



Commission for  
**Communications Regulation**

Speech

**"Competition in the Communications Market – The Challenges Ahead" *Presented by Isolde Goggin***

**Dublin Economic Workshop –  
Kenmare, 16 October 2004**

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# ***Competition in the Communications Market – The Challenges Ahead***

**Isolde Goggin**  
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**Dublin Economic Workshop, Kenmare, 16 October 2004.**

## **1 Introduction**

Independent telecommunications regulation in Ireland was introduced with the establishment of the Office of the Director of Telecommunications Regulation (ODTR) in 1996, through the Telecommunications (Miscellaneous provisions) Act. Since then, it has been the subject of one major piece of primary legislation (the Communications Regulation Act 2002) and no fewer than 27 statutory instruments. The primary legislation changed the structure to a three-person regulatory body, the Commission for Communications Regulation (ComReg), which has been in operation since December 2002. The secondary legislation completely changed the economic and legal basis for the regulation of the telecoms sector with effect from 25 July 2003, and introduced regulation of the postal sector in line with EU Directives.

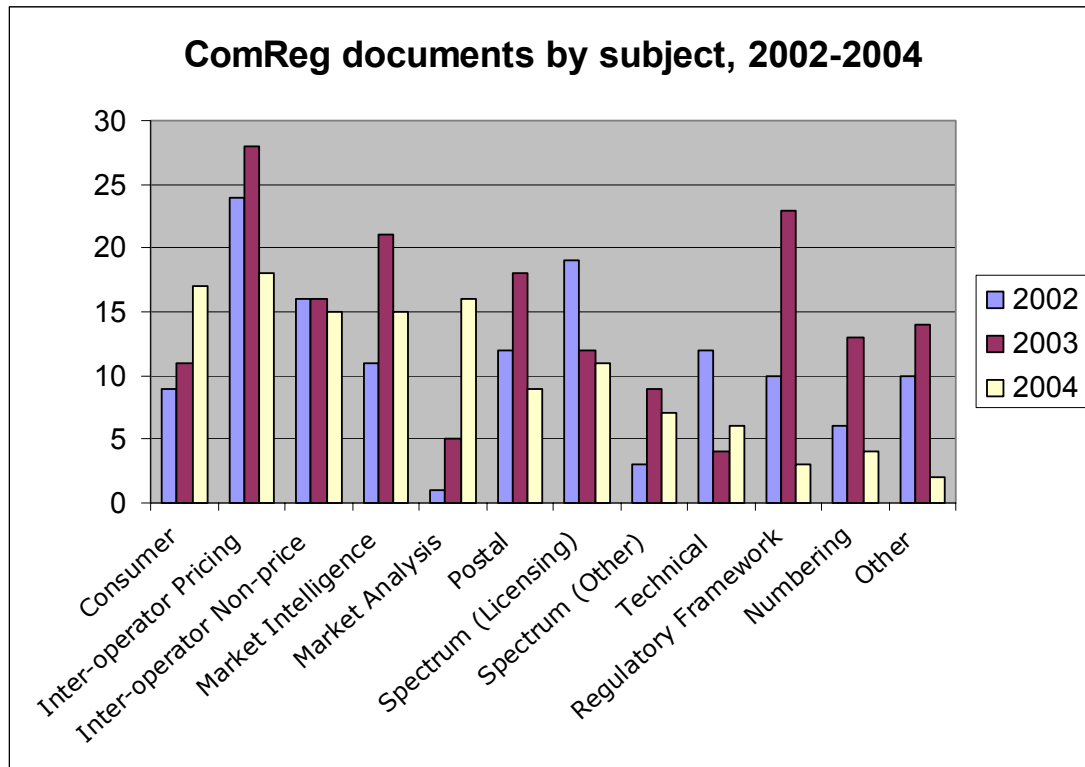
### **1.1 Objectives of Commission**

The objectives of the Commission are set out in Section 12 of the Communications Regulation Act, 2002 (see Annex I). The Commission has a multiplicity of functions and must balance its roles in relation to the protection of consumers and the promotion of competition. It must simultaneously encourage efficient investment, promote innovation and ensure that users derive maximum benefit in terms of choice, price and quality. It must ensure that measures taken by it are proportionate in relation to its objectives. It must have regard to policy statements by the Government or Minister. It must have regard to international developments with regard to electronic communications networks and electronic communications services, associated facilities, postal services, the radio frequency spectrum and numbering. It must take the utmost account of the desirability that the exercise of its functions aimed at achieving the objectives above does not result in discrimination in favour of or against particular types of technology for the transmission of electronic communications services.

### **1.2 The bigger picture: focus on access or focus on entry?**

The objectives and functions of the Commission in relation to spectrum and numbering have received little attention from economic commentators, perhaps because they are detailed and technical. In particular, calls for the amalgamation of sectoral regulators on efficiency/synergy grounds (as, for instance, in the recent report of the Enterprise Strategy Group) generally concentrate on the bits that economists like; such as access pricing and price caps, and ignore the fact that, at least in the case of ComReg, the regulator carries out a very wide range of statutory functions,

including functions under 13 Wireless Telegraphy and Broadcasting Acts and 26 Statutory Instruments under these Acts, and the synergies involved from amalgamating these are not obvious. By way of example, Ofcom, the UK regulator, which is “converged” in the sense that it regulates media content for television and radio as well as electronic communications, has 263 statutory duties, 128 of which were inherited from legacy regulators and 135 of which were created in the legislation which established Ofcom.



The focus on access pricing also tends to lead commentators to treat telecommunications as if it were a utility; as if there were a single “producer”, like electricity, and the only way for rivals to enter was to piggy-back on the incumbent’s network. In fact, the telecommunications sector is highly diverse, and the possibilities for entry vary according to the economic characteristics of the services being supplied and their place in the value chain, the capacity of the link, whether it is a trunk or a terminating segment, etc. For instance, the local loop – the “last mile” that converts the individual customer to the local telephone exchange is generally considered at present to be a natural monopoly, since economies of scale and scope mean that it would not be possible for a new entrant economically to replicate eircom’s copper network. Not all parts of the telecommunications network have the characteristics of a natural monopoly. Mobile networks have developed very rapidly in the recent past, so that in terms of ubiquity at least, they have come to rival the fixed network. Where fixed and mobile markets have been reviewed by NRAs, they have come to the conclusion that mobile networks do not yet offer a service which can be viewed as substitutable for that of fixed networks (in terms of functional characteristics, especially bandwidth, and price). However, this need not always be the case, and it is possible to envisage a future where mobile and other wireless-based platforms compete directly with fixed networks. Ireland could be well positioned for the

development of effectively competitive local access markets in this future scenario, since the fixed line incumbent does not own a mobile operator.

Another important aspect of our work is ensuring two-way access, or interconnection. In a network industry, it is vital that everyone should be able to talk to everyone else. This involves defining the technical points of access, terms and conditions and standards for interconnection. The new regulatory framework has the interesting result of bringing smaller operators more firmly under the scope of regulation, because an analysis of the wholesale market for “termination” (the ability to put calls through to called locations or subscribers) leads to the conclusion that each operator is dominant on its own network, unless it can be shown that Countervailing Buyer Power or some other circumstance exists which acts against the market power derived from its 100% market share.

### **1.3 Cost of Regulation**

ComReg’s income derives from three sources: telecommunications levy, postal levy and wireless telegraphy fees. The telecommunications levy is set by ComReg at 0.2% of relevant turnover (from the provision of electronic communications networks and services within the State). In any year, the levy covers approximately 30-40%% of ComReg’s costs. Wireless telegraphy fees, on the other hand, are the fees payable to the State, after deduction of administrative fees, for the use of the electromagnetic frequency spectrum. There is a huge range of applications, from individual use by radio experimenters, ship and aircraft radios, through to fixed links used by telecommunications network operators and mobile networks. There are about 16,000 licenses in existence and their administration forms a large part of our day to day work. Some uses, such as short-range devices or radio LANS, are exempted from licensing, where this will not lead to interference problems. Obviously the economic value of these spectrum allocations varies considerably, and in some cases the state considers it appropriate to charge a fee which reflects the economic rent for that spectrum. Fees are set by Statutory Instrument, which are drafted by ComReg but must be approved by the Minister and the Minister for Finance. This is an unwieldy mechanism, since there is no overall policy framework for determining how fees should be set for any particular application, and any change in fees (e.g. to reflect inflation) must be implemented by drafting new regulations for approval by both Ministers. The Wireless Telegraphy Act is currently under review by the Department of Communications, Marine and Natural Resources.

### **1.4 Current State of Sector**

The contribution of the Irish telecoms sector to GDP has remained relatively stable over the past two years, at just under 3.5%, compared with a European average of 2.7% in 2003<sup>1</sup>. Revenue within the sector is growing, increasing by 5.5% in 2002 and 3.2% in 2003<sup>2</sup>. While employment levels declined by 21% overall in the past three years, this has levelled off in the past year, with less than a 1% decrease<sup>3</sup>.

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<sup>1</sup> Source: ESRI Quarterly Reviews

<sup>2</sup> Source: ComReg quarterly reports

<sup>3</sup> Source: ComReg quarterly reports

## **Fixed**

There are a total of 1.6 million PSTN lines in Ireland, and about 390,000 ISDN access lines – thus just under 2 million narrowband access lines. There are approximately 100,000 broadband connections – mostly over Digital Subscriber Line (DSL) but some over cable modem or wireless. Competition in the voice telephony market mainly occurs via Carrier Pre-Select, which enables consumers to route calls via the carrier of their choice while continuing to rent the telephone line from the incumbent. Carrier pre-select to Other Authorised Operators (OAOs) accounts for approximately 17% of PSTN accounts, and there has been increased entry in recent months with such operators as UTV and Tele-2. However, eircom retains around an 80% share of revenues. ComReg has recently introduced Wholesale Line Rental, which allows an OAO to present itself as a full service provider to the incumbent, i.e. the customer receives a single bill for both calls and access. To date over 30,000 consumers have taken up this product.

Local loop unbundling allows alternative operators to compete with eircom by providing their own infrastructure, apart from the local loop itself. It thus stimulates product and service innovation, since competitors are not confined to re-selling eircom's product offerings. ComReg recently issued a draft Direction proposing to reduce the price of Unbundled Local Metallic Path to €14.65.

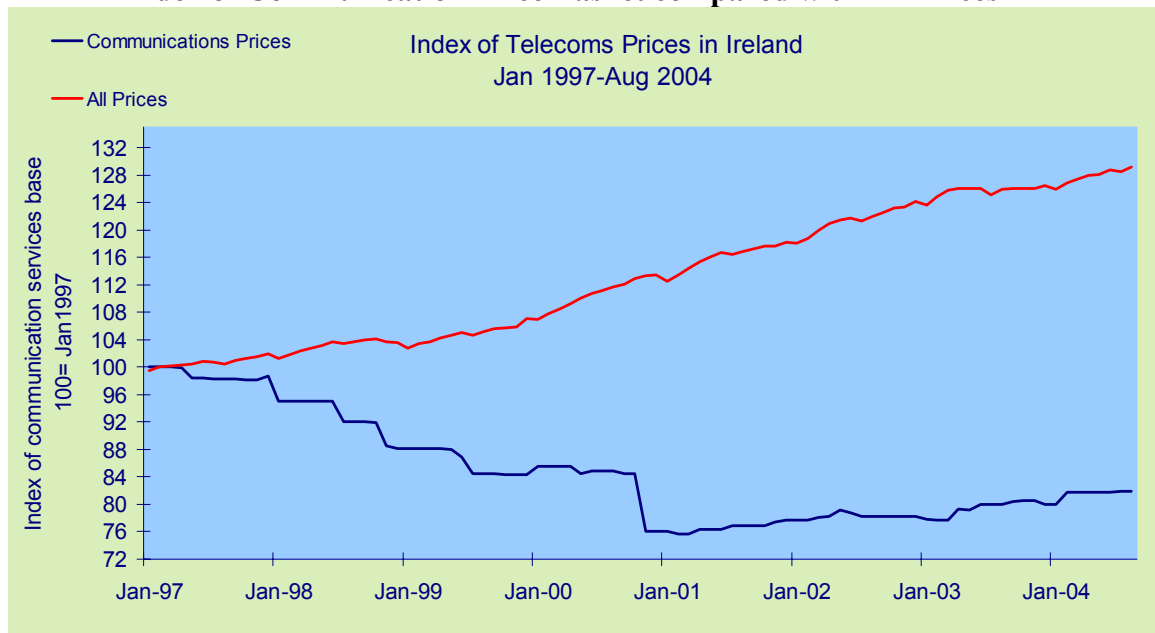
In the business segments of the market, as opposed to residential, competition has been quicker to develop as OAOs have built out networks in metropolitan areas and new technologies such as IP VPNs have come on stream. In a recent consultation on the market reviews for retail fixed narrowband access markets, ComReg found that while eircom's market share in lower-level narrowband (PSTN and basic-rate ISDN) eircom's market share was 99%, while in the higher level narrowband market (primary-rate ISDN) it was 77%. In the markets for leased lines, which are used directly by businesses and as inputs into their own networks by OAOs, ComReg has consulted on the removal of regulation on higher level and international leased lines, on the grounds that they appear to be effectively competitive.

## **Mobile**

There are now 3.5 million mobile subscribers in Ireland, with penetration at 89%. 74% of mobile users subscribe to a pre-paid service, while 26% used the post-paid bill system. 3.4 billion text message were sent in the Irish market in Ireland in the year ending June 04. Number portability introduced in the summer of 2003 allowing customers to change operator and keep their old number. Three 3G licenses have been issued to O2, Vodafone and Hutchinson, with mass market launch expected in late 2004, and early 2005.

## Pricing Trends

### Index of Communication Price Basket compared with All Prices



**Source:** Central Statistics Office, Ireland, September 2004

The above table shows the trend in communications prices in recent years. A recent report from the National Competitiveness Council<sup>4</sup> stated (page 3) that:

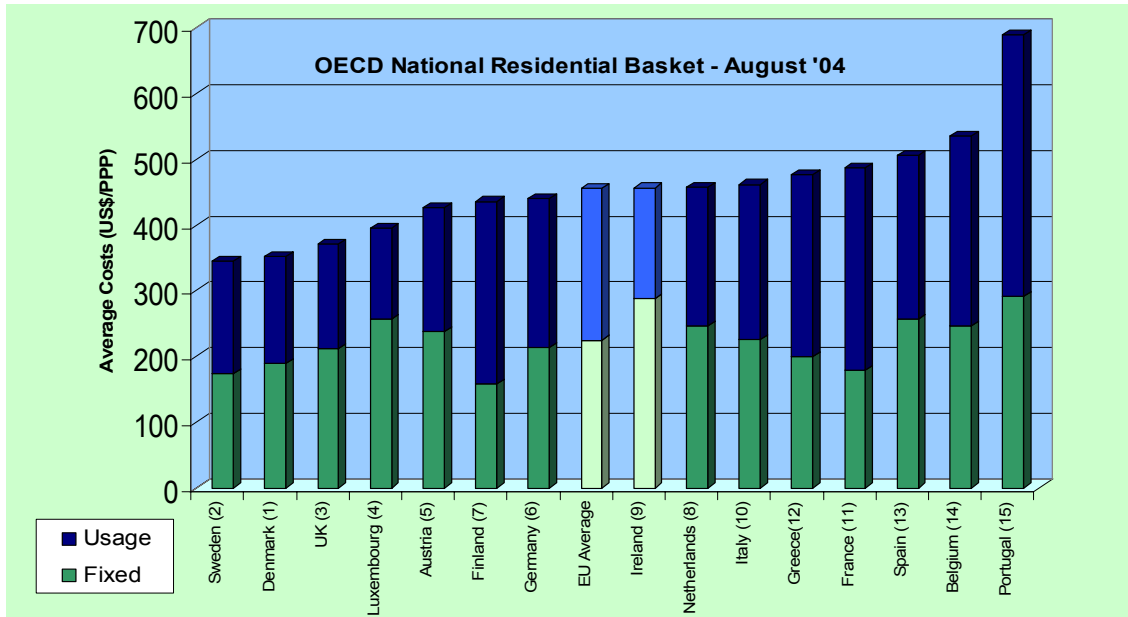
“Over the same period [the five years to January 2004], price increases for state regulated goods and services (such as electricity and telecoms) added a further two per cent to the inflation rate (or nine per cent of the total).”

However, Appendix 3 of the report shows that prices for “communications” fell by 9.2% and made a negative contribution (minus 1%) to inflation over this period. The above index of communications prices indicates that telecoms prices have either fallen or increased at considerably less than the rate of inflation over the past seven years.

The following diagrams benchmark communications prices in Ireland against those in other countries. They show that while prices for the national residential basket are just slightly above the EU average, those for the national business basket are below it (fifth lowest of EU-15 countries):

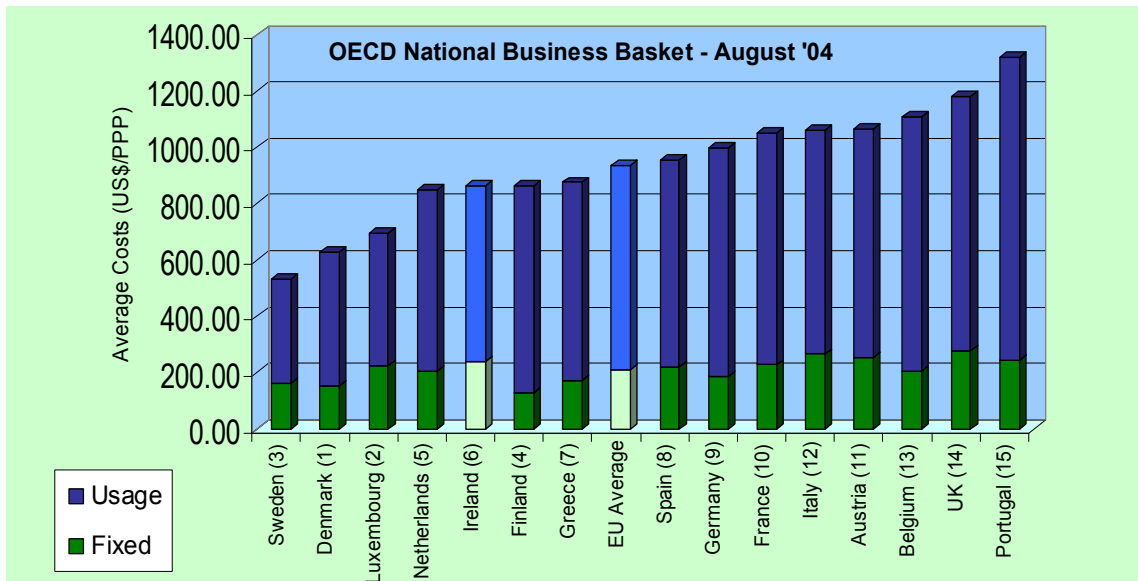
<sup>4</sup> NCC Statement on Prices and Costs 2004, September 2004; available at [www.forfas.ie](http://www.forfas.ie)

### National Fixed Residential Prices in Ireland Compared with other European Nations



Source: Teligen T-Basket data, August 2004, ComReg Quarterly Report Sep 2004

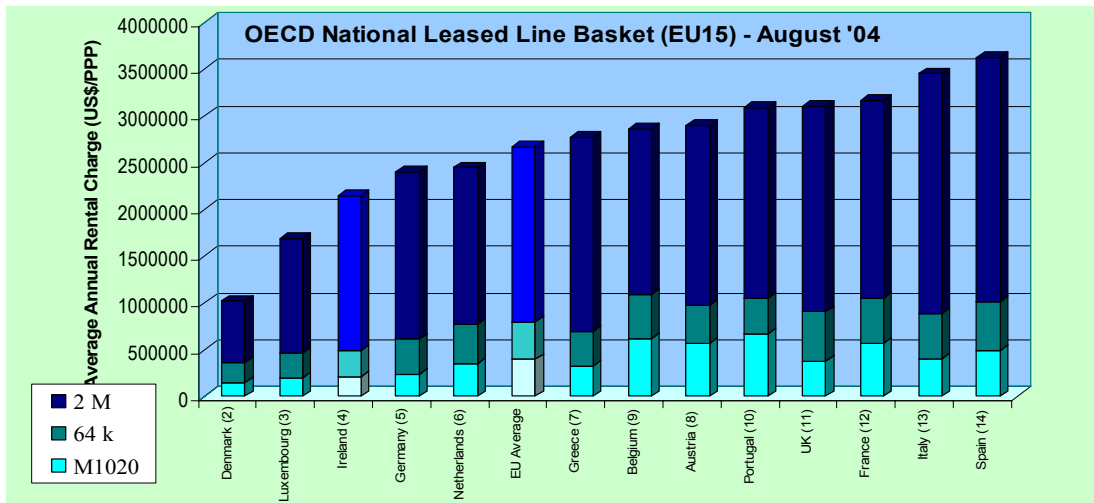
### National Fixed Business Prices in Ireland Compared with other European Nations



Source: Teligen T-Basket data, August 2004, ComReg Quarterly Report Sep 2004

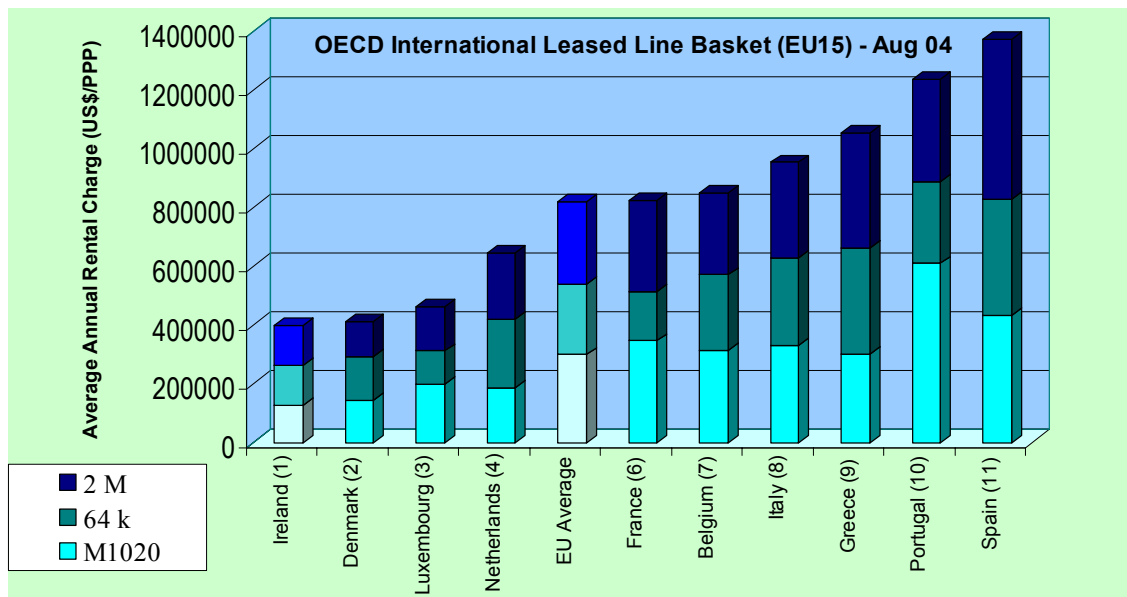
Both national and international leased line prices in Ireland compare favourably with those in other European countries:

## National Leased Line Prices in Ireland Compared with other European Nations



Source: Teligen T-Basket data, August 2004, ComReg Quarterly Report Sep 2004

## International Leased Line Prices in Ireland Compared with other European Nations



Source: Teligen T-Basket data, August 2004, ComReg Quarterly Report Sep 2004

## 2 The New Regulatory Framework

### 2.1 Evolution from “old” framework

The current regulatory framework consists of five Directives, which Member States were required to transpose into national law by 24 July 2003. The “old” regulatory framework had evolved in a rather piecemeal fashion, starting with the Commission’s



publication of a Green Paper<sup>5</sup> which proposed the gradual introduction of competition into what had been protected national markets for equipment, services and infrastructure. This was followed by a set of Commission directives aimed at promoting the liberalisation of the sector, and a set of Council-initiated measures aimed at harmonisation of the laws and institutions of Member States. Firstly, the sector was progressively liberalised, meaning that any special or exclusive rights were repealed. The process began in 1988 with the Terminal Equipment Directive<sup>6</sup>, which was followed by the Services Directive<sup>7</sup>, which required the liberalisation of value-added and data services and the provision of voice services to closed user groups. It also required the separation of operational and regulatory functions, and that licensing procedures should be minimal and subject only to objective, transparent and non-discriminatory criteria or conditions. The Services Directive also required incumbents to offer leased lines to new entrants. The initial “reserved area” (covering voice, telex, paging etc) was progressively eroded: cable infrastructure was removed in 1996<sup>8</sup>, as were mobile and personal communications services<sup>9</sup>. In 1996 the Full Competition Directive<sup>10</sup> was adopted, requiring Member States to ensure that any remaining restrictions on services competition and the deployment of alternative infrastructure were removed by 1 January 1998 (1 December 1998 in Ireland).

Other significant measures included a series of Council Directives and Decisions aimed at ensuring that Member States harmonised their use of radio spectrum to support key policy objectives, the most evident and successful being the case of GSM<sup>11</sup> and latterly UMTS<sup>12</sup> (generically known as 3G). The Directive on Radio and Telecommunications Terminal Equipment (R&TTE)<sup>13</sup> has also played a key role in furthering the objective of an internal market by removing barriers to placing radio and telecommunications terminal equipment on the European market through the creation of a self-certification regime for manufacturers or their representatives.

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<sup>5</sup> COM (87) 290 final

<sup>6</sup> Commission Directive 88/301/EEC of 16 May 1988 on competition in the markets in telecommunications terminal equipment, OJ L 131, 27.5.1988, p.73. The Commission has since issued decisions establishing common technical regulations for terminal equipment interfaces for a variety of services, including 2 Mb/s leased lines, DECT and ISDN.

<sup>7</sup> Council Directive 90/388/EEC of 28 June 1990 on competition in the markets for telecommunications services, OJ L 192, 24.07.1990, p.10.

<sup>8</sup> Commission Directive 95/51/EC of 18 October 1995 amending Directive 90/388/EEC with regard to the abolition of the restrictions on the use of cable television networks for the provision of already liberalised telecommunications services, OJ L 256, 26.10.1995, p. 49.

<sup>9</sup> Commission Directive 96/2/EC of 16 January 1996 amending Directive 90/388/EC with regard to mobile and personal communications, OJ L 20, 26.1.1996, p.59.

<sup>10</sup> Commission Directive 96/19/EC of 13 March 1996 amending Directive 90/388/EEC with regard to the implementation of full competition in telecommunications markets, OJ L 74, 22.3.1996, p.13.

<sup>11</sup> Council Directive 87/372/EEC of 25 June 1987 on the frequency bands to be reserved for the co-ordinated introduction of public pan-European cellular digital land-based mobile communications in the Community, OJ L 196, 17.7.1987, p85.

<sup>12</sup> Decision No 128/1999/EC of the European Parliament and the Council of 14 December 1998 on the co-ordinated introduction of a third-generation mobile and wireless communications system (UMTS) in the Community, OJ L 17, 22.1.1999, p1.

<sup>13</sup> Directive 1999/5/EC of the European Parliament and the Council of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity OJ L 91, 7.4.1999, p10

The liberalisation process was complemented and reinforced by a series of Council harmonisation measures. The “ONP Directive<sup>14</sup>” ensured that access to public telecommunications networks and (liberalised) public telecommunications services would be provided on the basis of non-discriminatory, objective and transparent conditions published in an appropriate manner. It was followed by Directives applying the principles of ONP to leased lines, voice telephony, interconnection and licensing.

The new framework represents an overhaul of the existing regime, in an attempt to position sector-specific regulation explicitly as an interim stage between monopoly and competition (with the implication that, in a competitive market, the need for sector-specific regulation will disappear and competition problems will be dealt with, ex post, by the national Competition Authority). It attempts to reflect the current state of competition, establish equal opportunities for all operators, and take account of developing markets and technological evolution.

## 2.2 The market analysis process

The Framework Directive requires that National Regulatory Authorities should review telecommunications markets and take an explicit decision as to whether further regulation is needed, or whether existing regulation can be removed, based on the state of competition in that market. For the first time, markets are to be defined according to competition law principles, using the concepts of demand- and supply-side substitution. Having said that, however, the Commission has issued a Recommendation on Relevant Markets which lays down a list of 18 pre-defined markets which NRAs must use as the starting point of their analysis, and any deviation from these must be fully justified.

The following table shows the state of play of ComReg’s analysis of the eighteen recommended markets:

### **State of play of ComReg’s Market Analysis Process**

Market No.	Description	National Consultation		Notification to Commission	Final SMP Designation
		Start	Finish		
1	Fixed retail access - residential	✓			
2	Fixed retail access – non-residential	✓			
3	Local and national calls – residential	✓			
4	International calls – residential	✓			
5	Local and national calls – non-residential				

<sup>14</sup> Council Directive 90/387/EEC of 28 June 1990 on the establishment of the internal market for telecommunications services through the implementation of open network provision, OJ L 192, 24.7.1990, p.1 (later amended).

		✓			
6	International calls – non-residential	✓			
7	Minimum set of (retail) leased lines	✓	✓		
8	Fixed wholesale call origination				
9	Fixed wholesale call termination				
10	Fixed wholesale transit				
11	Wholesale unbundled access to local loops	✓	✓	✓	✓
12	Wholesale broadband access	✓	✓	✓	
13	Wholesale terminating segments of leased lines	✓	✓		
14	Wholesale trunk segments of leased lines	✓	✓		
15	Mobile access and call origination	✓	✓		
16	Mobile voice call termination	✓	✓	✓	✓
17	Wholesale national market for international roaming	*			
18	Broadcasting transmission services	✓	✓	✓	✓

\* awaiting action at European level

### **2.3 Consultation and interaction with the Commission: procedural requirements**

The procedure to be followed is that the NRA must carry out the market definition, starting with the eighteen markets as defined in the framework but taking into account national circumstances, and including the definition of the geographic market. It must then analyse the market to determine whether or not it is effectively competitive. The market is judged to be effectively competitive if no operator either individually or collectively has Significant Market Power (SMP) – SMP having been redefined in line with the competition law concept of dominance. While market share is one factor to be taken into account in assessing dominance, other relevant factors such as economies of scale and scope, overall size of the undertaking and control of “essential facility” type infrastructures must be taken into account. The Commission has issued

a set of Guidelines to assist NRAs in assessing SMP<sup>15</sup>. Member States must ensure that the analysis is carried out, where appropriate, in collaboration with the national competition authorities.

Where an NRA has concluded that a market is effectively competitive, it must withdraw existing obligations and must not impose new ones. Where it concludes that a market is not effectively competitive, it can maintain existing obligations and/or impose new ones. The obligations which can be imposed vary according to the market concerned. On a wholesale market, they include obligations to provide access to, and use of, specific network facilities; transparency; non-discrimination; accounting separation; and price control and cost accounting. At the retail level, they may include requirements that the undertaking with SMP does not charge excessive prices, inhibit market entry or restrict competition by setting predatory prices, show undue preference to specific end-users or unreasonably bundle services. National regulatory authorities may apply to such undertakings appropriate retail price cap measures, measures to control individual tariffs, measure to orient tariffs towards costs or prices on comparable markets, “in order to protect end-user interests while promoting effective competition.”

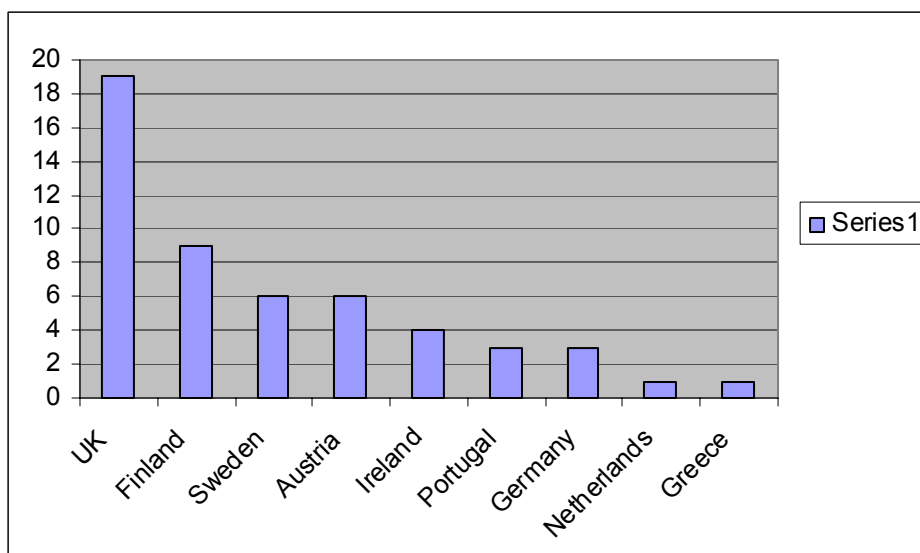
NRAs must carry out a national consultation before imposing any measures which have a significant impact on the relevant market. Where they intend to take a measure which would affect trade between Member States, they must also notify the draft measure to the Commission and other NRAs. The Commission has veto powers over aspects of the decision (notably, the definition of a market which differs from that in the Commission’s recommendation, and the finding of SMP) and can make comments on other aspects, such as remedies. Usually the Commission has one month to make comments, but if it has “serious doubts” about the measure’s compatibility with Community law, it can extend this period for two months before requiring the NRA concerned to withdraw the draft measure. The Commission has required Ficora, the Finnish NRA, to withdraw one draft measure, and has expressed serious doubts in two further cases – one concerning Finland, the other concerning Austria. These cases have not yet been resolved.

Although the Commission does not have a veto on remedies, our experience and that of other NRAs is that they will and do comment on the detail of remedies.

The following table shows the notifications which have reached the stage of “Commission comment”, by country:

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<sup>15</sup> Commission Guidelines on market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services, 2002/C 165/03.



## 2.4 Other aspects of the new framework

Other features of the new regulatory framework are:

- Technological neutrality. The framework does not discriminate between different means of transmission used for electronic communications networks and services: it applies to all fixed, mobile and broadcast networks.
- Forbearance. As outlined above, the NRA is required to make an explicit statement of whether or not the market is effectively competitive – and if it is, it must remove any company-specific regulatory requirements. The criteria for identifying relevant markets, i.e. those which should be subject to ex-ante regulation, include the existence of barriers to entry; whether or not the market will tend towards effective competition over time without regulatory intervention; and the sufficiency of general competition law in resolving competition problems.
- Appeals. Member States are required to ensure that “effective mechanisms” exist at national level for appeals from NRA decisions to a court or other body with appropriate experience which is independent of the parties involved. In Ireland, this has been done through the establishment of an Appeals Panel, in addition to the existing right of judicial review.
- Spectrum. The Commission has established a Radio Spectrum Committee, chaired by the Commission and comprising representatives of national regulators and governments, to assist and advise it on radio spectrum policy issues, such as radio spectrum availability, harmonisation and allocation of radio spectrum, provision of information concerning allocation, availability and use of radio spectrum, methods for granting rights to use spectrum, refarming, relocation, valuation and efficient use of

spectrum as well as protection of human health. The Commission has also established a Radio Spectrum Policy Group, comprising high level governmental experts from each Member State, to give strategic advice to the Commission on spectrum policy issues through formal “Opinions”. ComReg participates in both bodies.

## **2.5 The new framework in practice: implementation issues**

It is clear that the Commission is strongly aware of the need for consistency in decision-making across NRAs, if the concepts of market definition and dominance are not to be diluted. There is also a perception amongst NRAs that the Commission dislikes departures from the recommended list of markets, and will be reluctant to approve notifications which are substantially different (although they have taken a benign attitude to subdivisions of the eighteen markets). For instance, in commenting on ComReg’s notification of its review of the Wholesale Broadband Access market, they reverted to the market as described in their Recommendation. But this is not a particularly well-argued document, and the justifications for the various market definitions arrived at tend to be anecdotal and subjective, rather than strictly economic. In other words, the Commission appear to be applying a more stringent standard to NRAs than they have achieved themselves.

Another feature of the dialogue is that, clearly, it is equally difficult to withdraw or forbear from regulation as to impose it. In one of the Finnish cases, the Commission challenged a decision not to designate any operator as having significant market power in the market for international calls. In the Austrian case, it challenged a decision that Telekom Austria did not have significant market power in the transit market. In both these cases the national regulator had proposed to remove obligations from the incumbent.

There are also difficult technical and economic issues which are not dealt with in the Recommendation on Relevant Markets, but which NRAs are required to grapple with on their own and then “suck it and see” with the Commission. These include the demarcation between trunk and terminating segments of leased lines; the demarcations between call origination, transit and call termination in the wholesale fixed telephony markets; the treatment of self-supply (see, for example, Annex II, which describes ComReg’s notification of its review of the Wholesale Broadband Access market, and the Commission’s response), and the use of arguments concerning countervailing buyer power in the determination of dominance where a party has a large market share. In an ex-post, competition law scenario, these could be dealt with on a case-by-case basis. A decision on market definition in one case would not bind the competition authority in deciding a subsequent case. At present the rules represent an uneasy compromise between a drive towards consistency, if not harmonisation, at European level, and a drive towards a pure competition law system with decisions made at local level and on the specific circumstances of the case.

Of perhaps greater concern, however, is the fact that huge amounts of time and energy are being spent by all parties – by incumbents and competitive entrants as well as NRAs and the Commission – on “micro” level issues and on extensive and time-consuming consultations, both nationally and EU-wide, at a time when technology is

fundamentally changing the telecommunications landscape. The question is, can regulation change fast enough to keep up with the market? It is also likely that the cost of regulation may actually have increased in the short term, due to time delays and the level of effort and resources required to carry out a market review and the increased requirement for interaction with the European Commission.

### **3. Is the new regulatory framework future-proof?**

The new framework is an attempt to create a bridge between the relatively heavy-handed regulation which was viewed as necessary in the past, in order to break open markets and to kick-start competition, and the eventual use of competition law only, applied on an ex-post basis, to solve problems of market power. In this, it does a reasonable job. It has required NRAs to approach their tasks in a more analytical way, to provide justifications for their decisions and to consider regulatory options. It can be argued, however, that it assumes the future will look very like the past, and that the transition to a more competitive environment will involve the gradual erosion of incumbents' market power and the entry and growth of competitors who do much the same as incumbents, only better. There is a pronounced "regulatory lag" in taking decisions, whether these be to impose or to remove regulation – given the time needed to perform a market review, the need for national consultation, notification to the European Commission, possible phase 2 investigation, and the role of national appeals boards, regulation can easily lag up to two years behind market developments.

If the future looks like the past, this need not matter unduly – though it probably penalises incumbents by continuing the application of obligations after they have ceased to be justified. If, however, change in the telecommunications sector is revolutionary rather than evolutionary, we could be regulating to solve problems which have long ceased to have any relevance. Some of the trends which will have a major influence on the pace of change are<sup>16</sup>:

#### **3.1 The Evolution of Voice Markets**

Voice over Internet Protocol (VoIP) is already a reality. Users with a broadband connection download software from Skype and get free calls worldwide to any other VoIP phone worldwide. Thus the price of calls is tending towards zero, not in some remote time horizon but in the foreseeable future. Traditionally, profits from calls have been used to subsidise access (the telephone line rental). Plummeting revenues from voice mean that regulators must allow incumbents to re-balance their charges so as to recover efficient costs from the access network. This does not mean accepting the incumbent's actual charges, so that rebalancing will not necessarily eliminate traditional accounting losses on the incumbent's access network. In Ireland this has been a slow and painful process and has, unfortunately, involved increases in line rental. However, with the final determination of the price for unbundled local loops

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<sup>16</sup> See Ofcom's "Strategic Review of Telecommunications" Phase 1 Consultation Document (available at [www.ofcom.org.uk](http://www.ofcom.org.uk)) for a more complete consideration of these changes.

imminent, ComReg considers that the process is complete and is consulting on whether the line rental should now be subject to a sub-cap.

The development of VoIP while regulators are embroiled in the market reviews has led to a rather navel-gazing mindset where the most important question is whether VoIP is in the same market as traditional voice or not. This is important in the sense that Publicly Available Telephone Services (PATs) are automatically subject to certain obligations under the Universal Service Directive. However, the most important job for regulators is surely to ensure that customers can get whatever services they want, as quickly as possible. In this, the question of numbering is probably more important. Should VoIP services be given numbers from the national numbering scheme at all, or should they continue to rely on IP addresses? If they are given numbers, should these be in a special range dedicated to VoIP, or should they include ordinary (geographic) numbers? ComReg has recently consulted on this issue and we expect to finalise our position in the next few weeks.

Competition between fixed and mobile operators is expected to increase in certain segments, although they have different core characteristics, for instance higher capacity versus mobility. In the present tranche of market reviews, where fixed and mobile markets have been reviewed by NRAs, they have come to the conclusion that mobile networks do not yet offer a service which can be viewed as substitutable for that of fixed networks (in terms of functional characteristics, especially bandwidth, and price). However, this need not always be the case, and it is possible to envisage a future where mobile and other wireless-based platforms compete directly with fixed networks.

### **3.2 Migration to IP/ Next Generation Networks**

The convergence of telecommunications and information technology has been a truism for some time. This is expected to lead to realignment in the industry, and increased convergence between the telecoms and media sectors. The effects of these changes on competition and on consumers will need to be assessed. On the technical front, traditionally, intelligence has resided in the switches, which are under the control of the telecoms operators. Recently, more and more intelligence has migrated into the terminal equipment. This has implications for “next generation regulation”, in that standardisation of interfaces may become more important than access issues. At the same time, voice traffic has stabilised while data traffic has soared. If the volume of traditional circuit-switched traffic falls considerably, the costs of the legacy network may have to be spread over fewer users, leading to increases in costs, although the extent and rate of any such effects are not yet clear.

### **3.3 User Access and Content Delivery**

From the regulator’s point of view (and, particularly, where spectrum is concerned) it is convenient to think of the overall telecommunications sector as a series of discrete markets or services: fixed, mobile, broadcasting, voice, data ... From the point of view of the user, many of these distinctions no longer make sense. User demands are increasingly for access to content and services from any device, fixed or mobile or in-



between – what are called “portable” or “nomadic” services. The demand for bandwidth is ever-increasing, with new applications and greater utilisation of telecoms services. Users will require a seamless service covering all their telecommunications requirements, with a single bill and a single interface to their operator. Many of the debates around this subject focus on digital rights management – how can the rights holder control who has access to their content and how do they charge for it? Security issues are also important, since the criminal fraternity displays an ingenuity worthy of a better cause in thinking up ways of defrauding consumers. Recently, ComReg was forced to require operators either to block calls to certain jurisdictions (mainly in the South Pacific), or refund customers for calls fraudulently made on their behalf, as a result of “autodialler” or “modem hijacking” scams.

### **3.4 Spectrum allocation and assignment**

The electromagnetic frequency spectrum has traditionally been viewed as a scarce resource which belonged to the State. Use is generally only subject to the terms of a licence, or of a specific exemption decision. The allocation of different parts of the spectrum to different applications is based on regulations made under the auspices of the International Telecommunications Union, a specialised agency of the United Nations. Within this overall framework, countries decided what services they would licence and who they would give the licences to. For some time now European administrations have worked together under the auspices of CEPT<sup>17</sup> and now increasingly with the European Commission (see 2.3 on Spectrum above) to harmonise the use of particular frequency bands for specific applications if there is deemed to be a significant economic and/or social benefit in doing so. In Ireland’s case, allocating new licences usually involves ComReg consulting on whether a particular application should be licensed in a particular band, inviting expressions of interest, drafting regulations under the 1926 Wireless Telegraphy Act and sending them to the Department of Communications, Marine and Natural Resources for the approval of their Minister and that of the Minister for Finance. This cumbersome process, which can take up to two years, is not atypical.

Recently, interest in spectrum as an economic resource whose usage should be maximised has developed. This has led some administrations to explore more innovative methods of primary allocation of spectrum (by allowing more flexible use rather than specifying exactly what technologies and applications can be used in a band) and also secondary allocation (by allowing spectrum trading). Thus one focus is on economic methods of increasing the efficiency of spectrum use. On the other hand, technological developments such as Cognitive Radio or Software Defined Radio will mean that more devices can use the same spectrum at the same time without interfering with each other. The debate is tending in two divergent directions – one where economic means are used to get the best possible utilisation out of a scarce resource, the other viewing spectrum scarcity as something which will be eroded by technological innovation.

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<sup>17</sup> European Conference of Postal and Telecommunications Administrations: comprises 46 member countries from Western to Eastern Europe.

### 3.5 Universal service provision

The universal service in telecommunications is defined in the Universal Service Directive<sup>18</sup> as “the provision of a defined minimum set of services to all end-users at an affordable price”. It covers the provision of access to the public telephone network at a fixed location, at an affordable price. The requirement is limited to a single narrowband connection. While generally thought of as a political intervention in the market to protect consumers, the phrase was in fact coined by Theodore Vail, the head of the Bell system in the early years of the twentieth century, when it was undergoing financial troubles. Vail “offered to end his competitive wars with independent telephone companies, to interconnect with them, and to accept a framework of exclusive franchises and government regulation (Mueller 1997, p. 108). By his motto, “One System, One Policy, Universal Service”, Vail meant that the system would be “universal” only in the sense that any subscriber could place a call to any other subscriber, because networks would be interconnected (Mueller, 1997, p. 157).”<sup>19</sup> As markets become more competitive in future, one possible trend may be to regard telecommunications as a service like any other, with availability and cost being determined by the market. On the other hand, the trend may be to include more and higher-level services, such as broadband access, in the universal service.

## 4. Conclusions

Overall, telecommunications regulation in Ireland has resulted in a good deal for consumers and the promotion of competition. As sectors become progressively more competitive, regulation can be rolled back; for example, the price of international telephone calls is no longer controlled, and ComReg has proposed, in its consultation document on the review of the leased lines markets, to remove regulation on international leased lines and national higher-bandwidth leased lines.

The market reviews are imposing a healthy discipline on NRAs, in terms of evidence-based decision-making and proportionality of remedies. In fact, they offer an in-built “sunsetting” of regulation, since markets must be reviewed regularly to see whether they are effectively competitive. ComReg is working its way slowly but surely through the reviews, and the co-operation with the Competition Authority and the Commission has worked well to date. However, the system, especially the consultation requirements and the need to notify the Commission, is slow, and it involves a lot of concentration on minutiae.

Meanwhile, the telecommunications sector is evolving very quickly – and we must not neglect our responsibilities in numbering and spectrum, which may do more to promote competition in the long run!

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<sup>18</sup> Directive 2002/22/EC of the European Parliament and of the Council, of 7 March 2002, on universal service and users’ rights relating to electronic communications networks and services.

<sup>19</sup> “Universal Service”, James Alleman & Paul N. Rappoport,; Mueller, Milton L., 1997, « Universal Service: Competition, Interconnection and Monopoly in the making of the American telephone system », Cambridge, Mass.: MIT Press; Washington, D.C.: AEI Press.

## **ANNEX I: DETAILED OBJECTIVES OF COMMISSION FOR COMMUNICATIONS REGULATION**

### **(Extract from Section 12 of Communications Regulation Act, 2002)**

- (1) The objectives of the Commission in exercising its functions shall be as follows:
- (a) in relation to the provision of electronic communications networks, electronic communications services and associated facilities –
    - (i) to promote competition
    - (ii) to contribute to the development of the internal market, and
    - (iii) to promote the interests of users within the Community,
  - (b) to ensure the efficient management and use of the radio frequency spectrum and numbers from the national numbering scheme in the State in accordance with a direction under section 13, and
  - (c) to promote the development of the postal sector and in particular the availability of a universal postal service within, to and from the State at an affordable price for the benefit of all users.
- (2) In relation to the objectives referred to in subsection (1)(a), the Commission shall take all reasonable measures which are aimed at achieving those objectives, including –
- (a) in so far as the promotion of competition is concerned –
    - (i) ensuring that users, including disabled users, derive maximum benefit in terms of choice, price and quality,
    - (ii) ensuring that there is no distortion or restriction of competition in the electronic communications sector;
    - (iii) encouraging efficient investment in infrastructure and promoting innovation, and
    - (iv) encouraging efficient use and ensuring the effective management of radio frequencies and numbering resource,
  - (b) in so far as contributing to the development of the internal market is concerned –
    - (i) removing remaining obstacles to the provision of electronic communications networks, electronic communications infrastructure and associated facilities at Community level.
    - (ii) encouraging the establishment and development of trans-European networks and the interoperability of transnational services and end-to-end connectivity,
    - (iii) ensuring that, in similar circumstances, there is no discrimination in the treatment of undertakings providing electronic communications networks and services and associated facilities, and
    - (iv) co-operating with electronic communications national regulatory authorities in other Member States of the Community and with the Commission of the Community in a transparent manner to ensure the development of consistent regulatory practice and the consistent application of Community law in this field,

and

© in so far as promotion of the interests of users within the Community is concerned

—

- (i) ensuring that all users have access to a universal service,
- (ii) ensuring a high level of protection for consumers in their dealings with suppliers, in particular by ensuring the availability of simple and inexpensive dispute resolution procedures carried out by a body that is independent of the parties involved,
- (iii) contributing to ensuring a high level of protection of personal data and privacy,
- (iv) promoting the provision of clear information, in particular requiring transparency of tariffs and conditions for using publicly available electronic communications services,
- (v) encouraging access to the internet at reasonable cost to users,
- (vi) addressing the needs of specific social groups, in particular disabled users, and
- (vii) ensuring that the integrity and security of public networks are maintained.

## **ANNEX II: EXAMPLE OF ISSUES IN THE NEW REGULATORY FRAMEWORK: TREATMENT OF SELF-SUPPLY**

Ireland: Wholesale Broadband Access (Market 12 in the Commission's Recommendation on Relevant Markets)<sup>20</sup>

One of the eighteen markets in the Recommendation on Relevant Markets is: "Wholesale Broadband Access" (WBA). These services are purchased by other operators from eircom, to allow them to supply retail broadband access to their consumers. At the retail level, equivalent services can be provided via cable modems (i.e. by companies which already supply cable TV within a local area). They can also be provided via Fixed Wireless Access (FWA), and there are a large number of local area licenses for these services. The question is, should these services be included in the wholesale market definition (and hence in the calculation of market shares)? The Commission defines the market as "bitstream access permitting the transmission of broadband data in both directions and other WS access provided over the infrastructure, if and when they offer facilities equivalent to bitstream access". ComReg concluded that, even though cable and FWA did not offer facilities equivalent to bitstream access, they could be included in the market definition, because of the indirect pricing constraint they exercised via the retail level. Assume that a hypothetical monopolist is supplying a whole bitstream product to third-party broadband suppliers at the wholesale level. Assume also that there are vertically integrated cable modem and FWA suppliers operating at the retail level. The question is, could the hypothetical monopolist profitably increase the price of wholesale access by 5-10%? We thought not, because an increase in the price of WBA would translate into an increase in the price of retail broadband, and the third-party suppliers would be likely to lose to the vertically-integrated provider of retail ADSL services. Thus, the competitive constraint would come from demand substitution at the retail level.

The Commission did not exercise its veto power or proceed to a Stage 2 investigation of the market, but it did comment extensively on this issue. It referred back to the definition in the recommendation on relevant markets and considered that, in the presence of evidence excluding demand-side substitutability at the wholesale level, such an indirect competitive constraint could have been taken into account subsequent to the definition of the relevant market, i.e. at the stage of assessment of SMP. It also cast doubt over the ability of FLA platforms to constitute even an indirect pricing constraint, given their limited capacity. It concluded:

"Notwithstanding, while this approach may have led to a narrower market definition and there remain doubts as to whether cable and FWA-based wholesale bitstream access products (whether currently or prospectively) form part of the market, the exclusion of cable and FWA-based wholesale services from the market definition in this particular case would not have led to a different result in the SMP analysis."

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<sup>20</sup> SG-Greffe (2004) D/203756

It appears that the Commission is concerned that the approach taken by ComReg, which is similar to that taken by Ofcom, would in fact, lead to the deregulation of WBA in certain member states where cable is prolific. This is an example of where the requirement for a harmonised approach may conflict with the requirement for light-handed regulation (since, the broader the market, the less likely it is that any player is dominant).