAOs) in each of the fixed line service categories in figure 2.1.1. Each area bundles a number of services that are somewhat related to each other and does not reflect the specific markets identified in the recent market review process. It should be noted that the previously titled "other" category now includes broadband revenues. eircom revenues represent a large share of each area, and overall eircom market share is about 77%[5].

5 Eircom's market share for Q3 2005 was previously published as 79%. This has been restated due to a calculation error by ComReg rather than a real movement in eircom's market share

Figure 2.1.2 OAO Market Share



Source: *Quarterly Key Data Questionnaire*

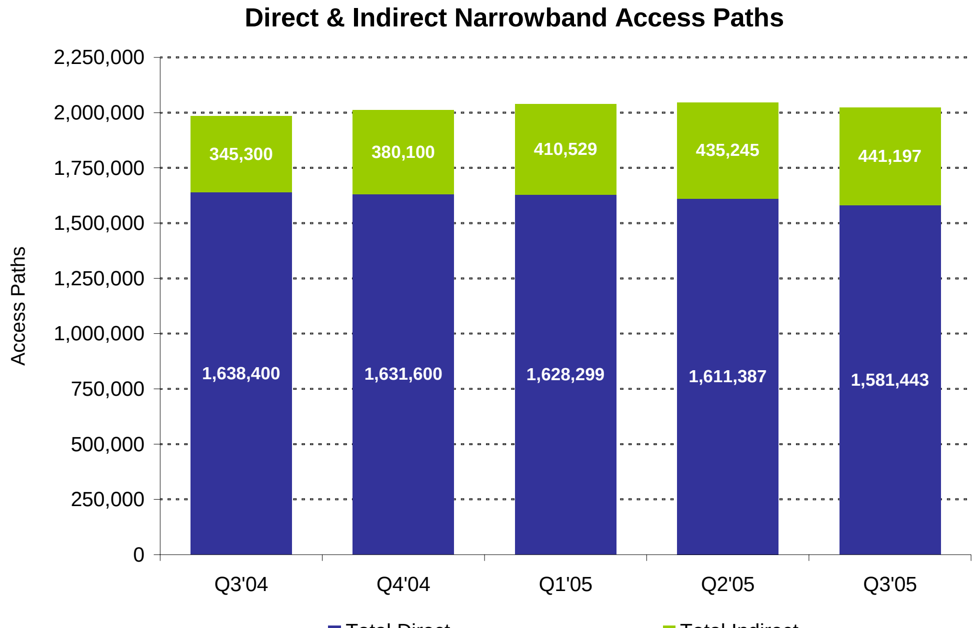
2.2 Fixed Line Access

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] on an historical basis. The proportion of indirect access paths as a percentage of the total has been steadily increasing and now accounts for 22% of narrowband access paths. The total number of access paths has decreased this quarter, due mainly to a decrease in the number of direct ISDN access paths. ComReg expects that as the broadband penetration rate in Ireland increases the number of ISDN access paths – in particular basic rate ISDN – will further decrease.

[6] Indirect access is defined as an access path managed by an operator other than eircom. Further information on indirect access is included in the explanatory memorandum document which accompanies this publication.

Figure 2.2.1 Fixed Access Paths

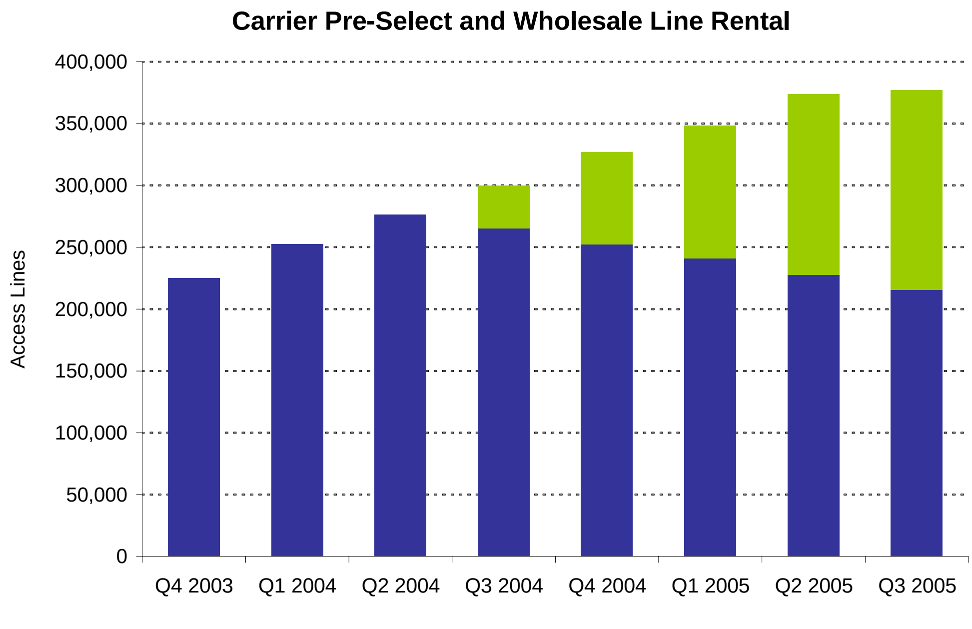


Source: Quarterly Key Data Questionnaire

2.2.2 Indirect Access and Calls

Figure 2.2.2, illustrates the overall number of lines provided by means of either Carrier Pre-Selection (CPS) or Wholesale Line Rental (WLR). In Quarter 3, 377,000 lines classified as CPS or WLR lines were provided by operators other than eircom. Seven OAO's (Other Authorised Operators) are currently offering customers single billing using WLR, which represents 43% of all indirect access lines. In Quarter 2, WLR represented 39% of in-direct access lines.

Figure 2.2.2 Indirect Access

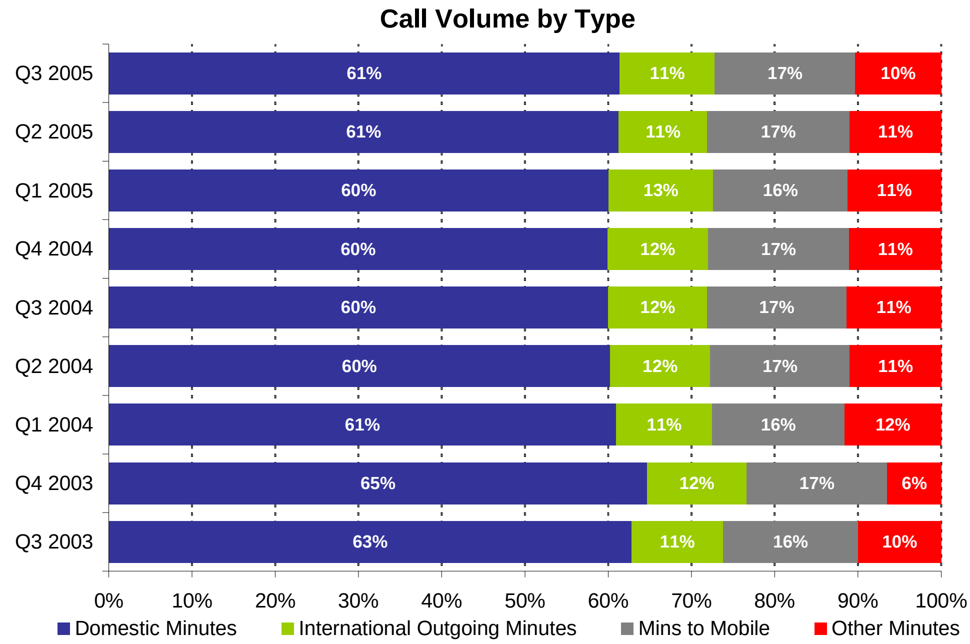


Source: Quarterly Key Data Questionnaire

2.3 Fixed Voice Call Volumes

Figure 2.3.1 below illustrates the development of fixed voice call volumes since Q3 2003. The overall volume of minutes in Q3 was 2.4bn, a slight increase since June 2005. There has been a slight change in the relative proportion of domestic traffic since 2003, perhaps reflecting the increased use of mobile voice services. Fixed international traffic usage does not appear to have been affected by this trend, perhaps reflecting the lower cost of making fixed calls abroad, relative to mobile services.

Figure 2.3.1 – Fixed Voice Call Volume[7]



Source: Quarterly Key Data Questionnaire

[7] Domestic Calls include local & national calls; other minutes include calls from payphone and 'other calls' including a range of ancillary fixed voice services categorised by operators.

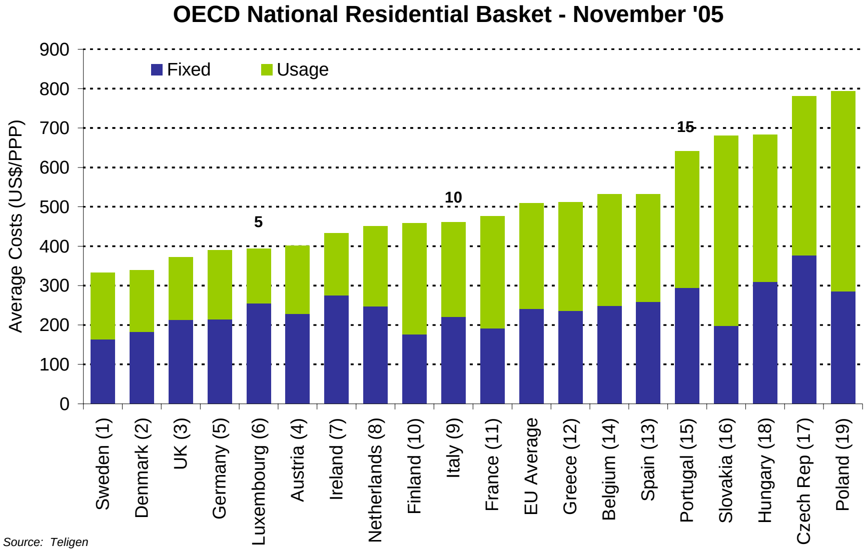
2.4 Fixed Pricing Data

2.4.1 PSTN Baskets

2.4.1.1 National Residential Basket

Figure 2.4.1.1 illustrates Ireland's ranking in the national residential basket. Ireland remains at 7th position overall, and five places better than the EU average in terms of price for this basket.

Figure 2.4.1.1 - OECD National Residential Basket –November 2005[8]



Source: Teligen

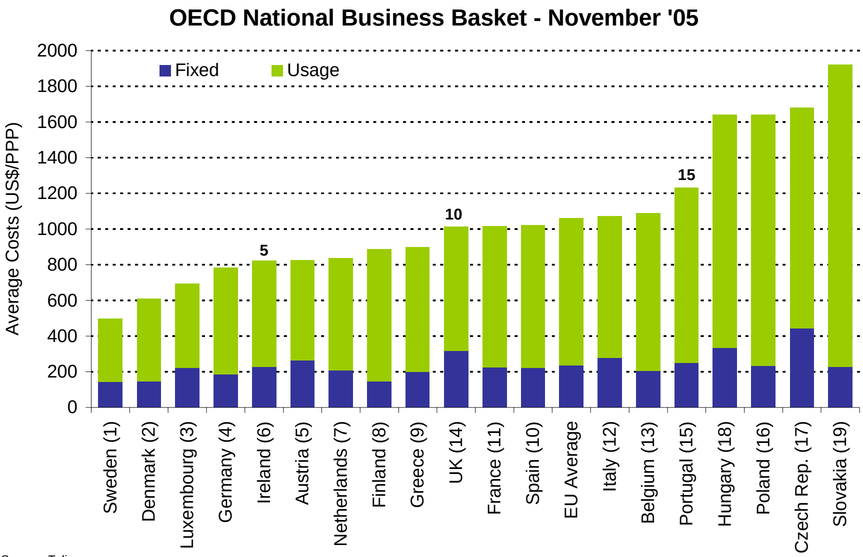
To note: The numbers in brackets represent each Member State's respective rankings as at August 2005

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

2.4.1.2 National Business Basket

Ireland has improved one place to 5th position in the national business basket since last quarter, and is now eight places better than the EU average in terms of price.

Figure 2.4.1.2 - OECD National Business Basket – November 2005



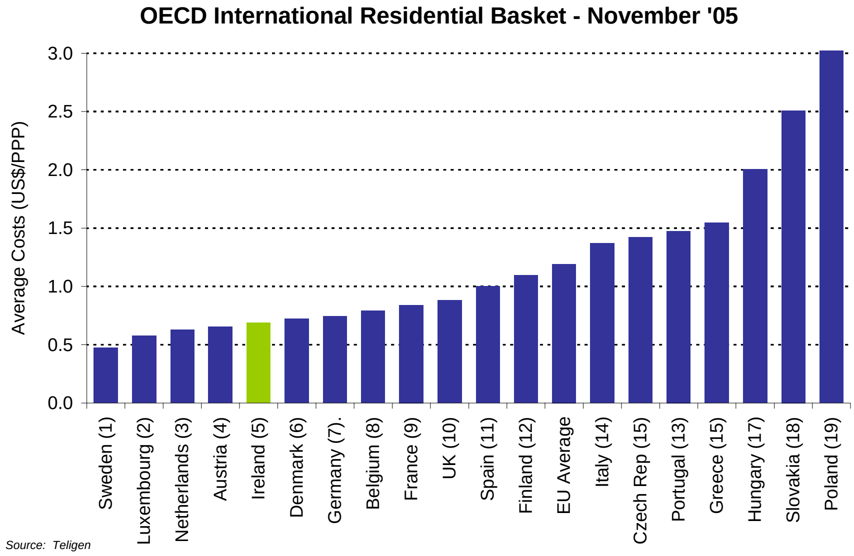
Source: Teligen

To note: The numbers in brackets represent each Member State's respective rankings as at August 2005

2.4.1.3 International Residential Basket

Figure 2.4.1.3 shows that Ireland's position has remained unchanged since last quarter, and is eight places better than the EU average in terms of price.

Figure 2.4.1.3 - OECD International Residential Basket –November 2005[9]



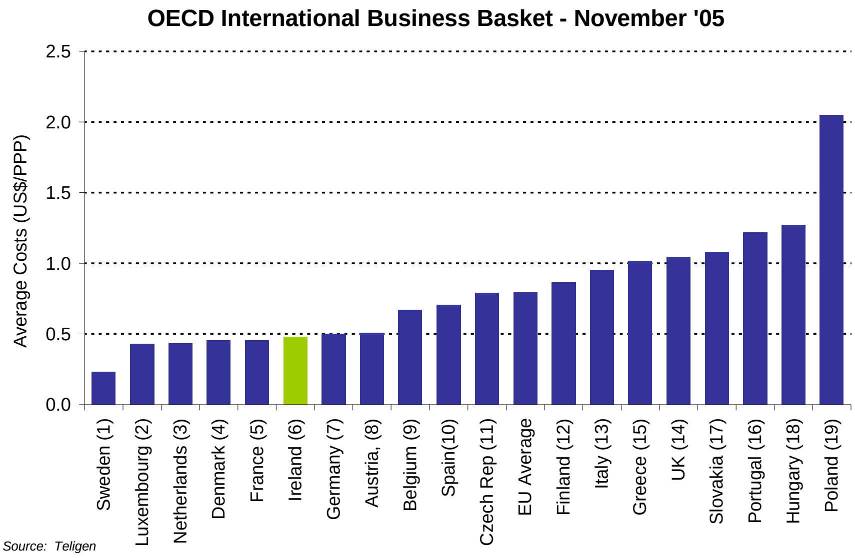
Source: Teligen

To note: The numbers in brackets represent each Member State's respective rankings as at August 2005

2.4.1.4 International Business Basket

Ireland remains ranked in 6th place in the international business basket this quarter and is six places better than the EU average in terms of price.

Figure 2.4.1.4 - OECD International Business Basket – November 2005



Source: Teligen

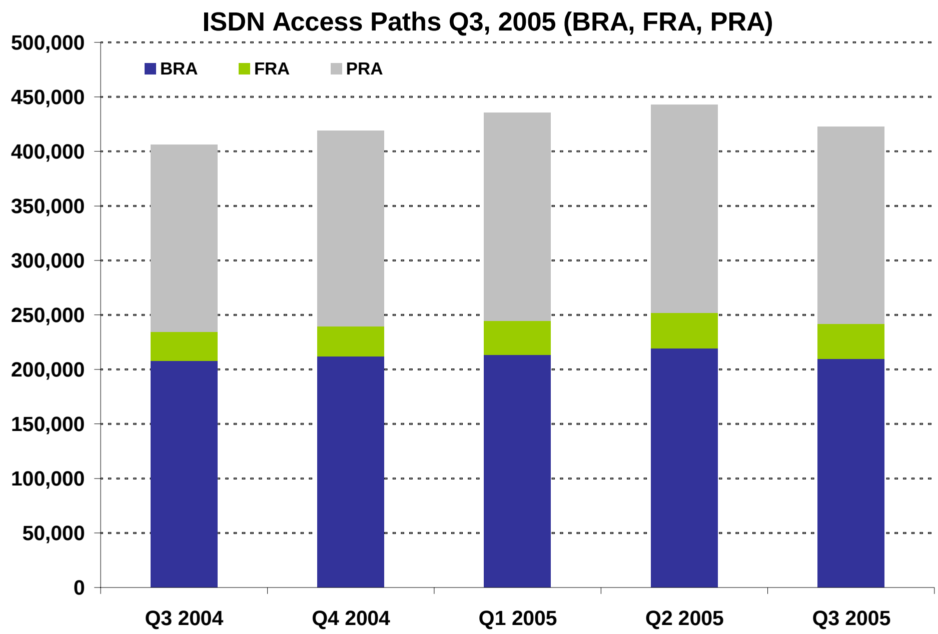
To note: The numbers in brackets represent each Member State's respective rankings as at August 2005

9 Residential tariffs include VAT. VAT rates vary between member states.

2.5 ISDN Access

Figure 2.5.1 indicates the provision of ISDN access paths in the Irish market segmented by basic, fractional and primary rate access. This figure shows that until this quarter the number of ISDN paths has slowly grown year-on-year across all types of ISDN products. In Q3 2005 there was a 4.5% decrease from last quarter in the total number of ISDN paths across all types, but mainly in basic rate and primary rate access paths. ComReg expects that as the consumers continue to adopt broadband, the number of ISDN paths will fall.

Figure 2.5.1 – ISDN Access Paths, separated by basic, fraction and primary rate access

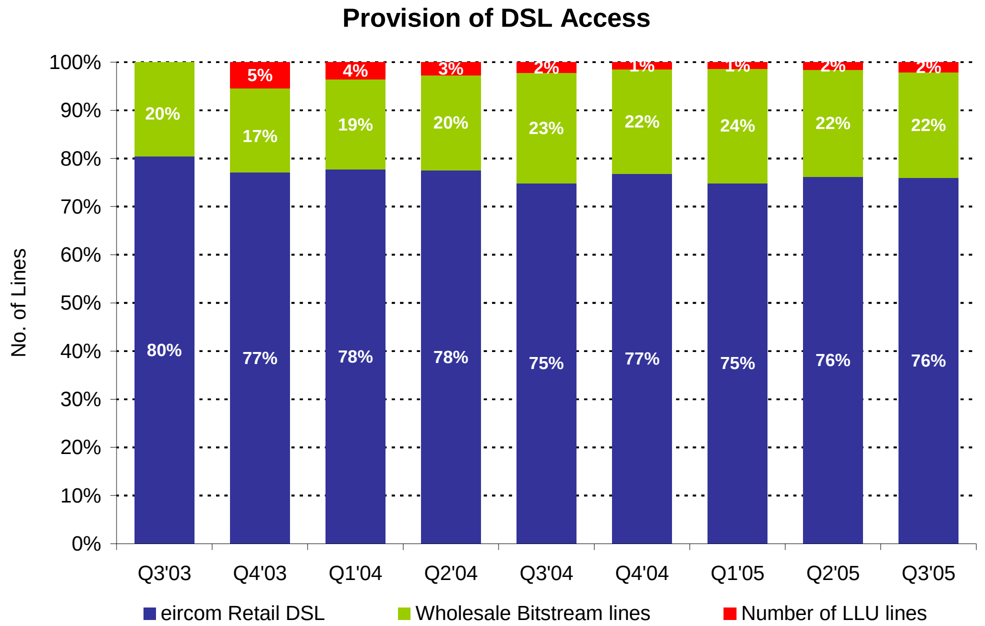


Source: Quarterly Key Data Questionnaire

2.6 Provision of Broadband Access

Figure 2.6.1 shows that since 2003, the percentage of alternative operators' retail lines for DSL has remained within the range of 20 – 25%. DSL services are primarily delivered by OAOs via eircom's wholesale bitstream product. At the end of September 2005 there were about 3,600 local loops either fully unbundled or shared.

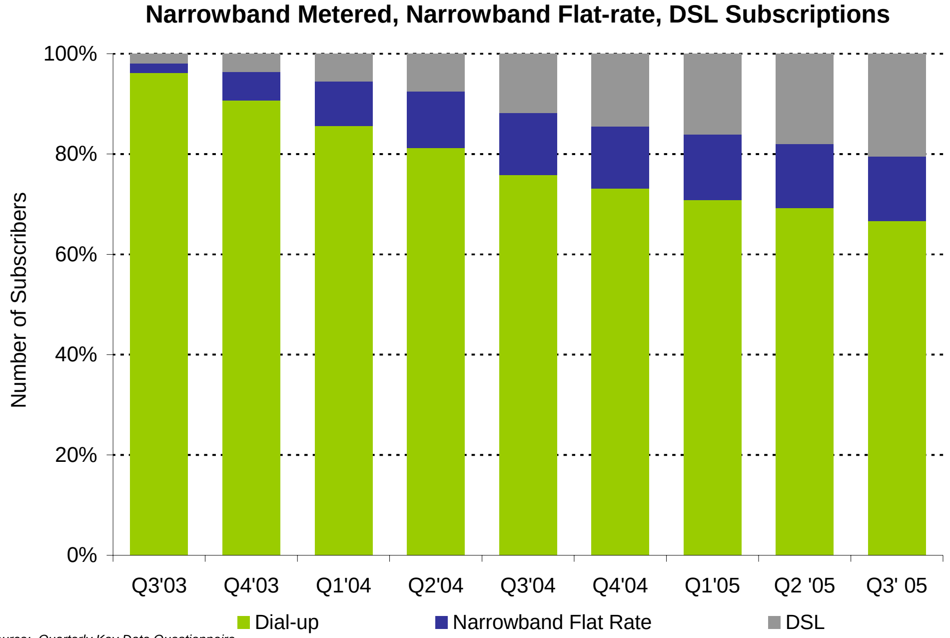
Figure 2.6.1 Provision of DSL Access



Source: Quarterly Key Data Questionnaire

2.7 Broadband and Narrowband Comparison

Figure 2.7.1 – Number of Subscribers: Narrowband[10] Vs Broadband[11]



Source: Quarterly Key Data Questionnaire

[10] This includes time-based and flat rate narrowband services.

[11] This includes DSL subscriber numbers only.

Figure 2.7.1 provides details of subscriptions to DSL, dial-up Flat Rate and dial-up metered internet services in Ireland. The chart indicates a steady decrease in metered dial-up subscriptions as a percentage of total internet connections over these technologies while the percentage of DSL has increased.

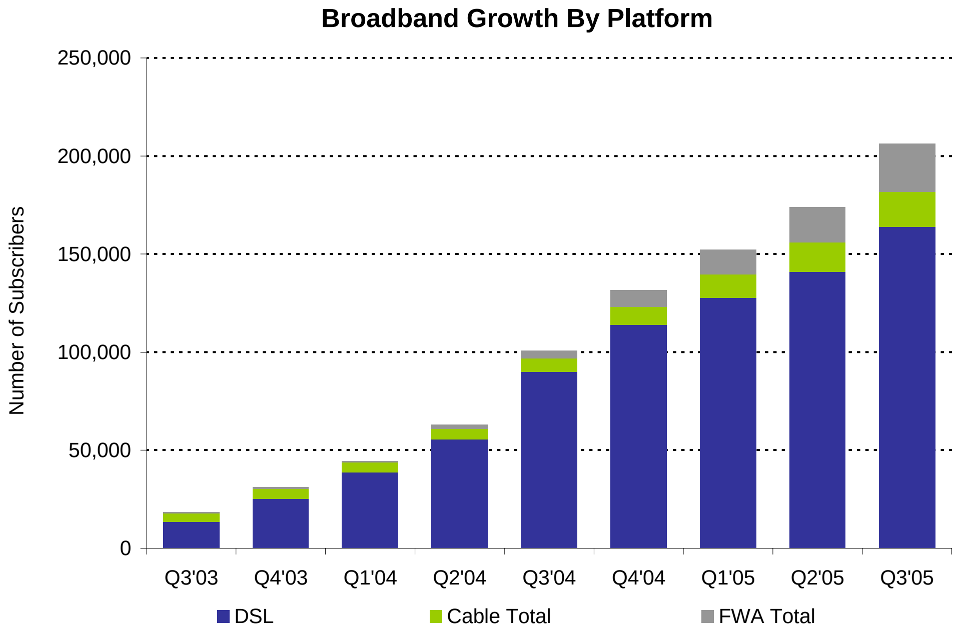
2.8 Provision of Broadband Services

Figure 2.8.1 outlines total broadband subscription levels in the Irish market across a number of access platforms, and growth rates by platform for the previous twelve months. Figure 2.8.2 shows that in terms of numbers of subscribers, DSL remains the largest platform for broadband access, representing around 78% of subscriptions. Overall, broadband subscriptions have grown by nearly 19% in the last quarter with fixed wireless broadband services continuing to exhibit rapid growth this quarter. Cable broadband subscriptions have grown by 20% this quarter, and now represent nearly 9% of total broadband subscriptions. The proportion of broadband subscriptions delivered over access platforms other than DSL has increased in the last 12 months. In September 2004, DSL represented 89% of all broadband subscriptions; in September 2005, DSL accounted for 78% of all broadband subscriptions.

Figure 2.8.1 – Broadband Subscribers and growth rates by platform

Platform	Q3 05 Subs	Quarterly Growth Q304-Q305	Year-on-Year Growth Q304-Q305
DSL	**163,700**	**17%**	**97%**
Cable	**18,000**	**21%**	**165%**
FWA	**24,600**	**37%**	**521%**
Satellite	**2,200**	**44%**	**870%**
Total	**208,500**	**19%**	**122%**

Figure 2.8.2 – Broadband Subscribers by Platform



Source: Quarterly Key Data Questionnaire

Figure 2.8.3 illustrates broadband penetration rates measured on a per capita basis by the OECD for European markets. Ireland's broadband penetration remains among the lowest of the EU countries measured with 4.3% penetration of broadband across all types of access.

Figure 2.8.3 – Broadband Penetration Rate

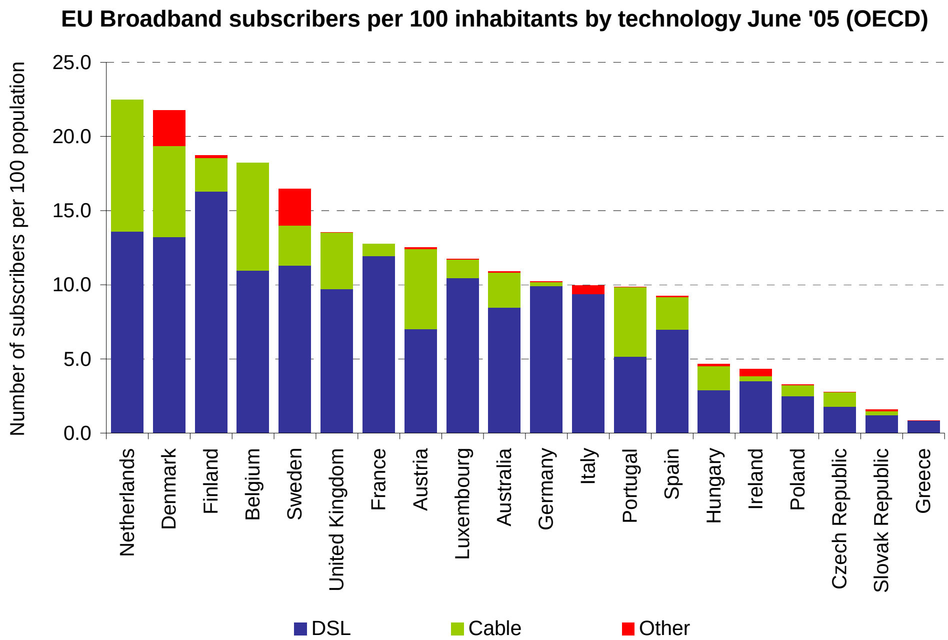
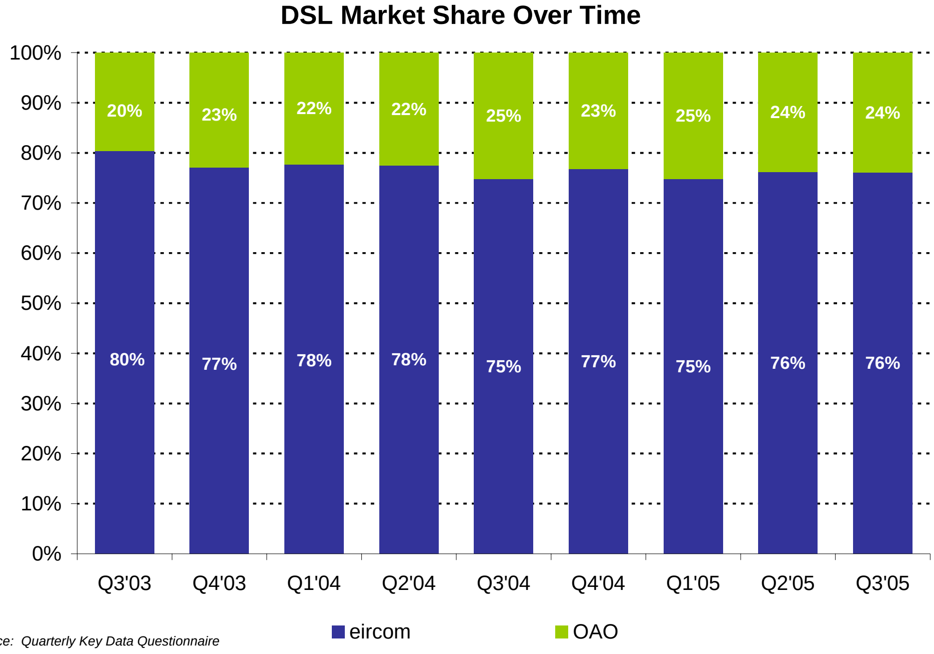


Figure 2.8.4 indicates that eircom has retained 78% market share by subscribers of the DSL retail market, no change from the previous quarter. Looking at the broadband market

overall, retail DSL offered by eircom accounts for 61% of broadband subscriptions across all platforms.

Figure 2.8.4 – DSL Market Share



Source: Quarterly Key Data Questionnaire

2.9 ADSL Pricing Data[12]

The following two ADSL baskets should be examined together to provide a complete comparison of ADSL prices across the EU. More detailed information on how these baskets are constructed can be found in the Explanatory Memorandum accompanying this report.

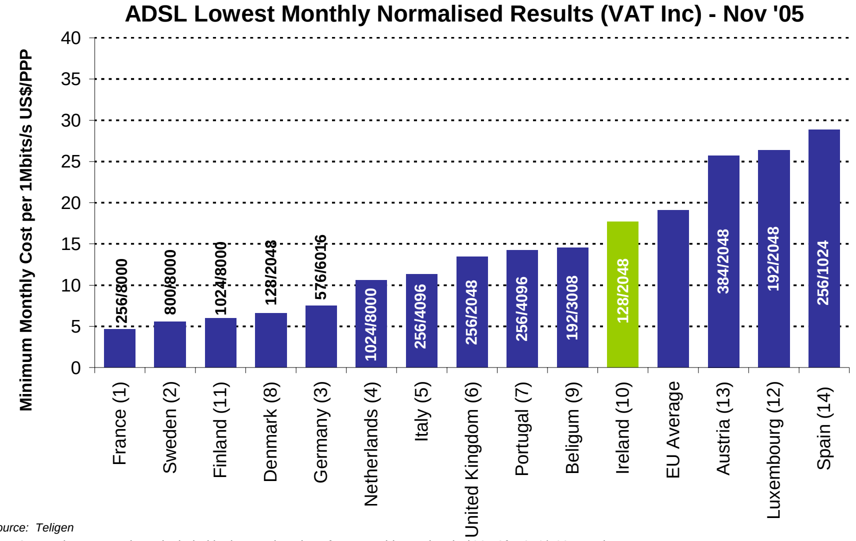
Lowest Monthly Rental ADSL Basket (Normalised)[13]

Irelands ranks in 11th place in the normalised ADSL basket, and is one place better than the EU average in terms of price, among the 19 European nations monitored.

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

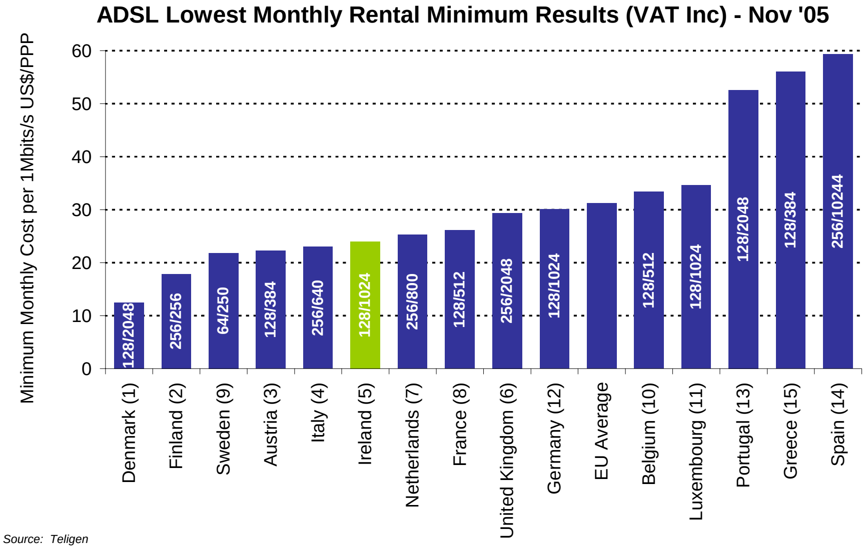
[13] The normalised (1Mbit/s) results show the cheapest offering in each country, per 1 Mbit/s of service. This method may favour countries offering higher speeds. Figures in boxes represent the upload/download speed (kb/s) of the service offered.

Figure 2.9.1 – Lowest Monthly Rental ADSL Basket (Normalised) – November '05



Source: Teligen
N.B. Greece has not yet been included in the graph. Price of comparable product is $93.48for 256/1024 product
The numbers in brackets represent each Member State's respective rankings as at August 2005

Figure 2.9.2 – Lowest Monthly Rental ADSL Basket (Minimum) – November '05



Source: Teligen
The numbers in brackets represent each Member State's respective rankings as at August 2005

Lowest Monthly Rental ADSL Basket (Minimum)[14]

Ireland's is currently ranked 6th out of the EU-15 countries and is 5 places better than the EU average in terms of price in this basket.

[14] The minimum results show the lowest monthly rental charge offered in each country. This method may favour countries offering lower speeds. Figures in boxes represent the upload / download speed (kb/s) of the service offered.

2.10 Leased Line Tables

Figure 2.10.1 shows the total number of traditional point to point leased lines, both national and international, provided at the wholesale and retail level. Leased lines are used to provide dedicated data services to medium and large businesses.[15]

Figure 2.10.1 – Fixed Data Access Lines

Platform	Q 2 2004	Q3 2004	Q4 2004	Q1 2005	Q2 2005	Q3 2005
Leased lines (retail)	18,930	18,801	18,669	18,231	17,703	16,753
Leased lines (wholesale)	8,440	8,508	8,319	9,092	8,819	8,946

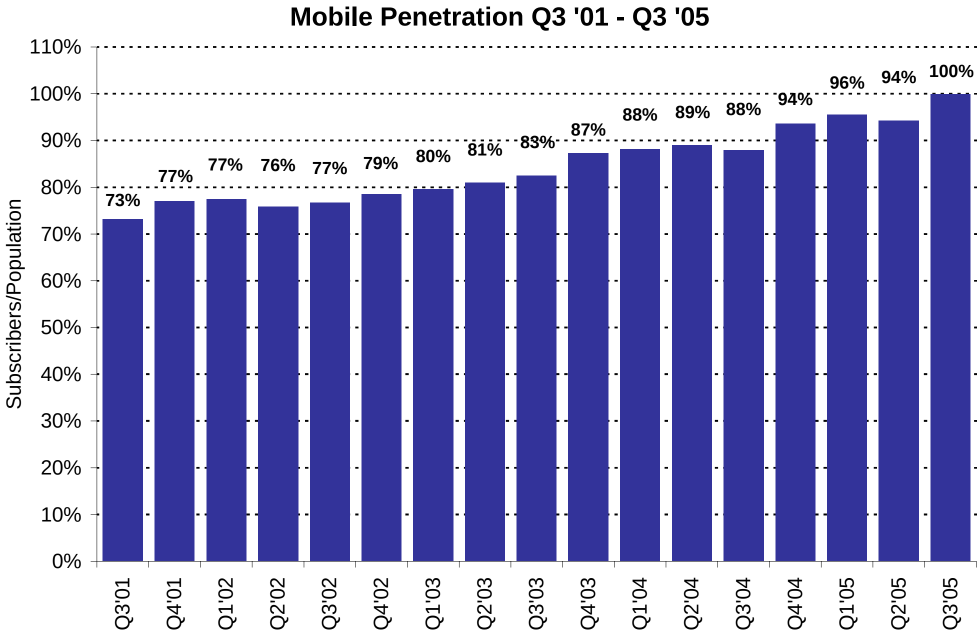
[15] For ComReg definitions please see the Quarterly Key Data Explanatory Memorandum published with this document

3 Mobile Market Data

3.1 Number of Subscribers and Penetration Rate

3.1.1 Irish Mobile Penetration Rate

Figure 3.1.1 – Irish Mobile Penetration Rate



Source: Quarterly Key Data Questionnaire

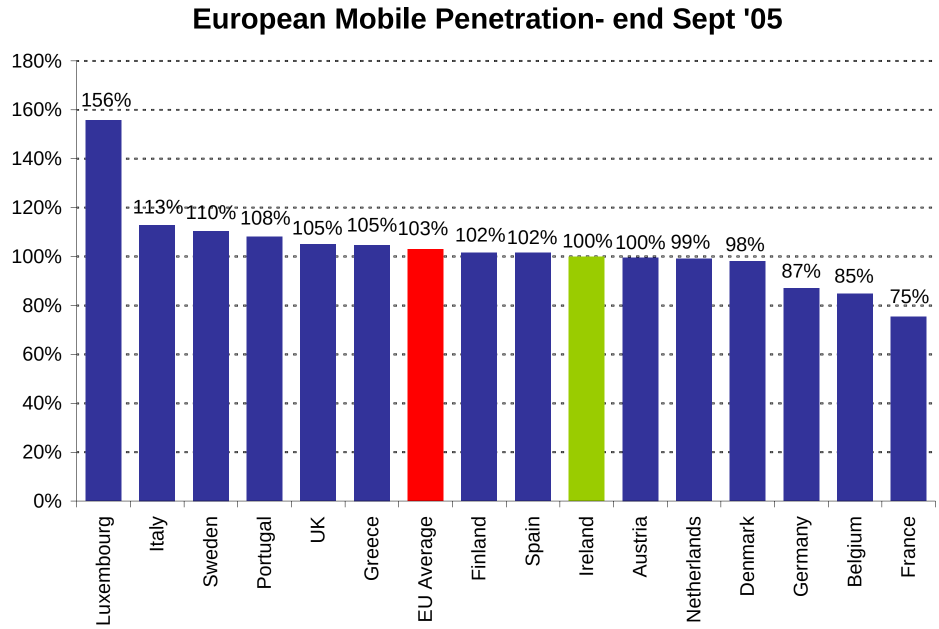
There are now 4.05 million mobile subscribers in Ireland. Figure 3.1.1 illustrates the growth in mobile penetration over the last number of years. For the first time, mobile subscription penetration has reached 100%. Subscribers reported in this report are measured based on the number of active SIM cards and it should be noted that subscribers may have more than one active SIM card. The most recent Amárach Trends survey published by ComReg[16] suggested that 7% of residential mobile users have more than one mobile subscription. The main purpose for having more than one handset or subscription was to maintain one account for business or work purposes, and the other for personal use.

3.1.2 European Mobile Penetration Rates

Figure 3.1.2 illustrations national mobile penetration rates across the EU. Ireland has the 10th highest mobile penetration rate compared with EU-15 countries and is currently 3% behind the EU average.

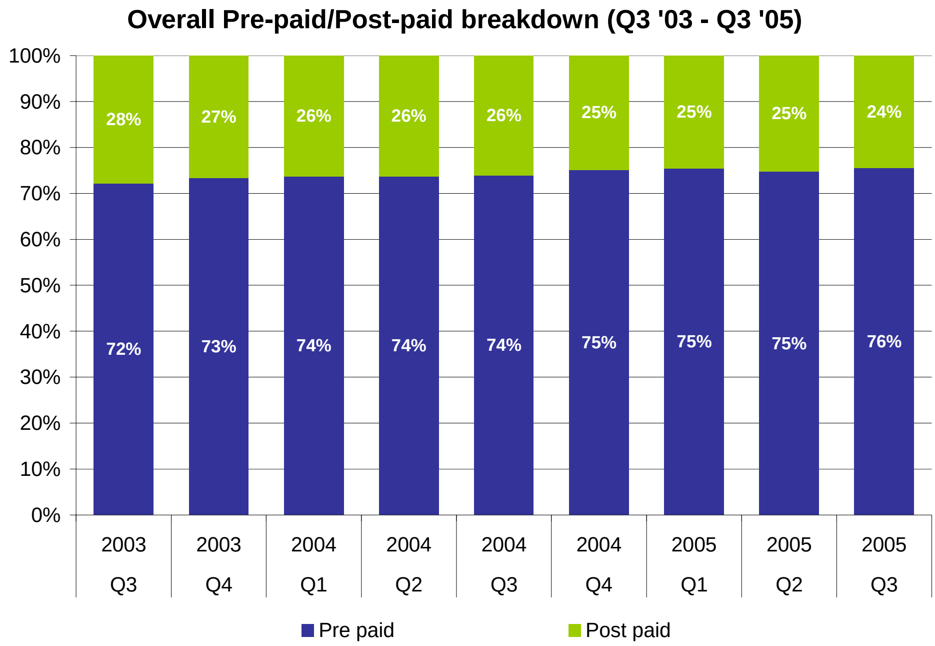
[16] ComReg Document 05/65a

Figure 3.1.2 – European Mobile Penetration Rates



Source: Baskerville Mobile Commincations (includes 3G subscriptions)

Figure 3.1.3 – Number of Subscribers (Pre-Paid / Post Paid)

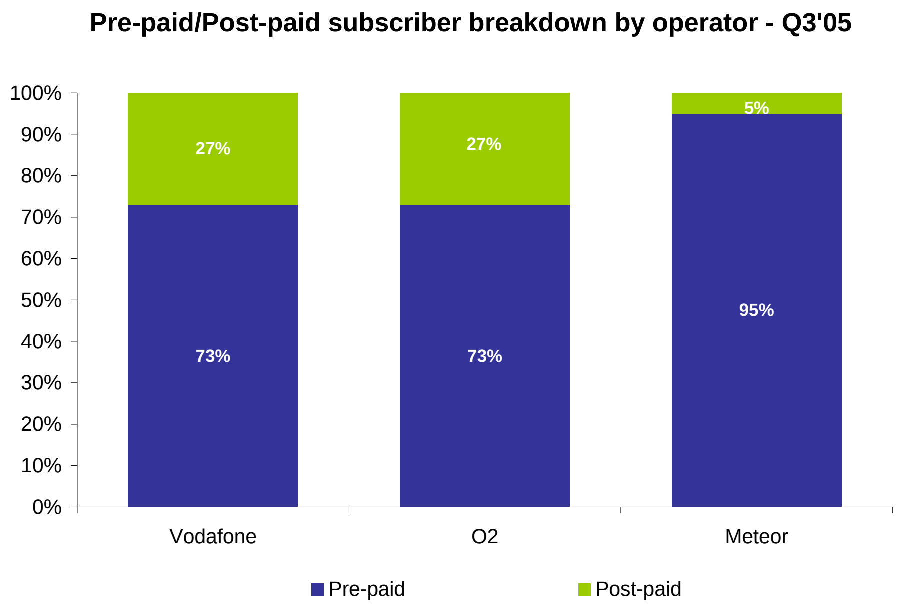


Source: Quarterly Key Data Questionnaire

3.1.3 Subscribers Pre-Paid / Post-Paid Comparison

Figure 3.1.3 illustrates the breakdown of all mobile subscriptions between pre-paid and post-paid subscribers. The proportion of pre-paid subscribers has remained relatively stable in the last two years, with a slight increase reported in this period. Figure 3.1.4 shows the breakdown of customers by operator between post-paid and pre-paid subscriptions. Both Vodafone and O2 exhibit a similar pre-paid/ post-paid split to previous quarters. Meteor's customer base remains predominantly within the pre-paid segment, however it has continued to target the post-paid customers. In the previous quarter, 2% of its customers used a post-paid service; this has now risen to 5% of its customer base.

Figure 3.1.4 – Number of Subscribers (Pre-Paid / Post Paid) – by Operator

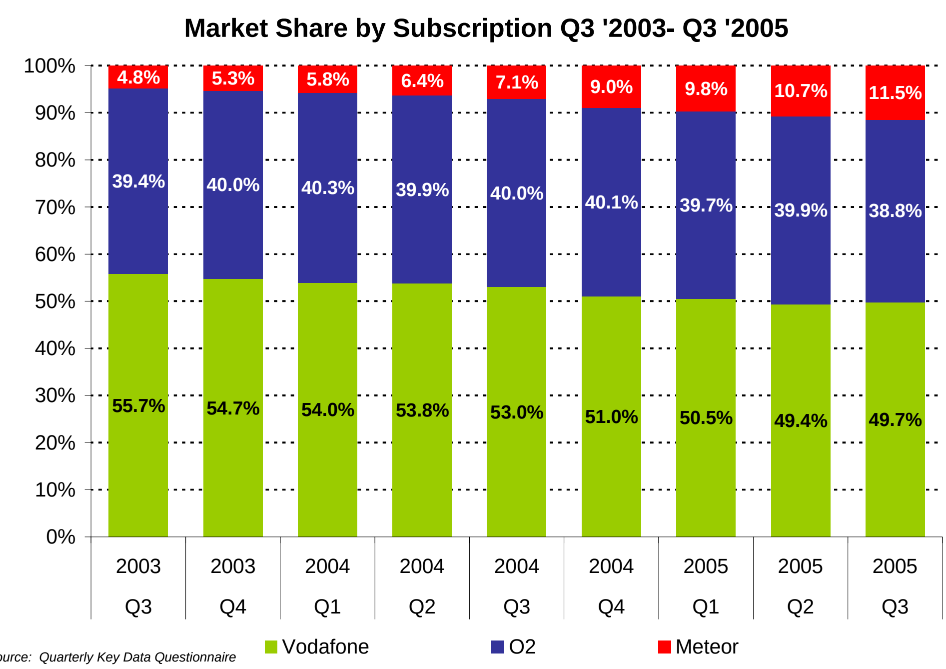


Source: Quarterly Key Data Questionnaire

3.2 Market Shares

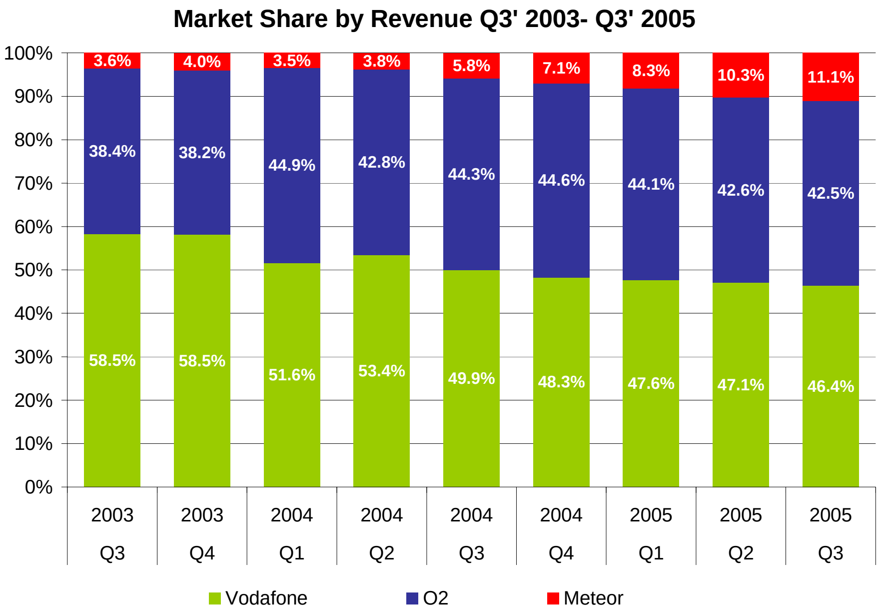
Figures 3.2.1 and 3.2.2 illustrate that Meteor has gradually increased its share of revenue and subscribers over the last few quarters. Meteor now accounts for 11.5% of all mobile subscribers in Ireland, and has 11.1% of retail revenues within the mobile market.

Figure 3.2.1 – Market Share – Number of Subscribers



Source: Quarterly Key Data Questionnaire

Figure 3.2.2 – Market Share – Revenue

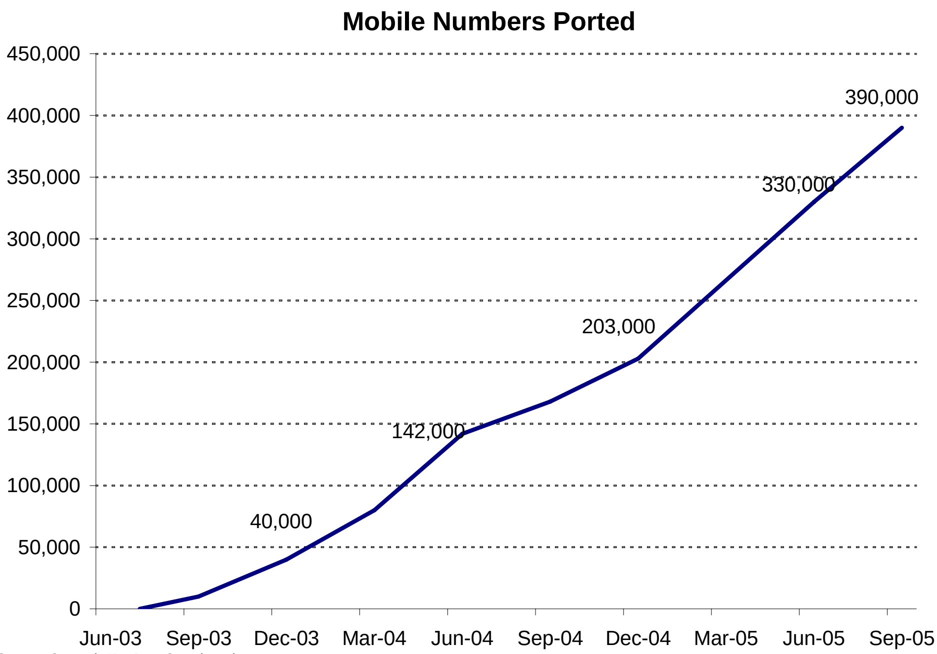


Source: Quarterly Key Data Questionnaire

3.3 Competitive Activity in the Mobile Market

Figure 3.3.1 outlines the growth in the use of MNP (mobile number portability) in the Irish market since its launch in June 2003. Mobile number portability allows mobile subscribers to switch mobile operator while retaining their mobile number.

Figure 3.3.1 – Mobile Numbers Ported

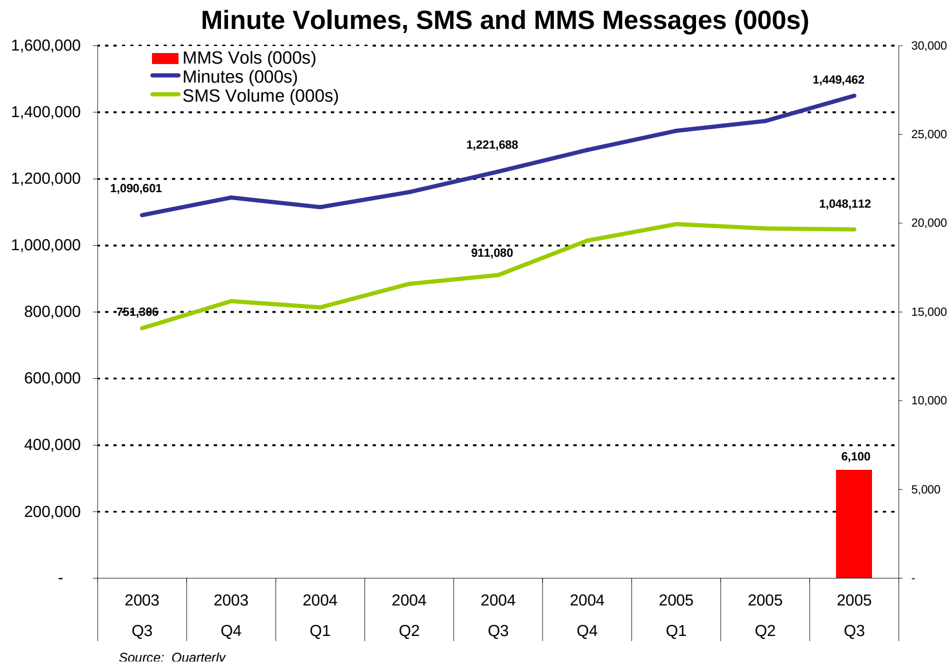


Source: Quarterly Key Data Questionnaire

3.4 SMS Services and Call Minutes

Figure 3.4.1 illustrates the growth in both call minutes and SMS messages sent each quarter over the past number of years. Volumes of voice minutes have increased by 20% on the same period last year, while SMS messages have increased by a corresponding 15%. For the first time, ComReg has included the total volumes of MMS (Multimedia messaging) sent in the Irish market. In this quarter, 6.1 million multi-media messages were sent by Irish mobile consumers.

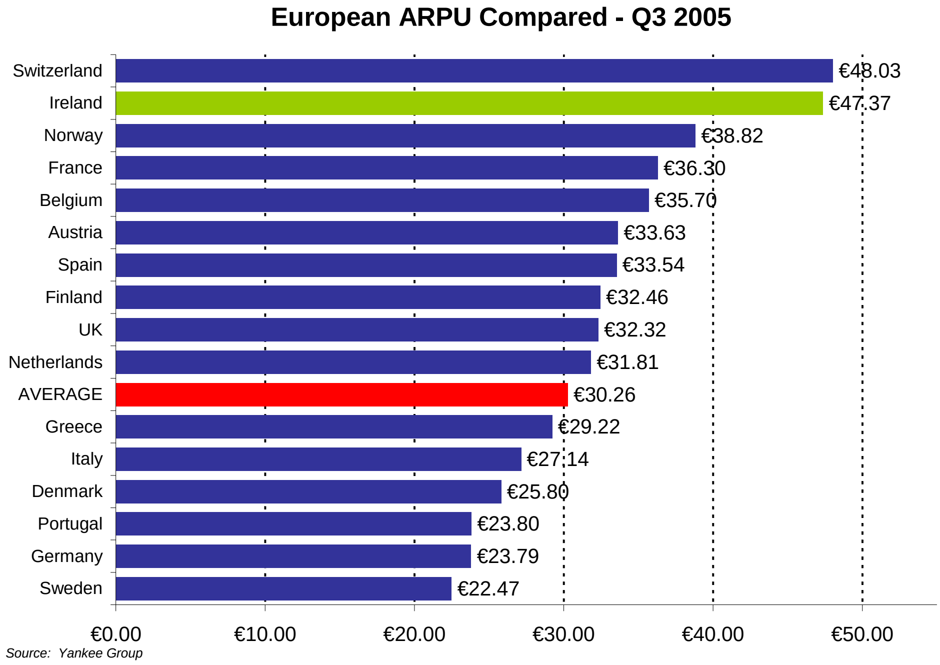
Figure 3.4.1 –SMS, MMS and Call Minutes



3.5 ARPU

Figure 3.5.1 compares ARPU (average revenue per user) across major European markets. Irish Mobile Operator's ARPU is estimated at €47.37 per month, the second highest among European countries monitored, remaining the same since the last quarter. EU average ARPU is €30.26.[17]

Figure 3.5.1 European ARPU Compared – Q3 2005



Source: Yankee Group

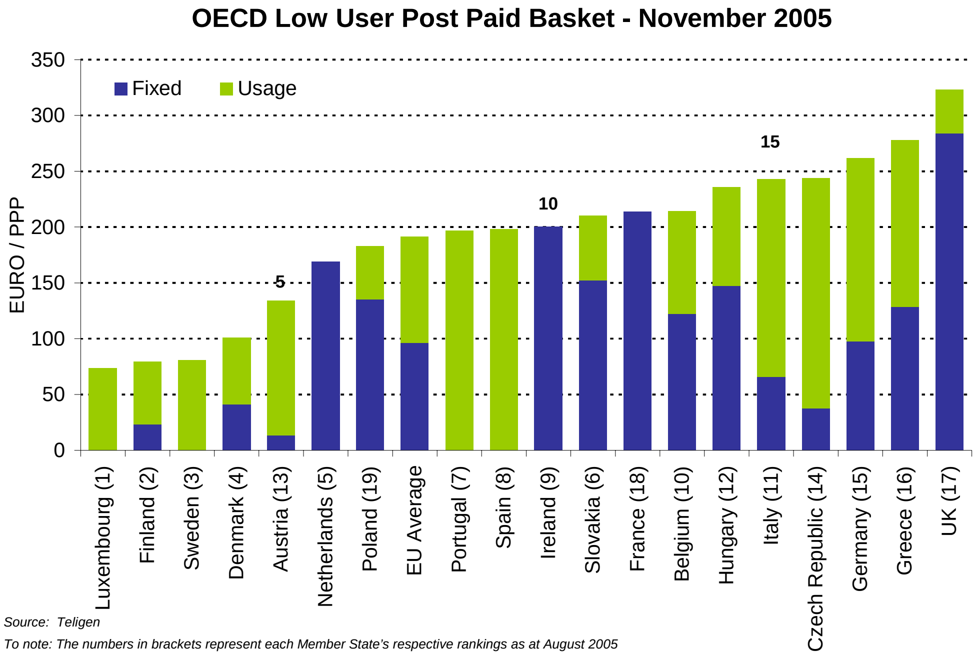
[17] As far as possible, ARPU figures are obtained directly from operators. Where unavailable, ARPU is calculated by dividing annual service revenues by the mid-term installed base (the sum of the opening and closing customer bases for the period divided by two). Once the Yankee Group has obtained or 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.

3.6 Mobile Pricing Data[18]

3.6.1 Low User Post Paid Mobile Basket[19]

Ireland is currently ranked 10th among the 19 EU markets analysed, and three places behind the EU average in terms of price.

Figure 3.6.1 OECD Low User Post Paid Mobile Basket – November 2005



Source: Teligen

To note: The numbers in brackets represent each Member State's respective rankings as at August 2005

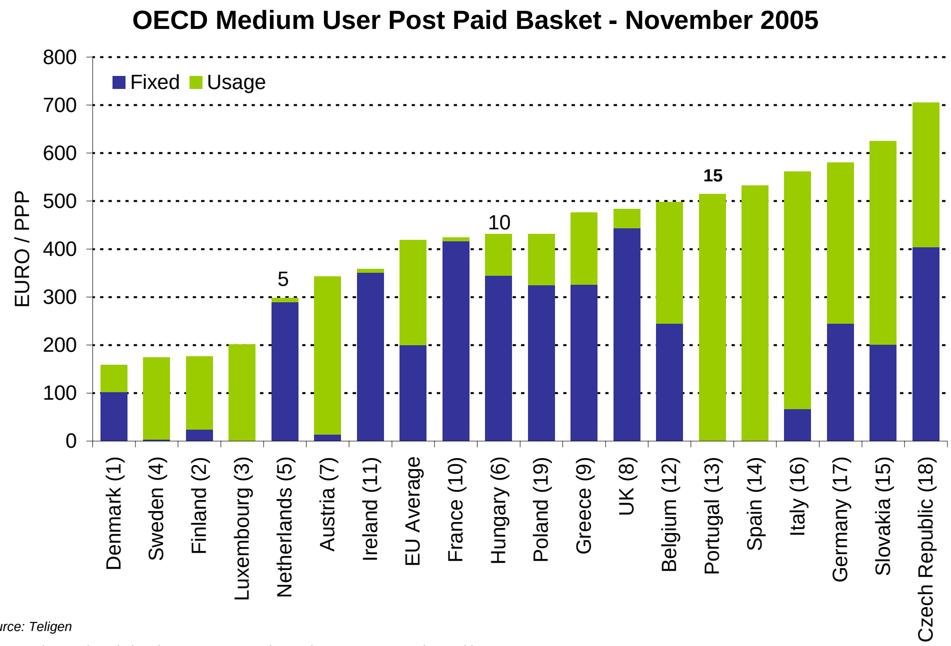
3.6.2 Medium User Post Paid Mobile Basket

Ireland's position in this basket moved from 11th to 7th ranking among the 19 EU countries analysed, moving Ireland to a place in front of the EU average.

[18] The 'Fixed' component of price refers to the standard charges imposed by operators, regardless of the amount of calls made (i.e. installation and rental). T-basket calculation of this figure is made up of: Installation Charge/5 + Rental charge for 1 year. The 'Usage' component of price refers to the charges imposed by operators, arising from the number of calls made by the user.

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

Figure 3.6.2 OECD Medium User Post Paid Mobile Basket – November 2005



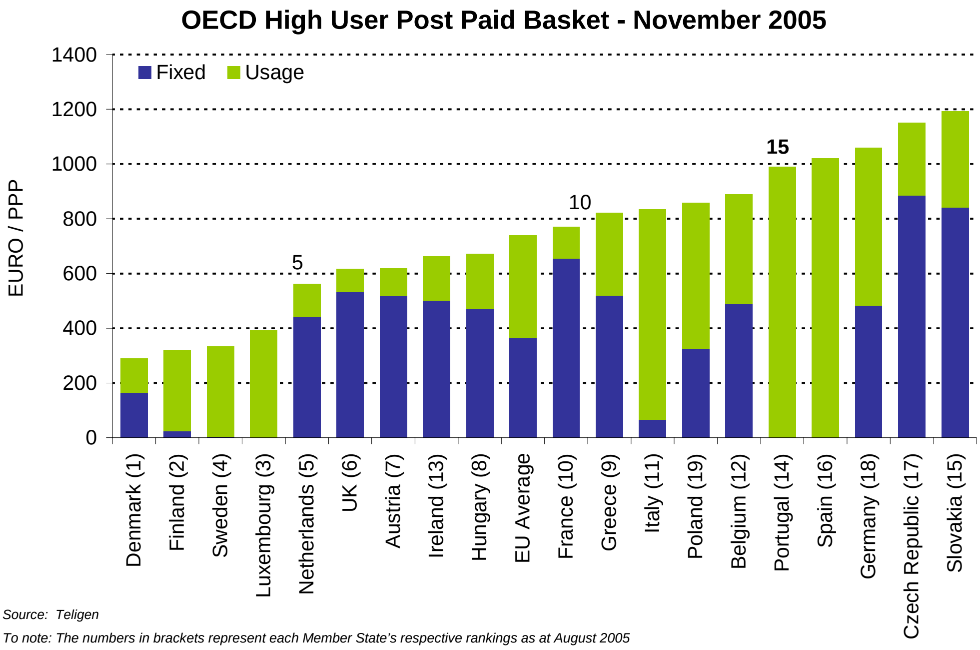
Source: Teligen

To note: The numbers in brackets represent each Member State's respective rankings as at August 2005

3.6.3 High User Post Paid Mobile Basket

Ireland's position has improved since the previous quarter when it was ranked 13th of the 19 EU countries analysed. This quarter Ireland is ranked 8th, and is two places better than the EU average in terms of price.

Figure 3.6.3 OECD High User Post Paid Mobile Basket – November 2005



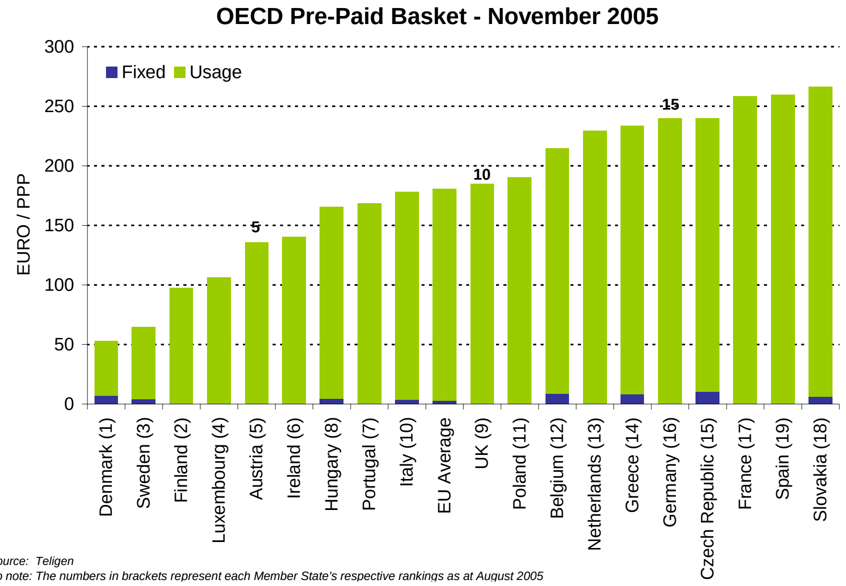
Source: Teligen

To note: The numbers in brackets represent each Member State's respective rankings as at August 2005

3.6.4 Pre-Paid Mobile Basket[20]

Ireland remains ranked 6th in the pre-paid basket, four places better than the EU average in terms of price among the 19 EU countries analysed.

Figure 3.6.4 OECD Pre-Paid Mobile Basket – November 2005



Source: Teligen
To note: The numbers in brackets represent each Member State's respective rankings as at August 2005

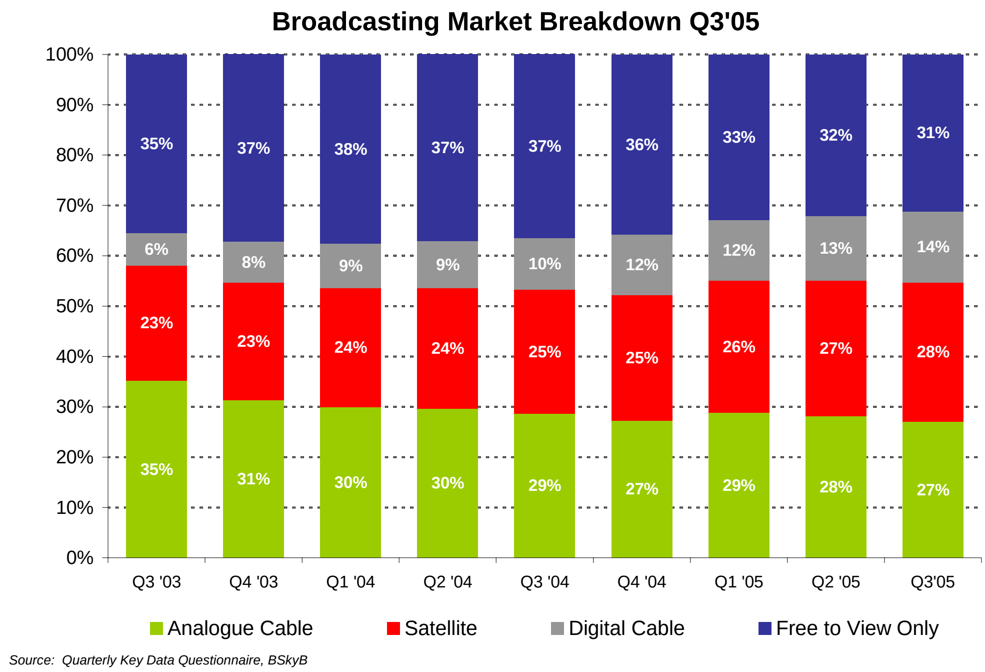
[20] The OECD has found that there is little difference between the average pre-paid usage and low-user post-paid usage. This pre-paid basket thus refers to the average pre-paid user and is based on low user post-paid usage.

4 Broadcasting

4.1 Cable / MMDS & Satellite

In the third quarter of 2005 there were approximately 557,000 cable/MMDS subscribers to television services in Ireland. Of these 366,000 subscribed to analogue only and over 191,000 had upgraded to digital television; with digital subscribers representing 34% of total cable/MMDS subscribers. By September 2005, BSkyB reported that it had 372,000 Irish subscribers. The total number of pay TV subscribers in Ireland (cable/MMDS and satellite) stood at 929,000 – 61% of total pay-TV subscribers now subscribe to digital TV.

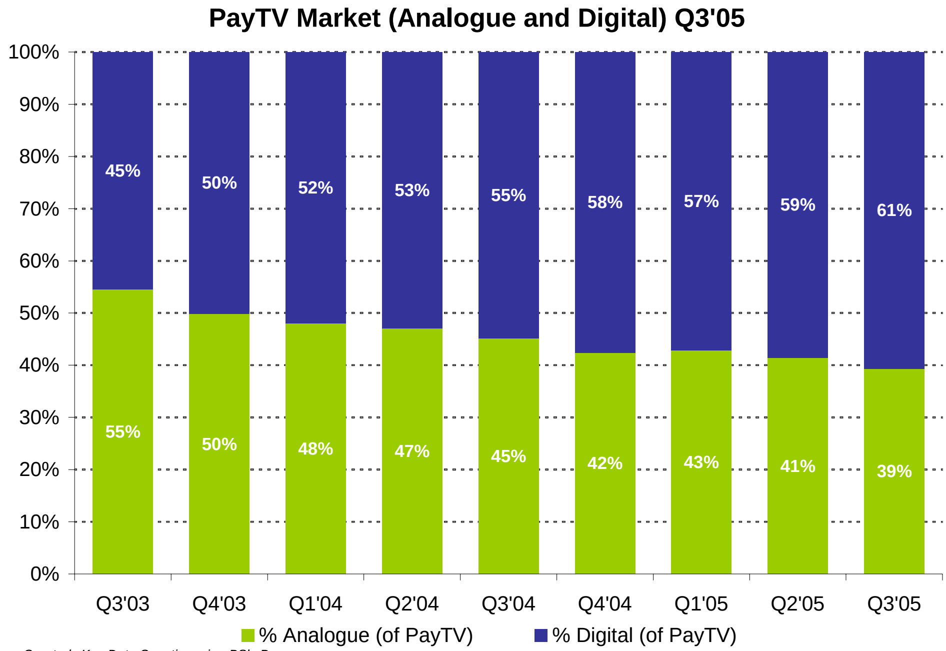
Figure 4.1.1 Take Up of Broadcasting Services



At the end of September 2005 there were approximately 563,000 digital cable/MMDS and satellite subscribers. Digital households represent approximately 42% of all households with a television[21].

[21] Figure is based on CSO estimate of 1.35 million households with a television.

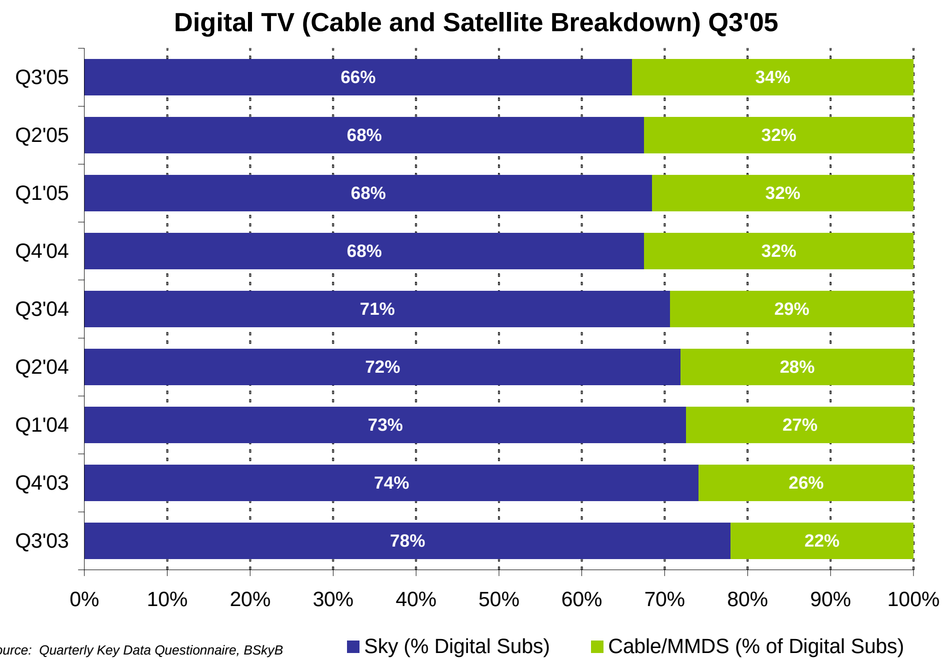
Figure 4.1.2 Pay TV Market (Analogue and Digital)



Source: Quarterly Key Data Questionnaire, BSkyB

In Figure 4.1.2 the switch by subscribers to digital Pay TV is illustrated, with 61% of all Pay TV services now delivered via digital. Figure 4.1.3 shows that cable/MMDS accounts for 34% of all digital subscribers in the country (satellite accounts for the remaining 66%). Digital cable offerings are capturing an increasing share of the digital TV market in Ireland. This is can be at least partly explained by the migration of existing customers from analogue to digital MMDS/cable services.

Figure 4.1.3 Digital TV (Cable and Satellite Breakdown)



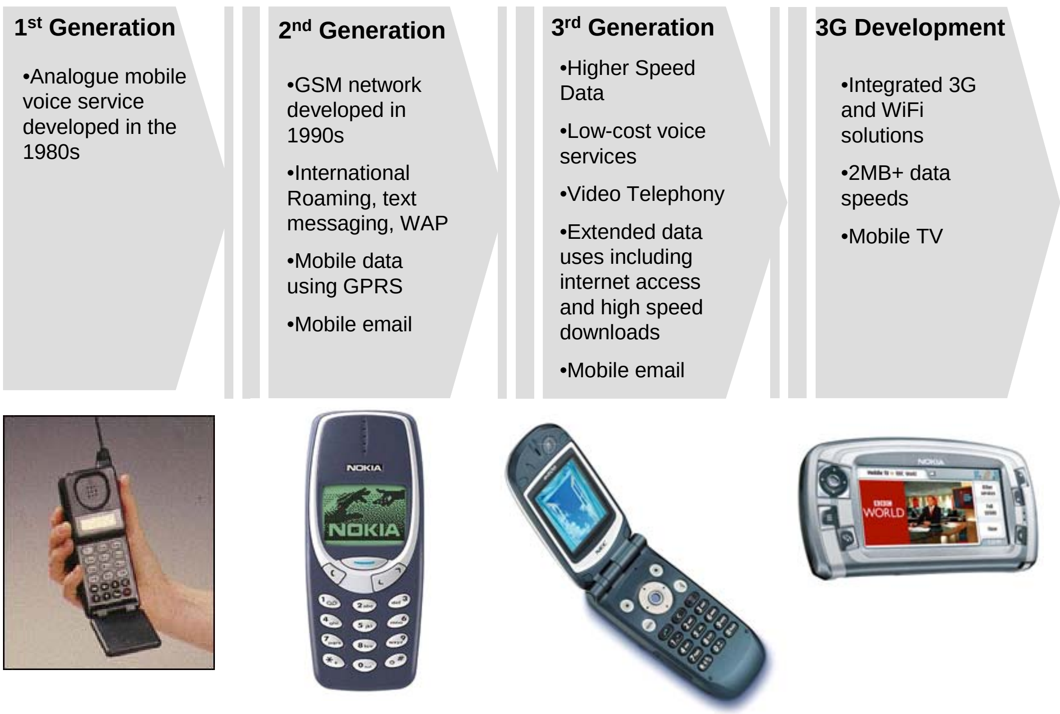
Source: Quarterly Key Data Questionnaire, BSkyB

5 Emerging Trends

5.1 3G Defined

3G stands for "third generation" and is an industry term for a set of advanced mobile technologies. 3G mobile networks provide enhanced ways to communicate and access information, delivering a range of high-speed data services such as high-speed internet access, video-telephony, music downloads, and voice services to mobile consumers. 3G technologies also allow for more efficient use of mobile networks and radio spectrum.

Figure 5.1.1: Applications enabled as a result of mobile network development and likely future application over 3G networks



5.2 3G Operators in Ireland

In July 2002, ComReg awarded three 3G licences to Vodafone, O2 and Hutchinson Whampoa (trading as "3 Ireland"). These licences were allocated for the deployment of 3G mobile networks and services to the Irish market. Following a period of network building and development, Vodafone and 3 Ireland have launched their full commercial offerings. O2 has yet to fully launch their 3G service portfolio, but currently offers 3G based data cards for internet and email access focusing on the corporate market. In November Smart Telecom was offered the final 3G licence following a tender process conducted by ComReg.

5.3 Key Features of 3G services

3G services extend the scope of mobile usage beyond traditional voice and SMS messaging to a number of enhanced and new mobile services, both voice and data.

Figure 5.3.1 Advanced 3G services

These include,

- **Video Calling**- a key differentiating feature between current GSM or 2G networks and 3G services is the ability for consumers to make video calls to other 3G customers.

- **Camera Phone**- although 2G phones have camera capabilities, 3G networks allow users to send and receive pictures at broadband speeds.

- **Location Based Services**- these services, available in a number of European countries, allow users to search for local services such as hotels in the vicinity.

- **Broadband Internet Access**- accessing the internet over 3G allows consumers to access services at broadband speeds (e.g. typically 100s of kbit/s).

- **Downloads**- broadband speed allows 3G users to download games, music videos, sporting footage or other audio-visual information and entertainment to their mobile handset.

- **Other audio-visual services**- Many mobile network operators are currently developing technologies which would allow TV broadcast services to be transmitted to mobile handsets.

5.4 Potential Benefits for Consumers

High data speeds, typically associated with fixed line broadband, enable 3G users to benefit from a range of video and data services from their 3G handset. Maximum download speeds for 3G are estimated at up to 2Mbps when usage is at a fixed location, 384Kbps at pedestrian walking speed, and 128Kbps when the user is moving[22]. In practical terms, this means that 3G services enable consumers to access and use their mobile phones for a wider range of voice and data services at much faster speeds than available over 2G or GPRS networks. Future 3G networks will be able to provide data rates greater than 2Mbit/s.

3G may provide an easy to use means of delivering broadband access. It brings broadband internet access to individuals who do not have access to a PC or a fixed telephone line, and enables these users to access the benefits of broadband services without the need for a personal computer in the home[23].

In addition to high speed data services, 3G networks allow for increased efficiency in the way mobile voice telephony is transmitted. These efficiency gains should mean lower cost voice telephony for 3G users, usually in the form of "bundles" of free voice minutes as part of a 3G package.

5.5 3G Development in Ireland

A ComReg commissioned Amárach survey in March 2005 examined awareness of 3G services among Irish mobile users. Overall, 38% of survey respondents were aware of 3G mobile phones; awareness was highest among 15-24 year olds (59%), single respondents (51%) and higher income groups.

Of those survey respondents who were aware of 3G services, 18% overall believed it was likely that they would get a 3G phone in the near future- this was particularly pronounced among 25-34 year olds, higher income groups and those in Dublin.

[22] Source: OECD. DSTI/ICCP/TISP (2003)10/FINAL. "Development of third-generation mobile services in the OECD" Moving is assumed to be at faster than walking speed e.g. a moving vehicle.

[23] 3G 'data cards' are available also that plug directly into a laptop computer, giving broadband access without the need for a fixed line.

The success of 3G mobile services and packages will be determined not only by the reliability of the network for voice telephony, but also by the attractiveness and usefulness of the advanced data services that the technology delivers. Vodafone recently announced that in September 2005 it had achieved 93,800 3G subscribers since commercial launch of its service in November 2004. It is expected that the numbers of 3G subscribers will continue to grow in the next 12 months as all operators roll out innovative commercial services in the market.