

Information Notice

Quarterly Key Data

Explanatory Memorandum

Document No:	05/44
Date:	22 June 2005

Contents

1	Ex	ecutive Summary	2
2	Pri	imary Data	3
3	Se	econdary data	6
	3.1 3.2	PRICING DATA COMPARATIVE DATA	.6 .6
		ossary	
5	PP	P Conversion Rates data	0

1 Executive Summary

Following the publication of an annual market review in November 1999, ComReg's predecessor- the ODTR- published its first Quarterly Review on 22nd March 2000.

Since that date, ComReg has continued to collect primary statistical data from authorised operators on a quarterly basis, in order to both understand current trends in the Irish communications market and inform external users.

Telecommunications networks and services can be offered in Ireland without the need for a preceding licence or authorisation. Therefore, not all providers of networks and services operating in the Irish market may have provided data for this report. However the report does aim to represent at least 95% of the total market.

ComReg would like to thank operators who have submitted data to ComReg for this report and hopes to see their continued co-operation in the future. ComReg welcomes any comments or feedback on any aspect of the quarterly review process, and would be particularly interested in suggestions that may improve the accuracy of information received or that would ease the burden for operators in collecting the data.

This memo provides data definitions for all statistics contained in the Quarterly Report as well as a glossary of technical terms used in the report. Section 1.1 Primary Data is based on data supplied to ComReg by authorised operators while section 2.1 Secondary data uses data supplied to ComReg by additional sources such as the European Commission and user surveys commissioned by ComReg.

All data is quarterly unless otherwise stated.

2 Primary Data

Section	Indicator	Definition						
1.1	Overall electronic communications revenues	Total revenue generated by the provision of retail and wholesale fixed and mobile voice and data services as well as retail cable and MMDS broadcasting services						
1.2	Overall call volumes	Total number of retail minutes generated by means of fixed and mobile voice calls						
1.3	Number of authorisations	Number of new authorisations issued by ComReg to fixed mobile and broadcasting operators						
2.1	Total fixed line revenue	Total revenue generated by the direct ¹ and indirect ² provision of retail and wholesale fixed voice and data services. Includes interconnection, retail narrowband services, leased line & managed services, other (including web-hosting, co-location services, directory publication & other services						
2.1.2	OAO fixed line market share	The proportion of overall fixed line revenues received by operators other than eircom						
2.2.1	Fixed access lines	Total number of direct ³ and indirect ⁴ fixed telephone lines, i.e. lines connecting the subscriber's terminal equipment to the public switched network and which have a dedicated port in the telephone exchange equipment.						
2.2.2	Indirect access and calls	Total number of indirect ⁵ fixed telephone lines provided to customers by means of carrier pre-select and/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.						
		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. Note: this indicator counts the Calling Line ID (CLI) rather than the physical line or subscriber						
2.3.1	Fixed voice call volumes	Total number of retail minutes generated by means of fixed voice calls both direct ⁶ and indirect ⁷						

⁵ ibid.

¹ Provided to customer over their supplier's own network infrastructure

² Provided to customer by means of their supplier's wholesale access to another operator's network infrastructure

³ See note 1 above

⁴ See note 2 above

⁶ Provided to customer over their supplier's own network infrastructure

⁷ Provided to customer by means of their supplier's wholesale access to another operator's network infrastructure

Section	Indicator	Definition
2.6.1	Provision of DSL access	Proportions of Digital Subscriber lines (DSL) supplied to customers by means of direct supply by eircom and wholesale supply by other operators by means of fully unbundled lines or bitstream. ⁸ DSL (Digital Subscriber Line) is a technology for bringing high-bandwidth or broadband information to homes and small businesses over ordinary copper telephone lines.
2.7.2	Addressable market: broadband over copper	Total potential broadband market based on customer take-up of retail narrowband and broadband lines delivered over copper networks.
2.8.1	Broadband and narrowband internet connection growth	Total number of narrowband (FRIACO and ISDN) and broadband lines (DSL) delivered over copper. FRIACO is a flat-rate narrowband or dial-up Internet service whereby the customer pays a flat monthly fee for a defined number of hours of Internet access. ISDN (Integrated Services Digital Network) Basic rate access (BRA) is a set of standards for digital transmission over ordinary telephone copper wire.
2.10.1	Broadband subscribers by platform	Total number of broadband subscribers by means of DSL, cable modem and/or fixed wireless access. Cable modems allow internet broadband access by means of cable TV. Fixed wireless access allows internet broadband access by means of wireless devices or systems in fixed locations such as homes and offices.
2.10.3	DSL market share	Percentage share both eircom and other authorised operators (OAOs) have of the total number of DSL subscribers in Ireland.
2.12.1	Bi-monthly consumer spend on fixed telecoms	Percentage of consumers who spend less than $\in 65$, between $\notin 66$ and $\notin 125$, between $\notin 126$ and $\notin 250$ and/or more than $\notin 250$ on fixed line telecoms services every 2 months. This is based on survey data commissioned by ComReg and carried out by Amarach Consulting.
2.13.1	Fixed data access lines	Total number of retail and wholesale leased lines supplied in the Irish market. Leased lines are Internet broadband connections by means of dedicated capacity provided over metallic copper pairs, including tail ends or partial circuits.
3.1.1	Irish mobile penetration rate	Total number of mobile phone subscribers (GSM only) in Ireland as measured by the total number of active SIM cards divided by the total population.
3.1.2	European mobile penetration rates	Total number of mobile phone subscribers (GSM only) in the EU-15 as measured by the total number of active SIM cards divided by the total population.
3.1.3	Number of subscribers (pre-paid/post paid)	Percentages of total number of subscribers using pre- paid and post-paid packages.
3.1.4	Number of subscribers (pre-paid/post paid)	Percentages of total number of subscribers to each of the mobile networks, using pre-paid and post-paid

⁸ Bitstream access refers to the situation where the incumbent installs a high-speed access link to the customer premises and then makes this access link available to third parties, to enable them to provide high-speed services to customers. Bitstream depends in part on the PSTN and may include other networks such as the ATM network, and bitstream access is a wholesale product that consists of the provision of transmission capacity in such a way as to allow new entrants to offer their own, value-added services to their clients. The incumbent may also provide transmission services to its competitor, to carry traffic to a 'higher' level in the network hierarchy where new entrants may already have a broadband point of presence

Section	Indicator	Definition
	by operator	packages
3.2.1	Market share – number of subscribers	Each mobile operator's share of the total number of mobile subscribers, expressed as a percentage.
3.2.2	Market share – revenue	Each mobile operator's share of total mobile revenues (retail and wholesale), expressed as a percentage
3.3.1	Revenues – roaming and non-roaming	Percentages of total retail mobile revenues contributed by roaming and non-roaming revenues. International roaming revenues include revenues from foreign roamers making calls on the operator's own network in Ireland, as well as any revenues gained from own network
3.4.1	SMS and Call minutes	Total volumes of mobile voice (calls) and data (SMS) minutes made over all mobile networks.
3.4.3	Number of call minutes/service	Percentages of total retail mobile voice traffic (calls) broken down by on-net (calls to same networks), off- net (calls from one network to another), fixed (calls from a mobile network to a fixed line phone), international (calls from a mobile phone to an international number) and roaming (revenues generated by mobile calls roaming on a foreign mobile network)
4.1.1	Take-up of broadcasting services	Percentages of TV households in Ireland broken down by the platforms used to deliver TV services – satellite, digital cable, analogue cable and free-to-view.
4.1.2	Pay TV market (analogue and digital)	Percentages of total pay TV households broken down by analogue and Digital pay TV platforms.

3 Secondary data

3.1 Pricing data

Sections 1.4, 2.4, 2.5, 2.11 and 3.5 contain comparative pricing data and are supplied by Teligen in its T-Basket product.

An OECD-approved methodology was adopted by T-Basket to compare operators' tariffs. This format follows a basic three-step process consisting of: (i) the construction of one or more baskets of telephone/leased line services; (ii) the pricing of those baskets; and (iii) the conversion of the individual currencies to standard units (e.g. Euros or Purchasing Power Parities (PPPs)). Section 2.3 provides more detail on the base rates used to calculate PPPs in the Teligen tariff baskets.

3.2 Comparative data

Figure 2.3.2 Incumbent share of retail fixed call markets

This chart displays the incumbent operator's market share of total retail revenues for all fixed voice calls and is sourced from the European Commission's 10th Implementation Report.⁹

Figure 2.9.1 PC and Internet penetration rate

This chart displays penetration or take-up of both PCs and the Internet in households in Ireland from 1998 to 2004. The data is based on the Central Statistics Office's annual household survey carried out under the European Commission's eEurope 2005 Action Plan.¹⁰

Figure 2.10.2 Broadband subscribers per 100 inhabitants by technology

This chart displays the broadband penetration rate in each EU country. The penetration rate is calculated by dividing the total number of subscribers which has taken up broadband by means of cable modem, DSL or other technologies such as satellite broadband or fixed wireless access. This figure is then divided by the total population and multiplied by 100. The data is provided by the OECD.¹¹.

Figure 3.1.5 – Pre-paid and post paid subscribers in the EU

This chart shows the percentage of total mobile subscribers using pre-paid and post-paid packages in a number of EU countries. The data is provided by the International Regulators' Group (IRG).

Figure 3.4.2 Number of SMS messages per subscriber sent in the EU

This chart ranks a number of EU countries by the average number of SMS messages sent per subscriber per month. The data is provided by the International Regulators' Group (IRG).

Figure 3.6.1 Consumer spend

This chart breaks down the average consumer's mobile spend per month into several brackets from less than \in 25 up to spend above \in 200, and is based on survey data commissioned by ComReg from Amarach Consulting. Every quarter Amarach Consulting interviews over 1,000 adults in their homes about their usage of and access to information and communications technologies (ICTs).

Figure 3.6.2 Data revenues as a % of total revenues

⁹

http://europa.eu.int/information_society/topics/ecomm/all_about/implementation_enforcement/annualreports/10threport/inde x_en.htm

¹⁰ http://www.cso.ie/releasespublications/documents/industry/2004/ictireland2004.pdf

¹¹ <u>http://www.oecd.org/document/60/0,2340,en_2649_34225_2496764_1_1_1_1,00.html</u>

This chart ranks a number of EU countries based on the percentage of total mobile retail revenues contributed by data services such as SMS and MMS. Data is supplied by the Yankee Group based on analysis of operator data in each country which is then averaged across all operators in each country.

4 Glossary

Access Line	A circuit that connects a subscriber to a switching centre.
ADSL	Asymmetric Digital Subscriber Line: Utilises a technology that transforms a normal telephone line into a high-speed digital line that enables access to telephony services and the Internet at the same time. ADSL provides always-on access to Internet or TV and Video on-demand services at speeds that are 10 to 40 times faster than a standard 56k modem. An ADSL line has a higher downstream speed (into the end user) than upstream speed (away from the end user).
Analogue	The direct representation of a waveform, as opposed to digital which is a coded representation. An analogue signal is one that varies continuously (eg. Sound waves). Analog signals vary along two parameters, amplitude (strength) and frequency (tone). The unit of measurement is the Hertz, or cycle per second.
АТМ	Asynchronous Transfer Mode - the internationally agreed basis for broadband ISDN. A technology that enables all types of information (data, voice and video in any combination) to be transported by a single network infrastructure.
Bandwidth	The physical characteristic of a telecommunications system that indicates the speed at which information can be transferred. In analogue systems, it is measured in cycles per second (Hertz) and in digital systems in binary bits per second. (Bit/s).
Bits per second	Basic unit of measurement for serial data transmission capacity; abbreviated as K bps, or kiobit/s for thousands of bits per second; M bps or megabit/s for millions of bits per second; G bps, or gigabit/s for billions of bits per second; T bps or terabit/s or trillions of bits per second.
Broadband	A service or connection allowing a considerable amount of information to be conveyed, such as television pictures. Generally defined as a bandwidth > 2Mbit/s Broadband Integrated Services Digital Network (B-ISDN). The capability to integrate any type of communications signals (voice, data, image or multimedia) and carry them over a single broadband channel of 150-mbps and above, 4k (B-ISDN) regardless of their content.
Calling Line Identity (CLI)	A facility that enables identification of the number from which a call is being made.
Carrier Pre-selection (CPS)	The facility offered to customers which allows them to opt for certain defined classes of call to be carried by an operator selected in advance (and having a contract with the customer), without having to dial a routing prefix or follow any other different procedure to invoke such routing.
Dial-up	Connections made to a data network using the switched network to provide a voiceband or data bearer.
Digital	The coded representation of a waveform by, for example, binary digits in the form of pulses of light, as opposed to analogue which is the direct representation of a waveform.
Digital Subscriber Line (DSL)	A family of technologies generically referred to as DSL or xDSL, which are capable of transforming a normal telephone line into a high-speed digital line. These include ADSL (Asymmetric DSL), SDSL (Symmetric DSL), HDSL (High data rate DSL) and VDSL (Very high data rate DSL). DSL enabled lines are capable of supporting services such as fast Internet access and video or TV on-demand.

1	
Direct Access	The situation where a customer is directly connected to a telecommunications operator by a wire, fibre-optic or radio link to connect that customer to the public telecommunication network.
Directory Enquiry Service (DQ)	Directory information service which is operator assisted and involves the operator looking up entries on a database.
Fibre Optic Cable	A transmission medium that uses glass or plastic fibres rather than copper wire to transport data or voice signals. The signal is imposed on the fibres via pulses (modulation) of light from a laser or a light- emitting diode (LED). Because of its high bandwidth and lack of susceptibility of interference, fibre-optic cable is used in long-haul or noisy applications.
Fixed telephone Services	Means the provision to end-users at fixed locations of a service for the originating and receiving of national and international calls, including voice telephony services and may include, in addition, access to emergency 112 services, the provision of operator assistance, directory services, provision of public pay telephones, provision of service under special terms or provision of special facilities for customers with disabilities or with special social needs but does not include value added services provided over the public telephone system.
Flat Rate Internet Access (FRIACO)	The provision of a Flat Rate Internet Access Call Origination via a wholesale un-metered Internet access product.
Fixed Wireless Access (FWA)	A system that connects subscribers to the public switched telephone network (PSTN) using radio signals as a substitute for copper wires for all or apart of the connection between the subscriber and the switch.
Global System for Mobile Communications (GSM)	A second generation digital mobile technology. Initially developed for operation in the 900MHz band and subsequently modified for the 850, 1800 and 1900MHz bands. GSM originally stood for Groupe Speciale Mobile, the CEPT committee which began the GSM standardisation process.
ICT	Information & Communications Technologies
Independent Service Provider (ISP)	Entities which provide telecommunications services over fixed or mobile networks, or services with a telecommunication service component, to the public at large but do not own or operate telecommunications networks. Some independent service providers may not use telecommunication networks e.g. they may be publishers of printed directories.
Indirect Access	Where a customer's call is routed and billed through operator A's network even though the call originated from the network of operator B. It is the generic term for both easy access and equal access.
Integrated Services Digital Network (ISDN)	A network based on the existing digital PSTN which provides digital links to customers and end to end digital connectivity between them. ISDN2 provides a maximum bandwidth of 128kbit/s.

Interconnection services	Services provided by one telecommunications organisation to another for the purpose of the conveyance of messages and information between the two systems and including any ancillary services necessary for the provision and maintenance of such services.
Internet protocol (IP)	Packet data protocol used for routing and carriage of messages across the internet.
Internet telephony	A specific type of VoIP service that uses the public Internet to carry the IP traffic (also referred to as Voice over the Internet).
Leased line	A leased line is a telephone line that has been leased for private use. In some contexts, it's called a <i>dedicated</i> line. A leased line is usually contrasted with a <i>switched line</i> or <i>dial-up line</i> .
Local Loop	The access network connection between a customer's premises and the local exchange. This usually takes the form of a pair of copper wires.
Local Loop unbundling (LLU)	LLU was mandated by the EU in December 2000. It requires those operators designated as having significant market power) to make their local networks (i.e. the telephone lines that run from a customer's premises to the local telephone exchange) available to other telecommunications companies.
Mobile Number Portability (MNP)	The facility which allows mobile subscribers to retain their mobile number when moving between mobile networks e.g. a customer with a 085, 086, 087 mobile number can be an active subscriber on the network of their choice with their current number.
Modem	A device which converts digital signals from a data-transmitting terminal into modulated analogue signals which can be carried by a public telephone network.
Narrowband	A service or connection allowing only a limited amount of information to be conveyed, such as for telephony. This compares with broadband which allows a considerable amount of information to be conveyed.
Originating network	The network to which a caller who makes a call is directly connected.
Other Authorised Operators (OAOs)	Companies, other than eircom, which operate telecommunications systems.
Premium rate services (PRS)	Services, including recorded information and live conversation, run by independent service providers. All calls to these companies are charged at a higher rate than ordinary calls to cover the companies' costs in providing the content of the call and the operator's cost for the special network facilities needed.
Private circuits	Point-to-point circuits for customers exclusive use covering speech, data or image communications.
Public switched telephone network (PSTN)	The telecommunications networks of the major operators, on which calls can be made to all customers of all PSTNs.
Public telecommunications network	A telecommunications network used, in whole or in part, for the provision of publicly available telecommunications services.
Resellers	Service Providers who do not have their own network.
Roaming	A service unique to GSM which enables a subscriber to make and receive calls when outside the service area of his home network e.g.

	when travelling abroad					
Spectrum	The range of wavelengths used, for example, for broadcasting radio, terrestrial television and satellite television. Usable wavelength ranges from about 100 KHz to about 400 GHz although there are as yet no broadcasts above about 12 Ghz.					
Subscriber Identity Module (SIM)	A smart card containing the telephone number of the subscribe encoded network identification details, the PIN and other user dat such as the phone book. A user's SIM card can be moved from phon to phone as it contains all the key information required to activate the phone.					
Switch	Relates to a telecommunications network comprising at least on exchange and capable of routing signals and messages from one lin to all other lines comprised in the network.					
Telecommunications	Conveyance of speech, music and other sounds, visual images of signals by electric, magnetic, electro-magnetic, electro-chemical of electro-mechanical means.					
Third generation mobile systems (3G)	A European 3G mobile communications system provides an enhance range of multimedia services (e.g. high speed Internet access).					
Transit	A transit service is a conveyance service provided by a networ between two points of interconnection. It is, therefore, a service that links two networks that are not in themselves interconnected.					
Trunk network	That part of a telecommunications network which provide connections between.					
Voice over Internet protocol (VoIP)	The generic name for the transport of voice traffic using Interne Protocol (IP) technology. The VoIP traffic can be carried on a privat managed network or the public Internet (see Internet telephony) or combination of both. Some organisations use the term 'IP telephony interchangeably with 'VoIP'.					
Voice telephony service	A service available to the public for the commercial provision of direct transport of real-time speech via the public switched network of networks such that any user can use equipment connected to network termination point at a fixed location to communicate wit another user of equipment connected to another termination point.					
Virtual private network (VPN)	These are used by a company or private group to make inter-sit connections either for telephone speech or data as if there wer dedicated leased lines between these sites. The equipment used located within the public telecommunications operators? premises an forms an integral part of the public network but is software partitioned to allow for a genuinely private network					

5 PPP Conversion Rates data

Exchange rates used:		2005	VAT	Spare lists	2005	VAT	Population	Index	GDP				
Related to:	US\$	US\$ PPP		US\$	US\$ PPP	%	1000's		Millions	Conversion from	FT format		CPL's
Australia	0.777799	0.700719	10	0.777798519	0.700719387	10	17529	1	401,360	Australia	1.28568	0.777799	111
Austria	1.295605	1.061972	20	1.295605307	1.061971563	20	7884	2	2,035,606	Austria	0.77184	1.295605	122
Belgium	1.295605	1.097971	21	1.295605307	1.097970599	21	9998	3	7,035,470	Belgium	0.77184	1.295605	118
Canada	0.800512	0.769723	15	0.800512328	0.769723392	15	27367	4	681,427	Canada	1.2492	0.800512	104
Czech Rep.	0.042952	0.067113	19	0.042952374	0.067113085	19		5		Czech Rep.	23.2816	0.042952	64
Denmark	0.17404	0.112284	25	0.174040168	0.11228398	25		6	859,771	Denmark	5.7458	0.17404	155
Finland	1.295605	0.938844	22	1.295605307	0.938844425	22	5042	7	475,608	Finland	0.77184	1.295605	138
France	1.295605	1.053338	19.6	1.295605307	1.053337648	19.6	57372	8	6,987,221	France	0.77184	1.295605	123
Germany	1.295605	1.061972	16	1.295605307	1.061971563	16	80569	9	2,794,200	Germany	0.77184	1.295605	122
Greece	1.295605	1.308692	18	1.295605307	1.308692229	18	10300	10	14,846,938	Greece	0.77184	1.295605	99
Hungary	0.005171	0.007284	25	0.005171433	0.007283708	25		11		Hungary	193.37	0.005171	71
lceland	0.015595	0.009014	24.5	0.015594542	0.009014186	24.5	260	12	382,255	lceland		0.015595	173
Ireland	1.295605	0.906018	21	1.295605307	0.906017697	21	3548	13	28,620	Ireland	0.77184	1.295605	143
Italy	1.295605	1.136496	20	1.295605307	1.136495883	20	56777	14	1,507,190,000	Italy	0.77184	1.295605	114
Japan	0.009589	0.006753	5	0.009589107	0.006752892	5	124336	15	64,933,000	Japan	104.285	0.009589	142
Korea	0.001	0.001137	10	0.0010003	0.001136705	10	43663	16	169,701,000	Korea	999.7	0.001	88
Luxembourg	1.295605	1.088744	15	1.295605307	1.088743955	15	390	17	300,000	Luxembourg	0.77184	1.295605	119
Mexico	0.091027	0.126426	15	0.091026598	0.126425831	15		18			10.9755	0.091112	69
Netherlands	1.295605	1.070748	19	1.295605307	1.070748187	19	15178	19		Netherlands	0.77184	1.295605	121
New Zealand	0.731598	0.659098	12.5	0.731598469	0.65909772	12.5	3414	20		New Zealand	1.36687	0.731598	111
Norway		0.103056	25	0.159736754	0.10305597	25		21				0.159737	155
Poland	0.308528	0.467466	22	0.308527706	0.467466221	22		22		Poland		0.308528	66
Portugal	1.295605	1.455736	19	1.295605307	1.4557363	19		23				1.295605	89
Slovak Rep.	0.033317	0.051258	19		0.051257618	19		24		Slovak Rep.	30.0143	0.033317	65
Spain	1.295605	1.295605	16	1.295605307	1.295605307	16		25			0.77184	1.295605	100
Sweden	0.141251	0.103861	25	0.141250918		25		26		Sweden		0.141251	136
Switzerland	0.840477	0.538768	7.6	0.840477391	0.538767558	7.6	6875	27		Switzerland	1.1898	0.840477	156
Turkey	0.740741	1.058201	18	0.740740741	1.058201058	18		28		Turkey	1.35	0.740741	70
UK	1.901791	1.598144	17.5	1.901791488	1.598144107	17.5	57848	29			0.52582	1.901791	119
USA	1	1	10	1	1	10	255020	30	5,920,200	USA	1	1	100
				Updated 05/05-05		Total	998738		Local currency				
										Exchange rates ta			
	PPP rates updated with latest OECD information as o										5th May 20	05	
	- Comparative Price Levels for March 2005												
	Canada an	d USA both	have respe	ctive 'Purchase Tax	' levels applied	to tariffs							