

# **Irish Communications Market**

# **Quarterly Key Data Report**

# December 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 1<sup>st</sup> July 2007 to 30<sup>th</sup> September 2007. The report is based on submissions from 67 operators, which represents almost all authorised operator market activity.

### 1.1 Number of Authorisations

Figure 1.1.1 - Total Number of Authorisations

Total Authorisations	December 2007
No. of fixed and wireless authorisations	319
No. of mobile telephony authorisations	5
No. of broadcasting authorisations (incl. Cable TV, MMDS, Deflectors)	84
Total Number	408

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 408 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<sup>1</sup>

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.

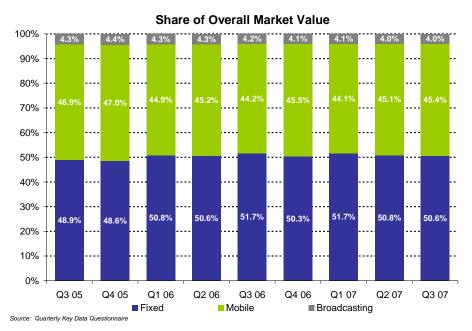


Figure 1.2.1 – Fixed, Mobile & Broadcasting as a % of Total Revenues<sup>2</sup>

Overall electronic communications network and service revenues at the end of September 2007 were nearly €1.14bn for the quarter, or €4.56bn on an annualised basis. Industry revenue increased by almost 1.1% in the quarter and by 4.7% compared to Q3 2006. Increased industry revenue this quarter was again driven mainly by growth in the mobile industry.

In Q3 2007 fixed line revenues accounted for 50.6% of total electronic communications revenues, a slight decrease since last quarter. In contrast the mobile industry's share of revenue increased from 45.1% in Q2 2007 to 45.4% in Q3 2007.

<sup>1</sup> For further detail on terms and definitions see ComReg Document Number 07/106a Explanatory Memorandum to Quarterly Key Data Report.

<sup>2</sup> 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)<sup>3</sup>

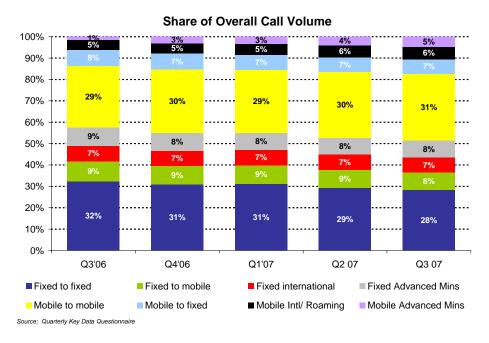


Figure 1.3.1 profiles volumes of voice calls by call type for both fixed and mobile voice on a quarterly basis. Voice minutes for the quarter totalled 4.54 billion minutes, a 1.4% increase on the previous quarter when total voice minutes were 4.48 billion minutes. Traffic originating on a fixed line network accounted for 51% of all voice minutes, while mobile originating voice minutes accounted for the remaining 49%.

Figure 1.3.2 - Fixed and Mobile Originating Voice Minutes

		Quarterly	Year-on-Year
Minute Type	Q3 07 Minutes	Change	Change
		Q2 07-Q3 07	Q3 06-Q3 07
Fixed Originating Minutes	2.33bn	-1%	-5%
Mobile Originating Minutes	2.21bn	+4%	+22%

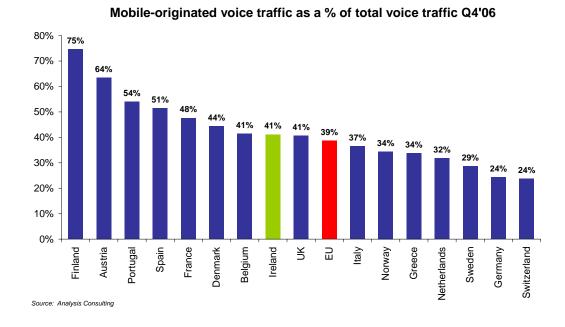
Analysys Research has suggested that 38.6% of total voice traffic in Western Europe originated on mobile networks in Q4 2006 and estimates that almost half of all voice traffic will originate on mobile networks by the end of 2008.<sup>4</sup>

<sup>3</sup> 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.

<sup>4</sup> Analysys Research (2007). The Acceleration of fixed-mobile substitution in Western Europe: facts and figures, p. 13

Figure 1.3.3 below, which is based on data from Analysys Research, provides an indication of the percentage of total voice calls originating (that is starting) on mobile networks, for the period September - December 2006. Countries with very high levels of mobile-generated voice traffic in 2006 included Finland, Austria and Portugal while in countries such as Switzerland and Germany, less than 1 in 4 calls originated on a mobile network in the same period.

Figure 1.3.3 - Mobile-originated voice traffic as a % of total voice traffic '06



### 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<sup>5</sup> 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 August 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 07/106a.

### 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 1<sup>st</sup>. 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 May 2007, at rank 9 and 6 respectively. The national business basket has ranked at 6<sup>th</sup> position consistently since February 2006 while the national residential has remained at 9<sup>th</sup> position for the last three quarters. The international residential has remained unchanged in 4<sup>th</sup> position, while international business has dropped 2 places to 6<sup>th</sup> since May 2007.

<sup>5</sup> 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.

Ireland's Position in the Various PSTN Baskets Relative to EU19: Feb'06 - Aug'07 12 10 Relative Ranking 6 4 0 Feb '06 May '06 Aug '06 Nov'06 Feb'07 May'07 Aug '07 Nat. Residential Nat. Business Int'l Residential Int'l Business

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

### 1.4.2 Mobile Baskets

Figure 1.4.2 shows the movement in Ireland's position in all mobile baskets since February 2006 relative to the EU, where the least expensive country is ranked 1<sup>st</sup>. The medium user basket was the only basket where the rank improved this quarter, from 11<sup>th</sup> to 10<sup>th</sup> among the 19 EU-member states analysed. The low user post-paid basket dropped two places from 11<sup>th</sup> to 13<sup>th</sup> position, while the high user and pre-paid baskets remained in the same position.

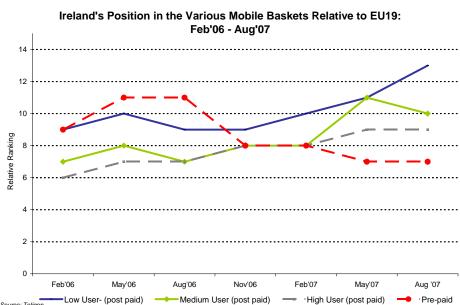


Figure 1.4.2 – Ireland's Position in Various Mobile Baskets

### 2 Fixed Market Data

### 2.1 Total Fixed Line Revenues

Fixed line revenues totalled over €576 million in Q3 2007, an increase of 1% since last quarter. In real terms, there were increases in the retail narrowband 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 2.1.1.6

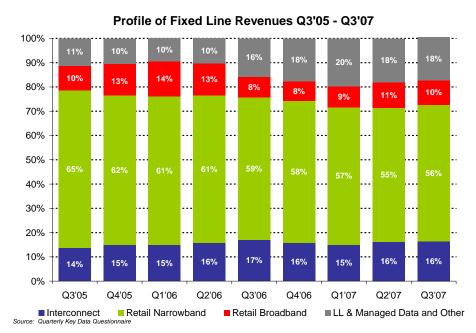


Figure 2.1.1 – Profile of Fixed Line Revenues

# 2.1.1 Authorised Operators' Share of Overall Fixed Line Revenues

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

<sup>6</sup> 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

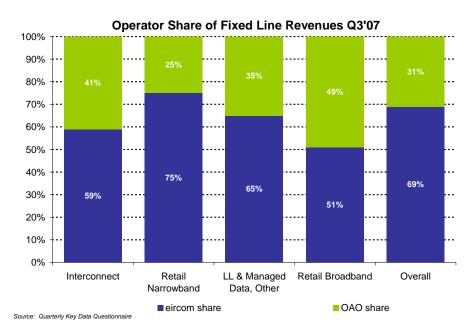
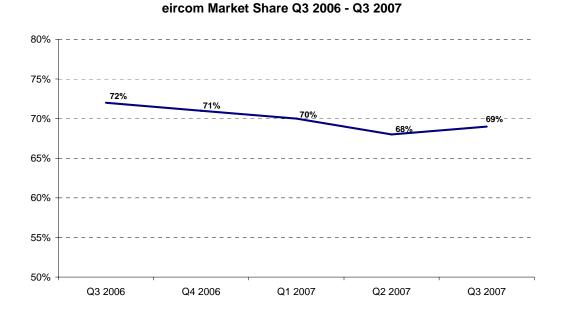


Figure 2.1.2 – Operator Share of Fixed Line Revenues

Eircom's overall share of fixed line market revenue has seen a quarterly increase of 1%, but a 3% decline since the same period last year. The reported decline is predominantly 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<sup>7</sup> in their responses to the Quarterly Report questionnaire.

Figure 2.1.3 - Eircom's Market Share



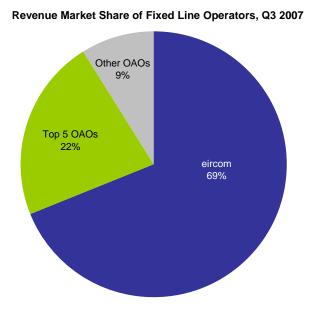
7 Updated data received by Colt Telecom for the first time since Q3 2006. Q2 2007 data used for the following operators: Broadworks, BT Ireland, Glantel, Icarus, NewTel, Perlico and Rainbow Telecom.

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Figure 2.1.4 outlines revenue market share in Q3 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 69% market share, ComReg estimates that the next five largest operators in terms of revenue contribute a further 22% of industry revenue, with the remaining 9% 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



### 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<sup>8</sup>. There were just over 2.1 million direct and indirect PSTN and ISDN access paths in the Irish market in Q3 2007, a marginal increase since Q2 2007. In many EU markets fixed-line connections have declined in recent years as some households migrated to mobile-only means of communication or to bundled cable TV/internet/VoIP packages. In Ireland however, Analysys Research has indicated that "population growth, as a result of immigration, has helped to increase the number of fixed connections" in Ireland<sup>9</sup>. 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 over 467,000 in Q3 2007, a 1% decrease since Q2 2007. In Q3 2007, indirect access accounted for 22% of all access paths in the fixed market.<sup>10</sup>

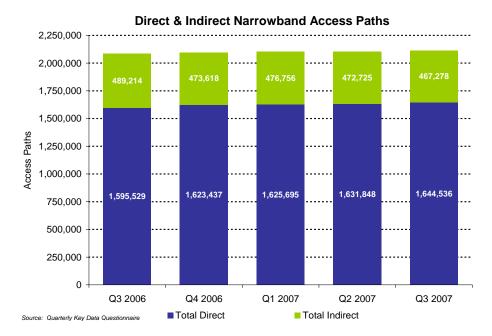


Figure 2.2.1 - Fixed Access Paths

<sup>8</sup> 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.

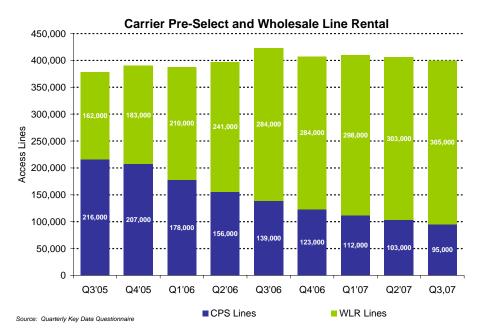
<sup>9</sup> Analysys Research (2007) The Acceleration of fixed-mobile substitution in Western Europe: facts and figures. p. 38

<sup>10</sup> 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.

### 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 Q3 2007, there were just over 400,000 active lines, enabling OAOs to provide services to customers by reselling elements of Eircom's copper network. The number of indirect access lines has decreased by 2% in overall terms this quarter. Year on year, indirect access lines for the 12 months to the end of September 2007 decreased by 5%. 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 76% of indirect access lines compared to 43% in Q3 2005. Despite the overall decrease in indirect access lines, WLR lines continue to see incremental growth.

Figure 2.2.2 - Indirect Access Lines<sup>11</sup>



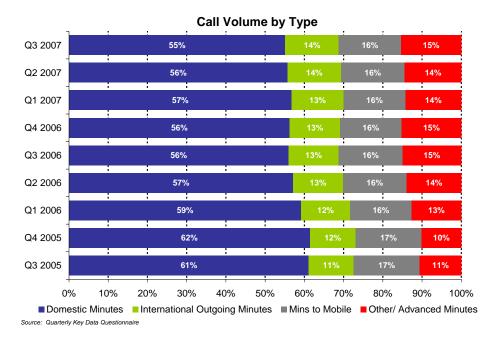
<sup>11</sup> Number of lines are rounded to the nearest thousand

### 2.3 Fixed Voice Call Volumes

Fixed call traffic in Q3 2007 was just over 2.33bn minutes, a decrease of 1% since Q2 2007, and a fall of 5% since Q3 2006.

A 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 Q3 2006 and Q3 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 56% of fixed line voice traffic, while in Q2 2007 this share of overall minutes had fallen, albeit marginally, to 55%. 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 illustrates trends in fixed voice call minutes since Q2 2005.





<sup>12</sup> 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.

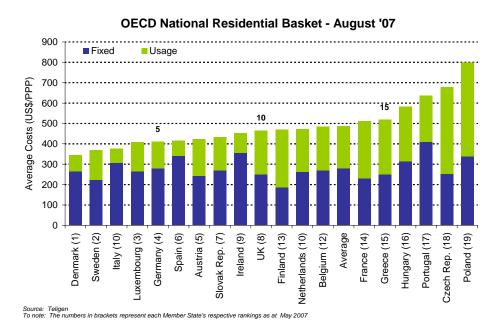
### 2.4 PSTN Pricing Data

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. 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 will 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 August 2007 Ireland remained in 9<sup>th</sup> position, five places better than the EU average in terms of price for this basket.

Figure 2.4.1.1 - OECD National Residential Basket - Aug 2007<sup>14</sup>



13 This will be determined by whether the EU country is also an OECD member.

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

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### 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 6<sup>th</sup> position in the national business basket consistently over the past year, and is seven places better than the EU average in terms of price.

OECD National Business Basket - August '07 2000 Usage Fixed 1800 1600 Average Costs (US\$/PPP) 1400 1200 1000 10 800 600 400 200 UK (16) Luxembourg (3) Slovak Rep. (18) Hungary (14) Italy (13) Portugal (15) Czech Rep. (19) Sweden (5) Vetherlands (8) Spain (9) Austria (10) Average France (12) Poland (17) Germany (2) Belgium (4) Ireland (6) Denmark (1) Greece (7) Finland (11) Source: Teligen
To note: The numbers in brackets represent each Member State's respective rankings as at May 2007

Figure 2.4.2.1 - OECD National Business Basket - August 2007

### 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. Ireland remains in the same position as last quarter, and is six places better than the EU average in terms of price.

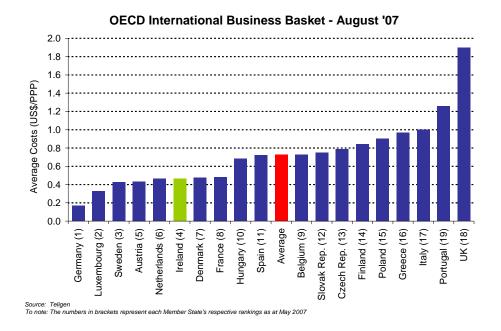
OECD International Residential Basket - August '07 2.5 Average Costs (US\$/PPP) 2.0 0.5 0.0 UK (11) Ireland (4) Luxembourg (5) Finland (13) Slovak Rep. (14) Hungary (15) Czech Rep.(16) Portugal (19) Sweden (2) Netherlands (3) Austria (6) Belgium (8) France (9) Average Poland (10) Spain (12) Italy (17) Greece (18) Germany (1) Denmark (7)

Figure 2.4.3.1 - OECD International Residential Basket – Aug 2007<sup>15</sup>

### 2.4.3 OECD International Business Basket

Ireland dropped two positions to 6th among EU countries analysed in the international business basket, but remains five places ahead of the EU average in terms of price.

Figure 2.4.4.1- OECD International Business Basket - Aug 2007



<sup>15</sup> Residential tariffs include VAT. VAT rates vary between member states

### 3 Internet and Broadband

# 3.1 Total Internet Subscriptions

At the end of Q3 2007, there were a total of almost 1.2 million active internet subscriptions in Ireland<sup>16</sup>. Table 3.1.1 shows the total number of narrowband and broadband subscriptions to internet services in Ireland. Recent research by Comscore indicates that Ireland had the third-fastest growing Internet audience in Europe in September 2007. The total internet universe in Ireland grew by 16% between September 2006 and September 2007. The average European internet audience growth was 5% in the same period<sup>17</sup>.

Table 3.1.1 - Total Number of Active Internet Subscriptions in Ireland

Subscription Type	Q3 07 Subs	Quarterly Growth Q2 07- Q3 07	Year-on-Year Growth Q3 06- Q3 07
Metered Narrowband	326,000	-4%	-31%
Flat Rate Narrowband	56,600	-8%	-39%
ADSL Broadband <sup>18</sup>	507,100	+7%	+59%
Other Broadband <sup>19</sup>	286,500	+27%	n/a
Total Internet Subscriptions	1,176,200	+7%	n/a

<sup>16</sup> 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.

<sup>17</sup> http://www.comscore.com/press/release.asp?press=1885

<sup>18</sup> DSL refers to a digital subscriber line, the means by which broadband speeds (i.e. in excess of 144k downstream) are delivered over the copper telecoms network.

<sup>19</sup> Other Broadband includes cable broadband, fixed wireless access, fibre, satellite and mobile broadband connections

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 67% of all internet subscriptions. Please note that "Other Broadband Subscriptions" in Figure 3.1.2 contains mobile broadband subscriptions. Figure 3.1.2 provides a profile for the periods Q3 2005 - Q1 2007 for historical trend purposes; however, please note that the inclusion of mobile broadband subscriptions from Q2 2007 means quarter on quarter comparisons should be not drawn between the current period and other quarters profiled in Figure 3.1.2.

Narrowband Metered, Narrowband Flat-rate, DSL and Other **Broadband Subscriptions** 100% 90% 20% 80% 26% 29% Percentage of Subscribers 32% 70% 37% 12% 42% 60% 43% 10% 43% 9% 50% 9% 40% 7% 6% 30% 54% 51% 47% 42% 20% 35% 31% 28% 10% 0% Q3'05 Q4'05 Q1'06 Q2 06 Q3'06 Q4'06 Q1'07 Q2'07 Q3'07 ■ Narrowband Flat Rate **■** DSL Other Broadband ■ Narrowband Metered Source: Quarterly Key Data Que

Figure 3.1.2 - Profile of Active Internet Subscriptions in Ireland

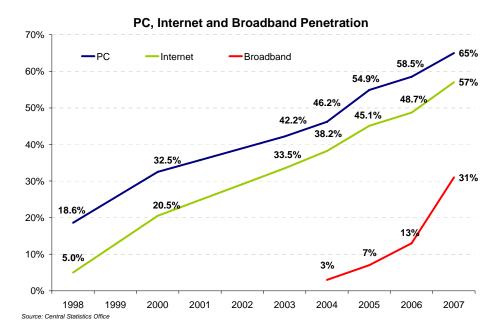
Figure 3.1.3 provides a historical view of the growth of total internet subscriptions in Ireland, and the migration from narrowband to broadband subscriptions since the start of 2003. Mobile broadband subscriptions were included in this chart for the first time in Q2 2007, and while previous data is 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.

Narrowband and Broadband Subscriptions Growth 1,300,000 1,200,000 1,100,000 1,000,000 900,000 Active Subscriptions 800,000 700,000 600,000 500,000 400,000 300,000 200,000 100.000 Q3'03 Source: Quarterly Key Data Questionna

Figure 3.1.3 – Narrowband and Broadband Subscriptions Growth in Ireland

Figure 3.1.4 shows household PC, internet and broadband usage statistics based on a survey carried out in February 2007 by the CSO<sup>20</sup>. Their analysis suggests that PC, Internet and broadband penetration have all increased between 2006 and 2007, with broadband penetration in particular experiencing a marked increase in take-up from 13% to 31% of households year on year.





<sup>20</sup> Further information on PC, internet and broadband usage by household can be found at the following link: http://www.cso.ie/releasespublications/documents/industry/current/iss.pdf

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 nearly 900,000 active internet subscriptions over the copper telecoms network at the end of September 2007, a 1.7% increase in the total number of copper-based subscriptions since Q2 2007. DSL accounted for 57% of copper-based internet subscriptions, while metered narrowband subscriptions accounted for a further 37% of internet subscriptions over copper, with flat rate narrowband internet subscriptions making up the remaining 6% of copper-based internet subscriptions.

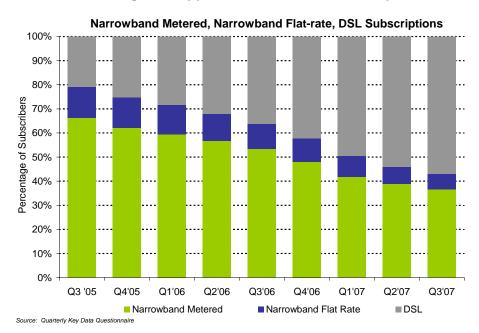


Figure 3.1.5 – Percentage of Copper Based Internet Subscriptions

### 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 68% of all DSL subscriptions in September 2007. The average incumbent share of retail DSL in the EU was 56.1% in July 2007<sup>21</sup>. Retail 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 September 2007, 28% of all DSL lines were provided by OAOs to subscriptions using wholesale bitstream, and the remaining 4% of

 $http://ec.europa.eu/information\_society/policy/ecomm/doc/implementation\_enforcement/broadband\_access/Broadband\_data\_july07\_final.pdf$ 

<sup>21</sup> Based on a report by the European Commission in October 2007 available at:

DSL lines were provided to subscribers by OAOs using local-loop unbundling. At the end of September 2007 there were about 18,150 local loops unbundled. Credit Suisse First Boston estimates that by the end of September 2007 the European average for unbundled local loops as a proportion of DSL was 23.2%.<sup>22</sup>

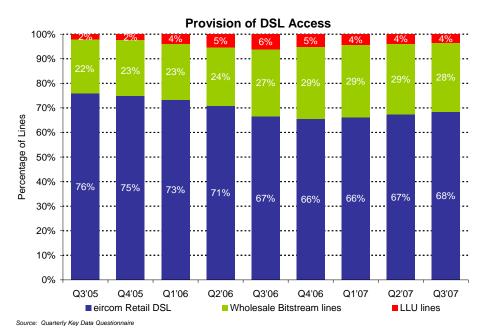


Figure 3.2.1 - Provision of DSL Access

Eircom's market share of retail DSL lines has increased by 1% for the second consecutive quarter in Q3 2007. In the past twelve months, Eircom's share of retail DSL subscriptions has remained fairly stable.

22 CSFB: European First Tel Factsheet- December 2007

### 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<sup>23</sup> and growth rates by Platform

Platform	Q3 07 Subs	Quarterly Growth Q2 07- Q3 07	Year-on-Year Growth Q3 06- Q3 07
DSL	507,100	7%	59%
Cable	76,900	12%	55%
FWA	113,000	10%	81%
Other <sup>24</sup>	8,200	- <b>7</b> % <sup>25</sup>	55%
Sub-Total	705,200	8%	61%
Mobile Broadband	88,400	96% <sup>26</sup>	n/a
Total	793,600	13.72%	n/a

Since the beginning of this year the availability of High Speed DownLink Packet Access (HSDPA) has been providing mobile broadband access to a growing number of Irish consumers. In order to fully reflect the range of broadband services available to customers in Ireland, ComReg started to include this data in its overview of the market in Q2 2007<sup>27</sup> report. 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 broadband and this should provide the basis for comparative data across countries in the near future.

At the end of September 2007, there were 793,600 broadband subscriptions in Ireland. This quarter saw growth of 13.7% in the number of subscriptions. However, as an estimate figure for mobile broadband subscribers was used in Q2 2007, and the actual figure in Q3 2007 was much higher than estimated by ComReg in Q2, this must be taken into account when considering this quarterly growth figure.

DSL remains the largest broadband access platform in terms of subscriptions, accounting for 64% of all broadband subscriptions, while other platforms account for

<sup>23</sup> 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

<sup>24</sup> Other Broadband includes Satellite and Optical Fibre broadband subscriptions.

<sup>25</sup> This negative growth figure is due to the decrease in the satellite subscriber element of "other" subscribers in Q3 2007.

<sup>26</sup> Q2'07 data for mobile broadband was a ComReg estimate. This growth figure is based on the estimate of 45,000 in Q2 2007.

<sup>27</sup> In Q2 2007 an estimate of 45,000 mobile broadband subscribers was used.

the remaining 36% of connections. Figure 3.3.2 illustrates the growth in total broadband subscriptions in the Irish market since Q3 2005. Mobile broadband subscriptions were included in Figure 3.3.2 for the first time in Q2 2007. Therefore total subscriptions levels from Q2 2007 presented in Figure 3.3.2 are not directly comparable with previous periods.

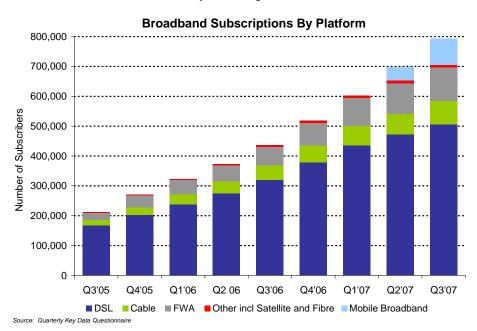


Figure 3.3.2 - Broadband Subscriptions by Platform

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, mobile broadband, fibre and satellite subscriptions broadband subscriptions. At the end of June 2007, 75% of broadband subscriptions on all 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.

Proportion of Business and Residential Subscribers across all Broadband **Platforms** DSL: 507,100 Total: 793,600 Other: 8,200 Cable: 76.900 88,400 100% 90% 25% 26% 31% 80% 43% 48% 70% 60% 50% 100% 40% 75% 74% 69% 30% 57% 52% 20% 10% 0% DSL Cable **FWA** Other Mobile Bband Total Res Non-Res Source: Quarterly Key Data Questionnaire

Figure 3.3.3 - Broadband Subscriptions by Subscriber Type

For the first time in Q3 2007 ComReg has provided a breakdown of broadband subscriptions by speed across all broadband platforms. Figure 3.3.4 illustrates that residential users are more likely to subscribe to packages of between 1Mb <2Mb, whereas business subscribers are more likely to subscribe to broadband offers in the 2Mbps <10Mbps category. There are low levels of uptake at both speeds of less than 1Mpbs and greater than 10Mbps. ComReg plans to benchmark these figures against other EU countries when data becomes available in 2008.

Figure 3.3.4 - Broadband Subscriptions by Contracted Download Speeds

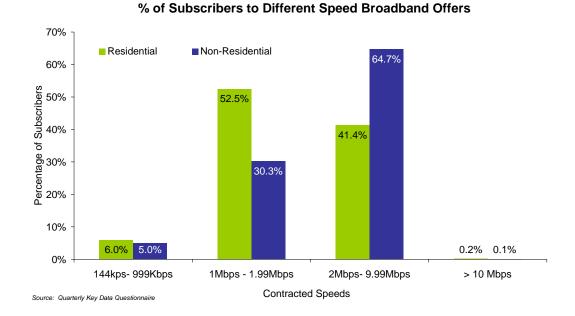


Figure 3.3.5 illustrates Eircom's market share of total broadband subscriptions when compared to other authorised operators' (OAO) share of overall broadband subscriptions, including DSL and alternative access technologies (which includes mobile broadband subscriptions).

In this period, Eircom held a 44% market share of all broadband subscriptions. DSL provided by OAOs using either Bitstream or LLU represented a further 20% of all broadband subscriptions. The remaining 36% of subscriptions was held by operators on alternative broadband platforms which include cable broadband, fixed wireless, fibre, satellite and mobile broadband subscriptions.

Please note that data from Q2 2007 cannot be compared to previous quarters as it includes mobile broadband for the first time; data prior to Q2 2007 is included here for illustration of previous trends.

**Market Share of Total Broadband Market** 100% 90% 80% 70% 10% 20% 60% 20% 50% 40% 30% 56% 54% 52% 49% 48% 48% 44% 20% 10% 0% Q3'05 Q4'05 Q1'06 Q2'06 Q3'06 Q4'06 Q1'07 Q2'07 Q3'07 ■DSL retailed by eircom ■ DSL retailed by OAOs Other Broadband Platforms Source: Quarterly Key Data Questionnaire

Figure 3.3.5 – Market share of Total Broadband Market

In presenting broadband penetration benchmarks for European countries, ComReg uses either OECD or ECTA data based on the most recently published statistics at the time of publication. ComReg provides broadband data for Ireland to both organisations. Figure 3.3.6 illustrates broadband penetration rates calculated by the OECD on a per capita basis at the end of June 2007<sup>28</sup>. The OECD calculated Ireland's broadband penetration at 15.4% in June 2007, compared to an average of 18.8% across the OECD countries

28 http://www.oecd.org/sti/ict/broadband

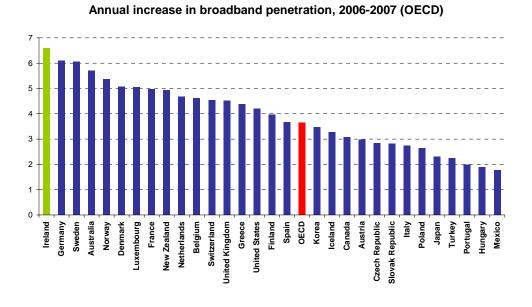
monitored. ComReg estimates that Irish broadband penetration (including mobile broadband) in September 2007 was  $18.40\%^{29}$ .

Figure 3.3.6 – OECD Broadband Penetration Rates, June 2007

# Netwice Republic Greece Republic Greece Slovak Republic Greece Gr

The OECD has also measured the annual increase in per-capita broadband penetration across the OECD between June 2006 and June 2007. Figure 3.3.7 indicates that Ireland's growth rate year on year was the highest in the OECD. According to Eurostat figures, Ireland's growth rate was also highest among the EU-27 member states, having increased from 13% to 31% between 2006 and 2007.

Figure 3.3.7 - Annual Growth in Broadband Penetration, 2006-2007



29 The broadband penetration rate is calculated based on total broadband subscriber numbers for DSL, Cable, FWA, mobile broadband and other broadband as a percentage of the total population of 4.315 million based on 2007 population estimates, which were used for the first time in Q3 2007. Penetration rate at the end of September 2007 without the inclusion of mobile broadband is 16.35%

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### 3.4 WiFi Broadband Access

ComReg 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<sup>30</sup>.

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 and BT Ireland.

Figure 3.4.1 - WiFi Hotspots and Access Points

	Q3 2007	Q2 07-Q3 07 Growth	Q3 06-Q3 07 Growth
WiFi Hotspots	1,238	+2%	n/a
WiFi Access Points	2,603	+11%	n/a

### 3.5 ADSL Pricing Data<sup>31</sup>

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<sup>32</sup>.

<sup>30</sup> A WiFi access point is a base station through which WiFi users can access the internet

<sup>31</sup> 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.

<sup>32</sup> ComReg Document 07/106a

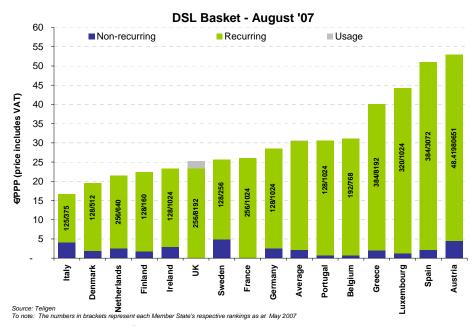


Figure 3.5.1 - Lowest Monthly Rental ADSL Basket- August 2007

Ireland was ranked in 5<sup>th</sup> place again in the DSL basket in August 2007, and is currently five places less expensive than the EU average. The Irish package used is Eircom's Broadband Home Starter package.

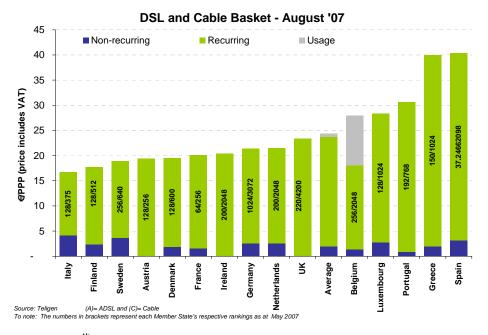


Figure 3.5.2 – Lowest Monthly Rental Cable and DSL Basket – August 2007<sup>33</sup>

Ireland is ranked in 7<sup>th</sup> place in this basket, four places less expensive than the EU average price in this basket. In Ireland, this product is the NTL Broadband Starter offered by UPC.

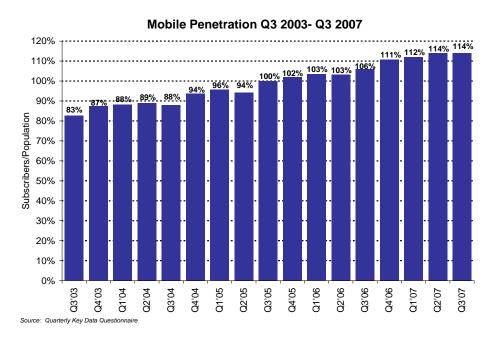
<sup>33</sup> Cable broadband offerings may not be available nationally in all countries. (A) denotes where the package is an ADSL service, (C) denotes where the package is a Cable broadband service

### 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



At the end of September 2007, there were over 4.9 million 2G and 3G mobile subscriptions in Ireland<sup>34</sup>. Figure 4.1.1.1 illustrates the growth in mobile penetration since 2003 and notes that at the end of September 2007, mobile penetration based on population in Ireland was 114%. While total mobile subscriptions increased by over 108,000 in the quarter, mobile penetration remained unchanged at 114%, as a new population estimate for Ireland for the 1<sup>st</sup> of January 2007 of 4.315m is being used in this report. 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<sup>35</sup> 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 overestimation of actual mobile usage using this metric.

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<sup>34</sup> 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.

<sup>35</sup> 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.

Figure 4.1.1.2 illustrates national mobile penetration rates across the EU15 in September 2007. Mobile subscription numbers analysed were sourced from the Yankee Group, while population figures for the countries analysed were provided by Eurostat's January 2007 population estimates for all countries. As analysis in previous quarters was based on population estimates for January 2006, the penetration rates in some countries may appear to have declined on the previous quarter. In this quarter average EU penetration across EU-15 member states was estimated at 115%.

**European Mobile Penetration - September 2007** 160 140 120 100 80 60 40 20 EU Average Spain Finland Belgium Luxembourg Denmark Italy Portugal Ireland Netherlands France Greece 놀 Sweden Austria Germany Source: Eurostat, Yankee Group. Data for Luxembour g I s for Q2 2007

Figure 4.1.1.2 – European Mobile Penetration Rates

### 4.1.2 The Profile of Mobile Subscriptions in Ireland

Source: Quarterly Key Data Questionnaire

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 September 2007. In Q3 2007, the proportion of pre-paid subscriptions remained unchanged since the previous quarter, and accounted for 74% of all active mobile subscriptions. The pre-paid/ post-paid subscriber split has seen little change since 2005.

Mobile Subscriptions- Prepaid and Postpaid (Q3'05 - Q3'07) 100% 90% 80% 70% 60% 50% 40% 76% 76% 76% 76% 75% 75% 75% 74% 30% 20% 10% 0% 2005 2005 2006 2006 2006 2006 2007 2007 2007 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 ■ Pre-paid ■ Post-paid

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

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. O2 has the highest proportion of post-paid customers with 33% of its subscriptions in the post-paid category. Meteor reports the largest proportion of pre-paid subscriptions, with 88% of their subscriptions base choosing to use the pre-paid payment option. This is a slight decrease from 89% last quarter. Vodafone's subscriber split has remained unchanged since Q2 2007.

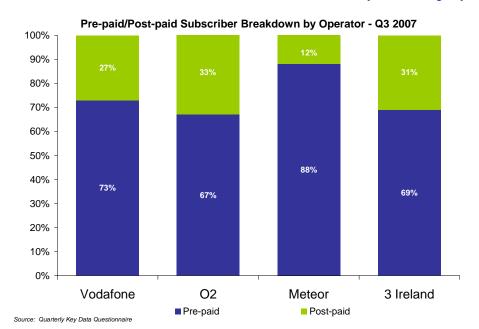


Figure 4.1.2.2 - Profile of Pre-Paid and Post Paid Subscriptions - by Operator

#### 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 Q3 2005. Total retail mobile voice traffic totalled over 2.2 billion minutes in Q3 2007, a growth of nearly 4% in voice volumes since the previous quarter, and a 23% increase in voice volumes since the same period in 2006. Mobile originating minutes now account for 49% of all voice traffic in the Irish telecommunications markets. The total number of SMS messages sent by mobile users in Ireland totalled 1.89 billion in Q3 2007. SMS messaging grew by 6% quarter on quarter, and volumes of SMS have increased by 31% on the same period in 2006. If the total volume of text messages is averaged over all active subscriptions, an average of 127 SMS messages were sent per subscription, per month in Q3 2007, compared with 107 in the same period last year.

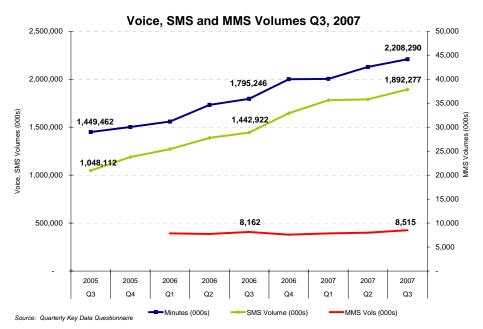


Figure 4.2.1.1 - SMS, MMS and Call Minutes

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 8.5 million MMS messages sent during the quarter.

### 4.3 Mobile Revenues

For the first time in Q3 2007, ComReg collected revenue figures associated with mobile broadband subscriptions of the 3 mobile operators offering these services. These revenues are included in the "Voice and Other Revenue" element of the chart below. As a result, Q3 2007 data is not comparable with data in previous quarters; data prior to Q3 2007 is presented here for historical trend purposes only.

Mobile retail revenues for the quarter were over €518 million. Of this €93 million was attributed to data services such as SMS and MMS which accounted for 18% of all retail revenues in Q3 2007<sup>36</sup>.

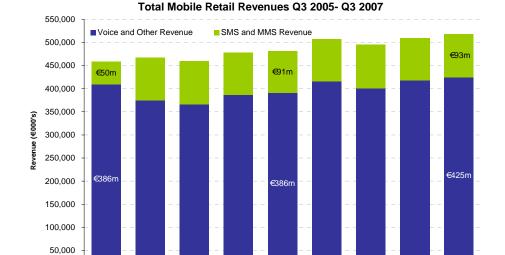


Figure 4.3.1 - Total Mobile Retail Revenues Q3 05- Q3 07

38

2005

Q3

2005

Q4

2006

Q1

2006

Q2

2006

Q3

2006

Q4

2007

Q1

2007

Q2

2007

Q3

<sup>36</sup> Data revenues identified by ComReg in this analysis include only revenues attributable to SMS and MMS messaging services.

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%<sup>37</sup> of revenue attributable to data revenues, unchanged since Q2 2007, and a 1% increase in the proportion of revenues from data services when compared with data from Q3 2006.

Data Revenues as a % of Total Mobile Revenues Q3, 2007 30% 25% -22% 25% 21% 21% 18% 20% 17% 16% 16% 15% 15% 15% 12% 10% 5% 0% Ireland Belgium Finland Austria Italy Portugal France 놀 Germany Netherlands EU Average **Denmark** Sweden Source: Yankee Group

Figure 4.3.2 - Data Revenues as % of Total Mobile Revenue<sup>38</sup>

<sup>37</sup> Data revenues identified by the Yankee Group include revenues from SMA, MMS, GPRS and 3G data services.

<sup>38</sup> Note that the graph relates to EU-15 countries except Luxembourg where no data was available.

Figure 4.3.3 compares ARPU (average revenue per user) across several EU countries<sup>39</sup>. 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 €44.66 per month in Q3 2007, a 5% decline in ARPU since the same period in 2006. This fall in ARPU is in line with trends elsewhere in the EU-15 member states within the period, although mobile ARPU in Ireland still remains the highest among the EU member states monitored.

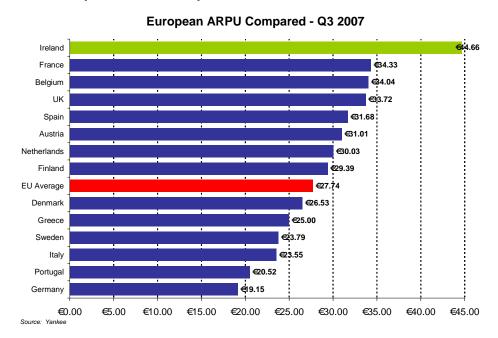


Figure 4.3.3 - European ARPU Compared - Q3 2007

#### 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<sup>40</sup>. Average minutes of use in Ireland for Q3 2007 was 232 minutes per month, no change on usage for the previous three months.

<sup>39</sup> 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.

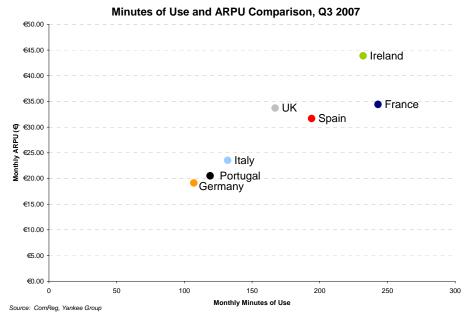
<sup>40</sup> ComReg Document 07/106a

Figure 4.4.1 - Minutes of use Q2 2007-Q3 2007

Country	MoU Q207	MoU Q307	Quarterly Change Q207-Q307
France	245	243	-0.8%
Ireland	232	232	0%
Spain	193	194	+0.5%
UK	163	167	+2.5%
Italy	132	132	0%
Portugal	119	119	0%
Germany	104	107	+2.8%

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, Q3 2007



Ireland has the highest level of monthly revenues generated by mobile telephony services, with the vast majority of this revenue coming from voice and data services. As figure 4.4.2 shows, Ireland has a comparatively high voice minute use while 4.3.2 suggests a high relative data use. Thus Ireland's high ARPU seems largely a function of high use of voice and data services.

### 4.5 Competition in the Mobile Market

### 4.5.1 Mobile Market Shares- By Subscription and Retail Revenues

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 since 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 3.6% of the total active mobile subscription base in Ireland.

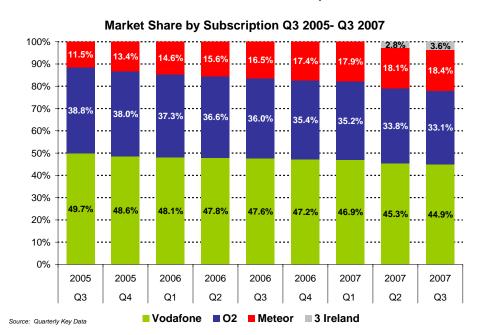


Figure 4.4.1.1 - Market Share - Number of Subscriptions

Figure 4.4.1.2 provides market shares for all mobile operators in the Irish market. 3 Ireland accounted for 3.4% of mobile industry retail revenues in Q3 2007.

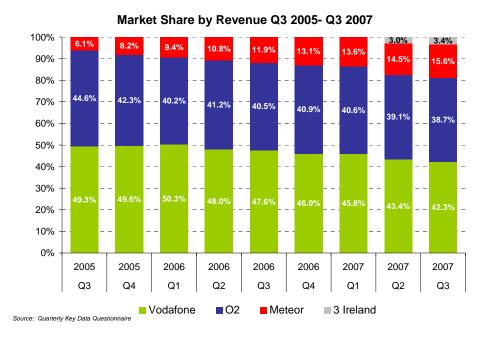
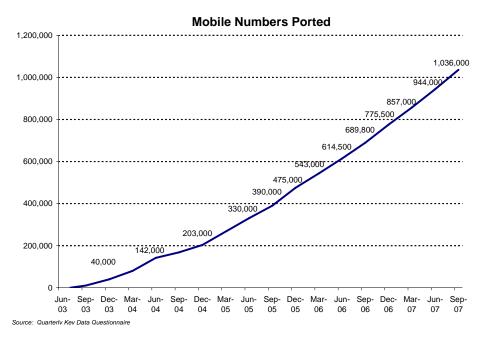


Figure 4.4.1.2 - Market Share - Revenue

### 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 1,036,000 people have used MNP to switch operator since June 2003. In Q3 2007 over 92,000 numbers were ported to another operator; based on data since September 2006, an average of around 84,000 numbers are ported each quarter.





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### 4.6 Mobile Pricing Data41

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<sup>42</sup>

Ireland is ranked in 13<sup>th</sup> place out of the 19 EU countries analysed, having fallen from 11<sup>th</sup> position in May 2007, and remains six places behind the EU average in terms of price.

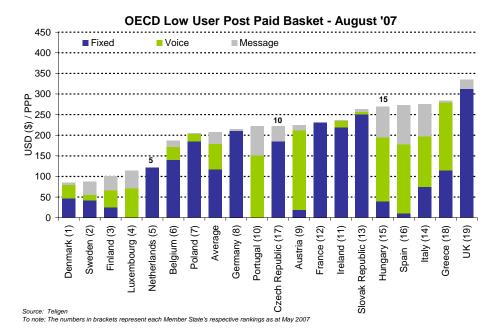


Figure 4.5.1.1 - OECD Low User Post Paid Mobile Basket – Aug 2007

<sup>41</sup> 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.

<sup>42</sup> All tariffs are inclusive of VAT, rates will vary between Member States

### 4.6.2 Medium User Post Paid Mobile Basket

Ireland's position in this basket is 10<sup>th</sup> among the 19 EU countries monitored this quarter; in May 2007 it was ranked in the 11<sup>th</sup> position. Ireland has dropped from 3 to 2 places more expensive than the EU average in this basket.

**OECD Medium User Post Paid Basket - August '07** 600 500 400 USD (\$) / PPP 300 200 100 UK (13) Italy (8) Sermany (14) Finland (2) Luxembourg (5) Austria (6) Greece (10) Belgium (12) Portugal (15) France (9) Szech Republic (19) Netherlands (4) Hungary(16) reland (11) Slovak Republic (17) Sweden (3) Denmark (1) Poland (7) Average Spain (18) To note: The numbers in brackets represent each Member State's respective rankings as at May 2007

Figure 4.5.2.1 - OECD Medium User Post Paid Mobile Basket - Aug 2007

### 4.6.3 High User Post Paid Mobile Basket

In the High-User Post-Paid basket, Ireland remains ranked in 9<sup>th</sup> place among EU-19 countries analysed. Ireland is currently two places ahead of the average in terms of price.

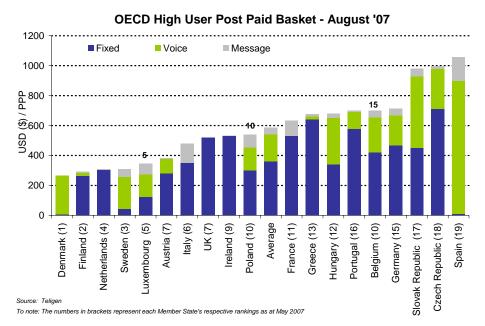
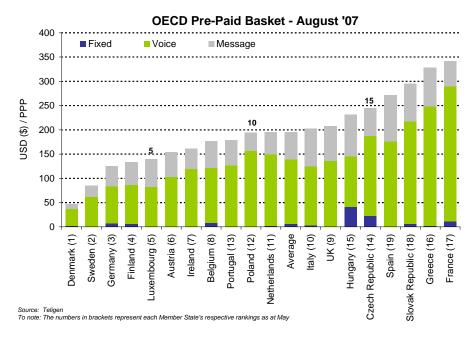


Figure 4.5.3.1 - OECD High User Post Paid Mobile Basket - Aug 2007

### 4.6.4 Pre-Paid Mobile Basket<sup>43</sup>

Ireland remains ranked in 7<sup>th</sup> place in the pre-paid basket this quarter, and is five places ahead of the EU average in terms of price.





<sup>43</sup> 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<sup>44</sup> 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<sup>45</sup> 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 September 2007 there were approximately 568,000 subscriptions to cable<sup>46</sup>/MMDS<sup>47</sup> television services in Ireland. For the same period BSkyB reported 513,000 Irish satellite<sup>48</sup> TV subscribers, a growth of 72,000 subscribers since the same reporting period last year. The total number of pay TV households in Ireland (cable/MMDS and satellite) is 1.081 million. Pay-TV households account for 74% of all homes with a television.

Figure 5.1.1 - Broadcasting Subscriptions and growth rates by Platform

Platform	Number of Subscriptions	Quarterly Change Q207-Q307	Annual Change Q306-Q307
Cable/MMDS	568,000	0.4%	-1%
Satellite	513,000	+3%	16%
Free-to-View	378,000	-5%	-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.

<sup>44</sup> ComReg uses the most up to date figure for TV households as per CSO figures when calculating penetration of Pay TV services. The latest CSO data published in the 2006 Information Society and Telecommunications report, reported 1.4583 million TV households in Ireland. The report indicates that there are a total of 1.483 million households in Ireland.

<sup>45</sup> 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.

<sup>46</sup> 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.

<sup>47</sup> 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.

<sup>48</sup> 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.

Broadcasting Market Breakdown Q3 2005 - Q3 2007 100% 90% 80% 70% 60% 50% 40% 30% 20% 33% 31% 32% 30% 29% 28% 28% 26% 10% 0% Q3'05 Q4'05 Q1'06 Q2'06 Q3'06 Q4'06 Q1'07 Q2'07 Q3'07 ■ Digital Cable Free to View Only Analogue Cable Satellite Source: Quarterly Key Data Questionnaire, BSkyB

Figure 5.1.2 - Delivery of Broadcasting Services

# 5.2 Pay TV

Figure 5.2.1 profiles the pay-TV market in Ireland, comparing those who subscribe to an analogue service provided by cable operators, and those who pay for digital TV, provided via either a digital cable service or satellite service. In Q3 2007, 76% of all those subscribing to a paid television service in Ireland had a digital subscription; an increase of 1% since Q2 2007 and a year-on-year increase of 7% since Q3 2006.

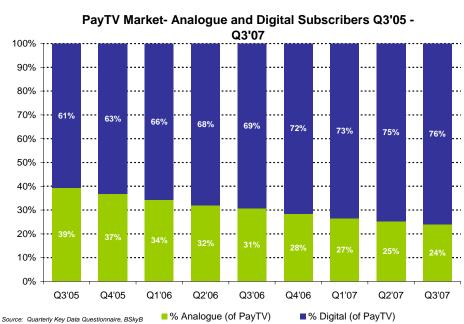


Figure 5.2.1 - Pay TV Market (Analogue and Digital)

## 5.3 Digital TV

At the end of September 2007, there were nearly 821,000 digital TV subscribers which include cable/MMDS and satellite customers; this is an absolute increase of over 26,000 subscribers since Q2 2007. Fifty six 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 remained the same this quarter.

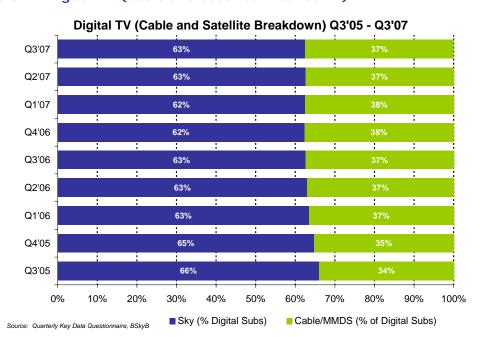


Figure 5.3.1 - Digital TV (Cable and Satellite Breakdown)

## 6 Emerging Trends: IPTV

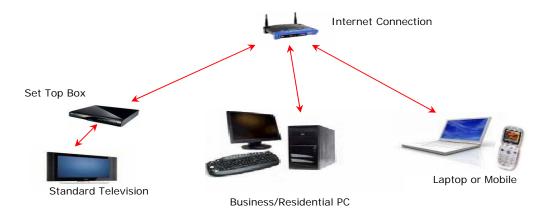
The Emerging Trends series in the Quarterly Qeport aims to provide information on innovations and emerging technologies within the electronic communication sector. This quarter's Emerging Trends looks at IPTV, that is the use of Internet Protocols to deliver audiovisual programming content over high-speed broadband networks.

#### 6.1 IPTV

In the last decade revenues from consumer fixed telephony services have been steadily declining; this has been offset to some extent by an increase in broadband access revenues. <sup>49</sup> This fall in voice revenues has prompted the telecommunications industry to look at other means of generating revenue. In an increasingly competitive market, operators have also recognised the attraction of converged multimedia to the consumer, and as a result are responding to the consumer's needs by offering triple and quadruple play that is bundled services which provide combinations of broadband internet, telephony, mobile and television all on one bill.

### 6.2 What is IPTV?

IPTV (Internet Protocol television) is the delivery of programming by video stream encoded as a series of IP packets. IPTV can be free or fee-based and can deliver either live TV or stored video. It can be bundled with other IP services, including VoIP and high-speed Internet access. In traditional television delivery, all programming is broadcast concurrently. The available programme signals flow downstream and the viewer selects which programme they wish to view by changing the channel. In contrast, IPTV sends only one programme at a time with the content remaining on the service provider's network and only the programme the customer selects is then sent to the home. When a viewer changes the channel, a new stream is transmitted from the provider's server directly to the viewer. With increased internet speeds, advances in technology, mass penetration of broadband connections, and the decrease in connection costs, IPTV can deliver live and on-demand digital television and video services via settop boxes and other devices to television sets or other devices such as PCs in both standard and high definition formats at a quality that is indistinguishable from broadcast TV or a DVD.



# 6.3 Benefits and Limitations of IPTV Benefits

### More attractive Pricing

Telecommunication companies entering the television market are generally competing directly with cable or satellite television providers for customers and subscription revenues. Therefore their offerings are similar in nature, encompassing a combination of live television channels and premium programming with video-on-demand services. In order to differentiate themselves from the existing platforms many of the new entrants are attempting to compete on price, programming and performance, typically bundling video, voice and data services at attractive price points.

### Interactivity

An IP-based platform enables the televisual experience to become more interactive and personalised. IPTV promises a level of interactivity that other TV technologies may find difficult to match. A service provider may include an interactive programme guide that enables a viewer to search for content by title or an actor's name, access high definition (HD) channels, fantasy sports and gaming, banking, karaoke, the ability to channel surf while continuing to watch a programme (picture-in-picture functionality). Viewers may also be able to view a favourite footballer's statistics while watching a game, the user may even have the ability to specify multiple camera angles for live concerts or sporting events. In addition operators can use click-through product placement and advertisement personalisation to generate additional advertising revenues.

### • Flexible viewing by means of Video on demand (VoD)

VoD systems allow users to select and watch video content over a network as part of an interactive television system. VOD systems either content to be streamed, allowing viewing in real time, or to be downloaded in which the programme is sent and stored in its entirety to a set-top box before viewing starts. The majority of cable

and telco-based VOD systems use the streaming approach, whereby a user buys or selects a movie or television programme and it begins to play on the television set almost instantaneously.

### Ability to use multiple converged services simultaneously

Another benefit of an IP-based platform is the opportunity for integration and convergence. The level of interoperability, whereby consumers will benefit from increased control to watch what they want, when they want, on the device of their choice is appealing. Effectively the user could record a favourite programme and watch it on a laptop, or while watching TV at home could simultaneously use instant messaging or accept a video call.

### Limitations

### Limits on Bandwidth

Bandwidth capacity sets the upper limit on the number of television services that can be streamed to a PC or a user's home network at any given time. With current consumer trends towards viewing high definition programming, IPTV may experience short-term bandwidth difficulties before it can effectively compete in the provision of high-definition content, which may require capacity of up to 8 - 12MB per programme when compressed using MPEG4 digital compression technology and up to twice that bandwidth when MPEG2 technology is used.

### Advertising challenges

The appeal of niche or targeted content by viewers presents a challenge as well as an opportunity for advertisers to explore in the expanding space occupied by IPTV. The most appropriate way of aggregating and offering such content to the viewer is a rapidly developing challenge for IPTV providers.

### Content Creation and Content Management

IPTV may challenge the traditional model of more centralised content management by broadcasters, as the means for sharing of content among users (for example via social networking sites such as Facebook and YouTube) become more diverse. The true potential and level of interactivity that could be achieved with IPTV has yet to be reached and therefore further blurring of the boundaries with other types of electronic communications services, such as gaming, can be expected.

#### 6.4 IPTV in Ireland

Technology is driving businesses and consumers in a totally new direction where the consumption of media is concerned. Viewers are being enticed by streams of mediarich data available to them with IPTV. IPTV penetation and usage is still relatively

limited in Ireland, but that may change with the advent of more and more companies specialising in providing IPTV and with the provision of higher broadband speeds with the development of Next Generation Networks (NGNs) and associated technology. Operators like Eircom, Magnet and Smart among others already offer or are trialling IPTV as part of a bundled service. Magnet has so far deployed fibre-to-the-home (FTTH) in 22 housing developments to date and in a recent deal with Sky has added 10 new channels to their line-up of TV channels available through their triple play service of voice, internet and TV.<sup>50</sup> Eircom plans a trial of IPTV in the Temple Bar area with a roll-out to approximately four broadband exchanges in 2008 and is currently finalising agreements with content partners.<sup>51</sup> Most recently, Smart Telecom launched the first phase of its new service which features over 100 channels and is initially being made available to existing customers with a further roll out to new customers in 2008<sup>52</sup>.

### 6.5 The Future

According to Ovum, the number of IPTV subscribers worldwide will grow from 4.3 million in 2005 to 55 million in 2011. This would suggest that there is an appetite for broadband-delivered video. Consumers want convenience and the means by which their television services are delivered be they cable, satellite, fibre or copper may become irrelevant. According to Lovelace Consulting, consumer surveys have consistently shown that the main factor that will influence a consumer to switch their television provider is price<sup>53</sup>. With both telcos and cable companies offering triple play, it is likely that consumers will need only a single data pipe streaming information into their home. Enhanced competition between telcos, traditional TV providers and new entrants should stimulate more innovation in the delivery of and bundling of audiovisual content to consumers.

<sup>50</sup> http://www.magnet.ie/news/03-09-2007.shtml

<sup>51</sup> http://www.siliconrepublic.com/news/news.nv?storyid=single9547

<sup>52</sup> http://www.smarttelecom.ie/smartvision\_tvchannels.html

<sup>53</sup> IPTV Guide – Delivering audio and video over broadband. Lovelace Consulting 2006.