



Market Analysis: Wholesale Unbundled Access

Document No:	08/41
Date:	11 June 2008

All responses to this consultation should be clearly marked:-
“Reference: Submission re ComReg 08/41” as indicated above,
and sent by post, facsimile, e-mail or on-line at www.comreg.ie
(current consultations), to arrive on or before 5pm, Wednesday
23 July, to:

Jason Reid
Commission for Communications Regulation
Irish Life Centre
Abbey Street
Freepost
Dublin 1
Ireland

Ph: +353-1-8049600 Fax: +353-1-804 9680 Email:
wholesaleconsult@comreg.ie

*Please note ComReg will publish all respondents submissions
with the Response to this Consultation, subject to the
provisions of ComReg's guidelines on the treatment of
confidential information – ComReg 05/24*

Contents

1. Executive Summary	2
INTRODUCTION	2
RELEVANT MARKET DEFINITION	2
RELEVANT MARKET ANALYSIS	3
PROPOSED SIGNIFICANT MARKET POWER DESIGNATION	4
PROPOSED REMEDIES	4
2. Introduction	7
THE REGULATORY FRAMEWORK	7
BACKGROUND TO WHOLESALE UNBUNDLED ACCESS MARKET REVIEW	9
THE CONSULTATION PROCESS	10
STRUCTURE OF CONSULTATION DOCUMENT	11
3. Market Definition	12
SCOPE OF RELEVANT MARKET DEFINITION	12
REVIEW OF RETAIL INTERNET TRENDS	15
DEFINING A RETAIL BROADBAND MARKET	20
DEFINING THE RELEVANT WHOLESALE MARKET	27
4. Relevant Market Analysis	36
INTRODUCTION	36
EXISTING COMPETITION	38
POTENTIAL COMPETITION	41
COUNTERVAILING BUYER POWER	45
OVERALL PRELIMINARY CONCLUSION ON MARKET ANALYSIS	45
5. Proposed Designation of Undertakings with Significant Market Power	47
6. Competition Problems	48
INTRODUCTION	48
POTENTIAL COMPETITION PROBLEMS	48
PRELIMINARY CONCLUSION ON COMPETITION PROBLEMS	53
7. Regulatory Impact Assessment	54
INTRODUCTION	54
PRINCIPLES IN SELECTING REMEDIES	54
THE IMPACT OF PROPOSED CHANGES	59
8. Proposed Remedies	61
ACCESS TO AND USE OF SPECIFIC NETWORK FACILITIES	61
TRANSPARENCY	68
NON-DISCRIMINATION	70
PRICE CONTROL AND COST ACCOUNTING	71
ACCOUNTING SEPARATION	74
Annex A: Consultation Questions	75
Glossary of Terms	76

1. Executive Summary

Introduction

- 1.1. On 11 December 2003 the Commission for Communications Regulation (ComReg) published a national consultation on Wholesale Unbundled Access (including shared access) to metallic loops and sub-loops.¹ The response to consultation and draft decision were notified to the European Commission (EC) and published on 16 April 2004², and the Decision Notice was published on 15 June 2004.³ Since the publication of the Decision Notice, ComReg has been heavily involved in this market, and has been engaged in further consultation⁴ and industry discussion.
- 1.2. This second round review of the Wholesale Unbundled Access (WUA) market is being undertaken because of the time which has elapsed since the last review. In addition, the European Commission recently updated its recommendation on relevant markets⁵, and has proposed a new definition of the WUA market. ComReg is obliged to take utmost account of the EC recommendation.

Relevant Market Definition

- 1.3. The EC defines a market for Wholesale Unbundled Access as follows:⁶

Wholesale (physical) network infrastructure access (including shared or fully unbundled access) at a fixed location.

Retail market

- 1.4. In order to analyse the WUA market, the first step is to describe and define the market for access to internet services at fixed locations at a retail level. The demand for wholesale unbundled access products is ultimately derived from demand for associated downstream retail products. Therefore understanding the relevant downstream retail markets is important for determining the scope of the WUA market.
- 1.5. ComReg's assessment of trends in the retail internet access market notes that Digital subscriber line (DSL) remains the dominant access platform, accounting for over 60% of retail broadband subscriptions. While Eircom's share of the overall retail broadband market has been slowly declining, Eircom's share of the retail DSL market has remained fairly stable over the last year (at just under 70%). Take-up of broadband provided via alternative platforms has been increasing, with growth in subscriptions particularly notable following the introduction of mobile broadband.

¹ ComReg Document Number 03/146

² ComReg Document Number 04/40

³ D8/04 ComReg Document Number 04/70

⁴ For example, Please see Documents Number 04/111 and 05/22 on Line Share

⁵ European Commission Recommendation of 17 December 2007 on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services OJ L 344

⁶ Commission Recommendation on relevant product and service markets, Commission for European Communities, 17 December 2007

Market Review

- 1.6. In order to define a retail market, ComReg has assessed the extent to which customers and suppliers would consider broadband products to be good substitutes. The preliminary view is that the retail market for broadband internet access is distinct from that for retail internet access via a narrowband connection, from access via leased lines, and from mobile broadband access. ComReg considers that all forms of broadband access from fixed locations form part of the same market because customers would be able, and likely, to switch to access via an alternative platform (where this is available) given a small but significant increase in price.

Wholesale market

- 1.7. At present, Eircom provides WUA products as a requirement of existing legislation. Eircom is required to provide fully unbundled local metallic path (ULMP) and a combined Geographic Number Portability and Unbundled Local Metallic Path service (GLUMP); and line sharing, for both loops and sub-loops, and is required to facilitate co-location, and to provide associated facilities necessary to support the products (collectively 'LLU products').
- 1.8. OAOs use LLU products to provide a range of retail services, primarily retail broadband and/or narrowband voice. Some OAOs may use LLU products to supplement their own infrastructure. Others may use LLU as their sole means of reaching the retail market. The control and flexibility offered by LLU means that OAOs can differentiate their retail offerings, and can bundle them in various combinations.
- 1.9. In considering the definition of the wholesale market, ComReg begins by hypothesising a narrow market, and then assesses whether this should be broadened. The analysis is forward-looking, so is not bound by the current product set. ComReg has analysed the following potential substitutes:
- The building of new infrastructure by Other Authorised Operators (OAOs)
 - Purchasing access to another operator's infrastructure
 - Wholesale Broadband Access (WBA) – Including bitstream
 - Self-supply
- 1.10. The preliminary view is that the WUA market does not include access via new infrastructure, and does not include wholesale access via alternative platforms. WBA is not in the same product market as WUA. The incumbent's self-supply would form part of the WUA market. It is proposed that the geographic market is national in scope. ComReg will be taking into account the views expressed by respondents to the proposed consultation before reaching a final view in this regard.

Relevant Market Analysis

- 1.11. ComReg notes that Eircom has a persistent market share of 100% in the WUA market.
- 1.12. ComReg's preliminary view is that:
- Existing competitors do not pose a significant competitive constraint
 - Barriers to entry are high and non-transitory, and therefore act as a deterrent to potential competitors. As such, potential competitors do not pose a significant constraint in the WUA market.

- Countervailing buyer power is negligible.

Proposed Significant Market Power Designation

1.13. Taking the conclusions of the market analysis into account ComReg proposes to designate Eircom with Significant Market Power (SMP) in the market for Wholesale Unbundled Access.

Proposed Remedies

1.14. If Eircom is ultimately found to have SMP in the WUA market, ComReg believes there would be significant scope for the following competition problems to arise:

- Exploitative practices, such as excessive pricing, inefficiency and denial of access
- Leverage, in particular vertical leverage from the WUA market to the downstream wholesale and retail markets
- Exclusionary practices aimed at defending the SMP position

1.15. In view of the significant potential and clear incentives for such anti-competitive practices to arise, it is considered that *ex ante* regulation is warranted and will serve as an appropriate complement to *ex post* competition law over the period of this review. To that end, ComReg proposes to apply a number of wholesale remedies, if Eircom is found to have SMP.

Access obligations

1.16. ComReg proposes to continue to impose an access obligation on Eircom to provide access to all WUA infrastructure and associated facilities on a technologically neutral basis. The obligation would include, but would not be limited to, those products currently offered in Eircom's Access Reference Offer (ARO) and supporting Local Loop Unbundling (LLU) documentation. It would also apply to fibre optic cable in the access network.

1.17. ComReg proposes that Eircom should continue to have an obligation not to withdraw access to facilities already granted, unless this withdrawal, and the associated timescales, have been approved by ComReg. It is proposed that no Main Distribution Frame (MDF) which is already unbundled or is likely to be unbundled may be removed with less than 5 years' notice, except in exceptional circumstances. In any case all withdrawals must have ComReg's prior approval and take place in accordance with timelines which have been approved by ComReg.

1.18. ComReg proposes to continue to oblige Eircom to provide information which supports existing and future wholesale unbundled access services.

1.19. ComReg proposes to continue to impose the obligation on Eircom to meet reasonable access requests. This obligation would apply to all elements of access, such as duct access and backhaul. Reasonable access will apply to the need for a scalable product. Reasonable access requests will include, but not be limited to, requests for variants of products, and requests to migrate customers between wholesale products, including between Sub-Loop Unbundling and Next Generation Network related products that are encompassed by this market.

Market Review

- 1.20. ComReg proposes that Eircom should continue to provide WUA services on terms and conditions which are fair, reasonable and timely. These terms and conditions should be supported by Service Level Agreements (SLAs).
- 1.21. ComReg proposes that performance metrics should be defined with ComReg's approval. Eircom should comply with these performance metrics in delivering WUA products. Failure to achieve these targets may become a matter for regulatory compliance. The implementation of this obligation will be subject to further consultation.
- 1.22. ComReg proposes that Eircom should be obliged to develop an Internal Reference Offer (IRO) which demonstrates that its WUA offer allows OAOs to provide a retail offering of at least an equivalent quality to Eircom's own retail offer.
- 1.23. ComReg proposes that Eircom should be obliged to negotiate in good faith with undertakings requiring access.
- 1.24. ComReg proposes that Eircom should continue to be required to provide access to WUA services to competitors at an equivalent standard and at an equivalent time as to its own retail arm.
- 1.25. ComReg proposes that Eircom should continue to grant open and timely access to technical interfaces, protocols, or other key technologies and should be required to provide such Operational Support Systems (OSS) or similar software necessary to ensure fair competition in the provision of services.

Transparency

- 1.26. ComReg proposes that a transparency obligation should continue to be imposed on Eircom.
- 1.27. The implementation of the transparency obligation would include a requirement to publish an ARO for all products in the WUA market, and to publish additional industry documentation as required.
- 1.28. ComReg proposes that Eircom should be obliged to publish all industry SLAs on its wholesale website.
- 1.29. ComReg proposes that the transparency obligation would apply to the publication of performance metrics regarding Eircom's delivery of services encompassed by this market and comparable services enjoyed by Eircom retail such that a meaningful comparison can be made between these sets of metrics.
- 1.30. ComReg proposes that Eircom should be obliged to publish an Internal Reference Offer (IRO).
- 1.31. ComReg proposes that Eircom should be obliged to provide OAOs with information which they may reasonably require in order to efficiently offer products and services in the market.

Obligation not to discriminate

- 1.32. ComReg proposes to continue to impose the remedy of non-discrimination on Eircom.
- 1.33. ComReg proposes that during the lifetime of this review, where Eircom has an obligation to offer certain wholesale products which have not yet been made available at the date of any Decision made on foot of this review, it may not offer these or functionally similar products to its retail arm until such time as these wholesale products are available to OAOs in accordance with the obligations proposed.

Price control & cost accounting

- 1.34. ComReg proposes to continue to impose price control and cost accounting remedies on Eircom. ComReg proposes that Eircom should be obliged to ensure that the relationship between its wholesale and retail pricing does not constitute a margin squeeze.
- 1.35. ComReg proposes that Eircom should be obliged to offer WUA services at prices which are cost-oriented.
- 1.36. ComReg proposes that Eircom should be obliged to maintain the current price control pending the outcome of further consultation.
- 1.37. ComReg proposes that, for WUA services provided over Next Generation Network infrastructure, it may consider forbearing from direct intervention in setting prices if certain criteria are met.
- 1.38. ComReg proposes to maintain the existing requirement of cost accounting system obligations on Eircom until the detailed implementation consultations are complete.
- 1.39. ComReg proposes to maintain the existing requirement of accounting separation obligations on Eircom until the detailed implementation consultations are complete.

Preliminary Conclusion

- 1.40. ComReg's preliminary conclusion is that the remedies proposed in this market review are based on the nature of the competition problems identified and are proportionate and justified in light of the objectives contained in Section 12 of the Communications Regulation Act, 2002. The proposed remedies aim to address potential market failures, to protect consumers against the exercise of market power and to promote competition.

2. Introduction

- 2.1. This consultation paper is published in fulfilment of ComReg's role as the body responsible for the regulation of the electronic communications sector in Ireland. The paper relates to a review being undertaken by ComReg of the WUA market.
- 2.2. The paper presents the preliminary views held by ComReg in regard to its review of the WUA market. The structure of this Consultation paper reflects the market analysis approach recommended by the European Commission. It begins by defining the relevant market, then assesses competition within the market, then finally assesses competition problems and considers appropriate regulatory remedies.
- 2.3. ComReg seeks feedback from interested parties on these preliminary views, including specific questions raised throughout the paper.

The Regulatory Framework

- 2.4. The market review is being undertaken by ComReg in accordance with the EC recommendation that National Regulatory Authorities (NRAs) should analyse the WUA market. It is the EC's view that barriers to entry into the local loop market remain high and non-transitory, that there is no tendency towards competition behind the barriers to entry, and that competition law would be insufficient to address market failure.⁷ Accordingly, the EC has identified the WUA market, as described above, as being a market in which *ex ante* regulation may be warranted.

Legal Basis

- 2.5. Regulation 26 of the Framework Regulations⁸ requires that ComReg, taking utmost account of the Recommendation⁹ and of the EC's Guidelines on Market Analysis and Significant Market Power¹⁰ (SMP Guidelines), defines relevant markets appropriate to national circumstances, in accordance with the market definition procedure outlined in the Framework Regulations.

⁷ European Commission Recommendation of 17 December 2007 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services OJ L 344, Paragraph 4.2.2

⁸ The European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2003 (S.I. No. 307 of 2003), ('the Framework Regulations');

⁹ European Commission Recommendation of 17 December 2007 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (second edition) notified under document number C(2007) 5406 (Text with EEA relevance) (2007/879/EC) (OJ L 344, 28.12.2007, p. 65–69)

¹⁰ European 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).

Market Review

- 2.6. The EC recently revised its recommendation on the relevant WUA market as follows:¹¹

Wholesale (physical) network infrastructure access (including shared or fully unbundled access) at a fixed location.

- 2.7. This revised market definition has moved away from the EC's previous definition of the WUA market, which referred specifically to metallic loops and sub-loops, in favour of a broader technology-neutral definition. The revised definition accounts for the potential impact of Next Generation Network (NGN) deployment, which may result in Other Authorised Operators (OAOs) requiring access to non-metallic physical elements of a network in order to reach retail customers. The revised definition allows for the inclusion of non-metallic elements of the physical network infrastructure (such as fibre or duct access) in the relevant market.
- 2.8. Regulation 27 of the Framework Regulations requires ComReg to conduct an analysis of the relevant markets to decide whether they are effectively competitive. Pursuant to Regulation 25 in conjunction with Regulation 27(4), where ComReg concludes that the relevant market is not effectively competitive (i.e., where there is an undertaking with SMP), ComReg must identify the undertakings with SMP in that market and impose on such undertakings such specific regulatory obligations as it considers appropriate.
- 2.9. Where an operator is designated as having SMP in a relevant market ComReg is obliged, under Regulation 9(1) of the Access Regulations, to impose on such an operator some of the *wholesale* obligations set out in Regulations 10 to 14 of the Access Regulations. Regulation 14 of the Universal Service Regulations¹² also allows ComReg, where it concludes that obligations imposed under the Access Regulations and/or Regulation 16 of the Universal Service Regulations would not result in the achievement of the objectives set out in section 12 of the Communications Regulation Act, 2002, to impose such *retail* obligations as it considers appropriate to achieve those objectives.¹³
- 2.10. In preparing this paper, ComReg has taken account of its functions under the Framework Regulations and the Access Regulations.¹⁴ ComReg has taken the utmost account of the EC's Recommendation and its Explanatory Memorandum on relevant product and service markets within the electronic communications sector¹⁵ ('the Recommendation' and 'the Explanatory Memorandum ') as well as the SMP

¹¹ European Commission Recommendation of 17 December 2007 on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (second edition) notified under document number C(2007) 5406 (Text with EEA relevance) (2007/879/EC) (OJ L 344, 28.12.2007, p. 65–69)

¹² Which transposes Article 17 of the Universal Service Directive into national law.

¹³ The SMP Guidelines state at paragraph 17 that "NRAs must impose at least one regulatory obligation on an undertaking that has been designated as having SMP".

¹⁴ European Communities (Electronic Communications) Access Regulations 2003 (S.I. No. 305 of 2003) ('the Access Regulations')

¹⁵ European Commission Recommendation on relevant product and service markets, Commission for European Communities, 17 December 2007.

Guidelines. It has also had regard to sections 10¹⁶, 12¹⁷ and 13¹⁸ of the Communications Regulation Act 2002.

Background to Wholesale Unbundled Access market review

2.11. WUA is a physical wholesale input used in the provision of a range of retail products, which are used by consumers to access the internet, for voice telephony, and potentially for television services. The focus of this review is on WUA as an upstream input to retail internet services. Competition in the retail broadband market plays an important role in enhancing the speeds, prices, and availability of retail broadband products. Competition in the retail market depends on the ability of Internet Service Providers (ISPs) to secure a transmission channel to end-users. ComReg therefore considers that competition in the WUA market will assist in driving the development and growth of the retail broadband market.

Previous Review

2.12. On 11 December 2003 ComReg published a national consultation on **Wholesale Unbundled Access** (including shared access) to metallic loops and sub-loops.¹⁹ The response to consultation and draft decision were notified to the EC and published on 16 April 2004²⁰. The Decision Notice was published on 15 June 2004²¹

2.13. The notified Wholesale Unbundled Access (WUA) market included the following products:

- Fully unbundled local metallic path (ULMP)
- Shared loops (line sharing)
- Fully unbundled sub-loops
- Shared sub-loops
- Co-location
- Associated facilities

2.14. ComReg proposed that WUA and WBA were distinct product markets, due to differences in functionality and pricing. An operator using unbundled local loops (LLU) would not normally consider WBA to be a substitute, even if the service provided by the WBA provider allowed the supply of the same retail services. This is because an operator that has invested in LLU would have sunk costs. Equally, ComReg considered an operator using WBA to offer retail broadband could not

¹⁶ Section 10 sets out the functions of ComReg under the Communications Regulation Act, 2002

¹⁷ Section 12 sets out the objectives of ComReg as defined by the 2002 Act. Section 12 of the Communications Regulation Act 2002 outlines the objectives of ComReg in exercising its functions. In relation to the provision of electronic communications networks, electronic communications services and associated facilities these objectives are to:

- (i) promote competition;
- (ii) contribute to the development of the internal market; and
- (iii) promote the interests of users within the European Union

¹⁸ Section 13 of the 2002 Act requires that ComReg comply with relevant Ministerial Policy Directions made by Dermot Ahern T.D. Minister for Communications, Marine and Natural Resources on 21 February, 2003 and 26 March, 2004

¹⁹ ComReg 03/146

²⁰ ComReg 04/40

²¹ D8/04 ComReg 04/70

Market Review

easily switch to using unbundled local loops in response to a small yet significant non-transitory price increase because of the level of investment and time involved.

- 2.15. The original review also proposed that access via alternative technologies such as Fixed Wireless Access (FWA) and cable were unlikely to pose a competitive constraint in the lifetime of the review. Eircom had 100% share of the WUA market, and the market analysis concluded that this was unlikely to change over the lifetime of the review. Eircom was designated with SMP.
- 2.16. ComReg imposed a full suite of remedies under the Access Regulations in relation to access, transparency, non-discrimination, price controls, accounting separation and cost accounting. Since the publication of the Decision Notice, ComReg has been heavily involved in this market, and has been engaged in further consultation²² and industry discussion. Work has continued on the implementation of WUA remedies established following the last market review. In common with other markets, ComReg carries out a continuous review of price controls. A review of the methodology associated with the unbundled access price controls is currently being undertaken by ComReg.

Current review

- 2.17. Because of the time that has elapsed since ComReg's previous WUA market analysis, ComReg has decided to undertake a new review of the market for wholesale unbundled access. This review is conducted in light of the EC's recent review of the WUA market definition.
- 2.18. As part of this current review, ComReg has obtained qualitative and quantitative information from relevant operators through a data direction issued to operators on 30 November 2007, and through a series of meetings with operators. This material supplements information which is provided to ComReg in the course of the performance of its regular operations. ComReg has also reviewed the experience of regulating other broadband access markets in other jurisdictions. ComReg has carefully analysed all this information before arriving at its preliminary view in this consultation document.

The Consultation Process

- 2.19. As noted above, the purpose of this consultation is to set out ComReg's preliminary views on the nature of the relevant market definition, competition analysis and proposed remedies. ComReg invites interested parties to respond to the questions set out in this document, or to comment on any other aspect of the document.
- 2.20. Respondents are requested to clearly mark any commercially sensitive information that they do not wish to be published. ComReg reserves the right to publish material not marked as commercially sensitive.
- 2.21. All responses should be forwarded to ComReg, at the following address, by 5pm on Wednesday 23 July 2008:

²² For example, on line share 04/111 and 05/22; and Consultation on the Rental price for Shared Access to the Unbundled Local Loop (ComReg Document Number 08/23)

Market Review

Jason Reid
Commission for Communications Regulation
Abbey Court, Irish Life Centre
Lower Abbey Street
Dublin 1
Ireland

Responses may also be sent by email to Jason.reid@comreg.ie. Any responses received after the given date cannot be considered.

Structure of Consultation Document

2.22. This document is structured as follows:

- Section 1: Executive Summary
- Section 2: Introduction
- Section 3: Market Definition
- Section 4: Market Analysis
- Section 5: Proposed SMP Designation
- Section 6: Competition problems
- Section 7: Regulatory Impact Assessment
- Section 8: Proposed remedies

3. Market Definition

- 3.1. The purpose of market definition is to identify the competitive constraints that undertakings face. The market definition is not an end in itself but rather is a means of assessing effective competition for the purpose of determining whether *ex ante* regulation is required. This involves assessing demand and supply for other products, which could be considered to be substitutes for WUA.
- 3.2. ComReg takes the utmost account of guidance given by the EC²³ in defining relevant markets. Such guidance is set out in its Explanatory Memorandum on relevant product and service markets within the electronic communications sector²⁴ (“the Recommendation” and “the Explanatory Memorandum”), the EC’s Notice on Market Definition²⁵, the EC’s Guidelines on Market Analysis and Significant Market Power²⁶ (“the SMP Guidelines”). ComReg also considers guidance given by any relevant competition case law or decisions.
- 3.3. The definition of the relevant market is established by the combination of the relevant product and geographic dimensions. The process of defining these dimensions is outlined below. The market definition and analysis considers both current market conditions and any potential developments that may take place over the next two to three years.

Scope of Relevant Market Definition

- 3.4. The starting point for the product market definition is the WUA market identified by the EC as being susceptible to *ex ante* regulation.²⁷
- 3.5. The EC defines a market for Wholesale Unbundled Access as follows:²⁸

Wholesale (physical) network infrastructure access (including shared or fully unbundled access) at a fixed location.

- 3.6. The description of the market has been revised since the time of the last review to take into account changes in the market, in particular technological changes. The previous characterisation of the market focused on access to metallic loops and sub-

²³ Paragraph 17 of the Commission’s Notice on Market Definition states - “The question to be asked is whether the parties’ customers would switch to readily available substitutes or to suppliers located elsewhere in response to a hypothetical small (in the range of 5% to 10%) but permanent relative price increase in the products and areas being considered. If substitution were enough to make the price increase unprofitable because of the resulting loss of sales, additional substitutes and areas are included in the relevant market”.

²⁴ Commission Recommendation on relevant product and service markets, Commission for European Communities, 17 December 2007.

²⁵ European Commission, Notice on the Definition of the Relevant Market for the Purposes of Community Competition Law, OJ [1997] C372/5.

²⁶ European 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).

²⁷ Regulation 26 of the Framework Regulations specifically states: “As soon as possible after the adoption by the European Commission of a recommendation referred to in Article 15(1) of the Framework Directive, the Regulator shall... define relevant markets for the purposes of these Regulations and the Specific Regulations, including the geographical area within the State of such markets”.

²⁸ Commission Recommendation on relevant product and service markets, Commission for European Communities, 17 December 2007

loops. The new description focuses clearly on the problem being addressed; namely the need to ensure that competition problems do not impede the connection of end-user premises to the wider communications networks, irrespective of the technology currently in use. This technologically neutral product description may include network elements such as ducts and fibre in the WUA market.

- 3.7. At present, WUA is typically provided using a twisted metallic pair, i.e. a local loop connection. This runs from the network termination point at an end-user's premises to a main distribution frame (MDF) at an MDF site, or equivalent facility. An individual loop is connected to an operator's equipment, such as a Digital Subscriber Line Access Multiplexer (DSLAM) or concentrator equipment, within the MDF site, using flexible jumpers and tie cables. The WUA product would therefore include the loop, jumpers and tie cables, together with any supplementary services associated with providing the connection (for example, backhaul between cabinet or exchange based equipment (co-location point) and the OAOs required handover point).
- 3.8. However, it is possible to use different means of connecting the end-user premises to the communications network, and it is possible that there will be further changes over the lifetime of this review. For example, the local loop need not necessarily be provided over a twisted metallic pair, as the connection to the end-user could be provided over, for example, fibre or wireless. By adopting a technology neutral approach, it is ComReg's view that the focus of this review should be on addressing potential competition problems in the local access connection, irrespective of what technologies may be used to provide that connection. This means that, while the product description will use the current provision as an illustration, the products covered in this review are not limited to the current technology. Rather, the products are all of those which are necessary to ensure wholesale physical network infrastructure access at a fixed location.
- 3.9. In line with the Recommendation and SMP Guidelines, ComReg takes the recommended set of products/services to form the starting point of its relevant product market analysis. It then considers whether, from a demand and supply perspective, the market should be expanded or narrowed.
- 3.10. ComReg has approached the definition of the relevant geographic market by identifying "*a clearly defined geographic area in which [the product] is marketed and where the conditions are sufficiently homogeneous for the effect of the economic power of the undertaking concerned to be able to be evaluated*"²⁹ and "*which can be distinguished from neighbouring areas because the conditions of competition are appreciably different in those areas*"³⁰.
- 3.11. In that regard, ComReg has considered whether a small price increase by a hypothetical monopolist in a narrowly defined area would induce customers to switch to suppliers located outside the relevant area or if providers located elsewhere could easily switch to supplying customers in the relevant area.

²⁹ Case 27/76 United Brands v. Commission, [1978] ECR 207, [1987] 1 CMLR 429, paras 10 and 11.

³⁰ European Commission Notice on the definition of relevant market for the purposes of Community competition law (97/C 372/03), Paragraph 8.

- 3.12. The EC's notice on the definition of the relevant market for the purposes of Community competition law³¹ further outlines the EC's approach to geographic market definition where it states that the EC "*will take a preliminary view of the scope of the geographic market on the basis of broad indications as to the distribution of market shares between the parties and their competitors, as well as a preliminary analysis of pricing and price differences at national and Community or EEA level*"³².

General approach to market definition

- 3.13. The analysis of demand-side considerations involves an assessment of all those products or services that are viewed as sufficiently close substitutes by consumers to be included within the same relevant product market. For two products to be effective demand side substitutes, it is not necessary that all consumers switch to a competing product, but that enough switching takes place to render a relative price increase unprofitable³³. The **Small but Significant Non-transitory Increase in Price** ("SSNIP") test provides a useful conceptual framework within which to identify the existence of close demand substitutes³⁴. It allows the identification of the main price constraints on the product in question.
- 3.14. In carrying out the SSNIP test, the point at which a market should be expanded to include additional products/services is where a hypothetical monopolist of the goods/services in question would not be able to sustain a small but significant (5-10%) price increase above the competitive level because enough customers would switch to alternative products/services so as to render that price increase unprofitable. Where the price of a service is regulated, it is important to consider how the price relates to a competitive price, as if it is significantly different, the findings of the SSNIP may be misleading. If it is not possible for the hypothetical monopolist to profitably sustain a 5-10% price increase, this implies that suppliers of other products/services impose important competitive constraints and should be included as part of the relevant market.
- 3.15. The SSNIP test is also considered from the supply side perspective as a means to establish whether suppliers are able to switch production to the relevant products or services and market them in the short term in response to a small yet significant increase in the price of those products. For the products of a firm to be regarded as

³¹ European Commission Notice on the definition of relevant market for the purposes of Community competition law (97/C 372/03), paras 28-31.

³² The notice outlines further that it will also need to be established whether companies in different areas do indeed constitute an alternative source of supply for customers and whether companies located in different areas would face impediments to developing their sales on competitive terms throughout the whole geographic market.

³³ European 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 11 July 2002

³⁴ Paragraph 17 of the Commission's Notice on Market Definition states - "The question to be asked is whether the parties' customers would switch to readily available substitutes or to suppliers located elsewhere in response to a hypothetical small (in the range of 5% to 10%) but permanent relative price increase in the products and areas being considered. If substitution were enough to make the price increase unprofitable because of the resulting loss of sales, additional substitutes and areas are included in the relevant market".

Market Review

effective supply-side substitutes, it is not only necessary for the production, marketing and distribution of the relevant products to be possible without the need for significant new investments; it must also be possible within a reasonable timeframe. Accordingly, ComReg considers any possible costs, risks or time delays associated with suppliers switching between supplying the products under consideration and whether they are likely to do so in practice.

- 3.16. The EC notes that supply-side substitutability may also be taken into account where:³⁵

Its effects are equivalent to those of demand substitution in terms of effectiveness and immediacy

And where:

Suppliers are able to switch production to the relevant products and market them in the short term without incurring significant additional costs or risks in response to small and permanent changes in relative prices.

Relationship between the wholesale and retail internet markets

- 3.17. The first step in analysing the WUA market is to describe and define the retail market for access to internet services. While WUA can be used to provide a range of retail products, it is its role as an input to retail broadband services which prompts this market analysis. The demand for WUA is ultimately derived from demand for associated downstream retail products. Therefore understanding the relevant downstream retail markets is important for determining the scope of the wholesale unbundled access market.
- 3.18. At present, customers can access retail internet services at a fixed location using various technologies. For example; using a fixed link such as DSL or cable modem, a Fixed Wireless link, a leased line, or a data-card or modem connected to a mobile broadband provider.
- 3.19. The first steps involved in analysing the WUA market are to review trends in the provision of retail internet services, and to define the market for access to retail internet services.³⁶

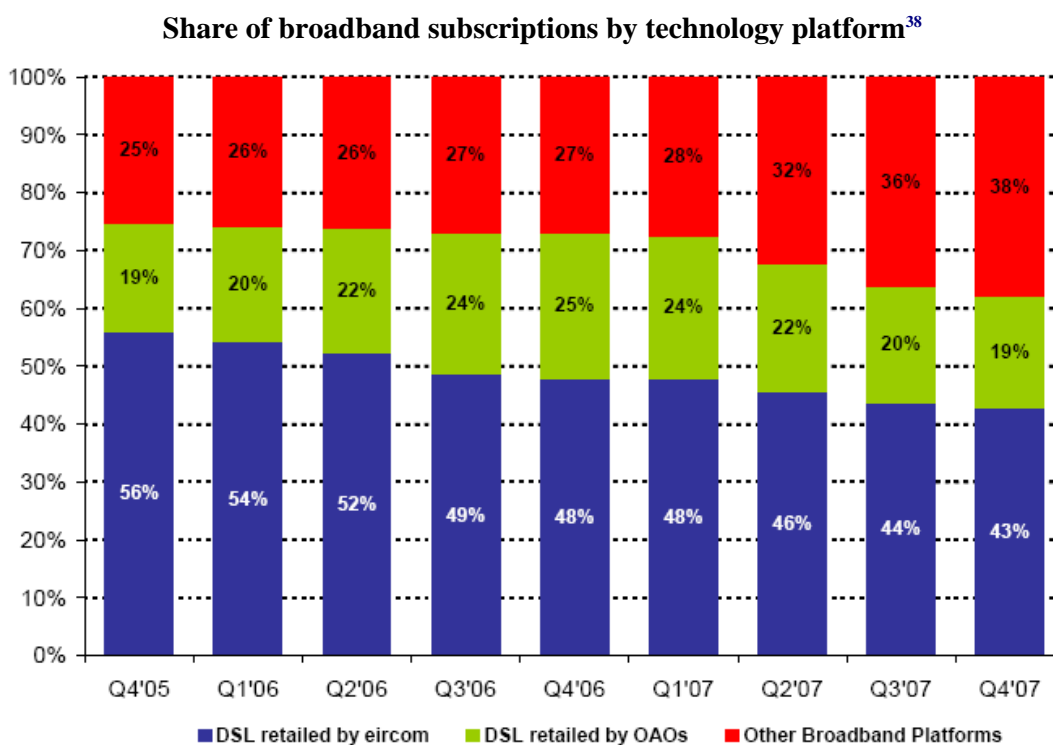
Review of retail internet trends

- 3.20. The purpose of this section is to review recent trends observed by ComReg in retail internet provision. This provides a useful context for a review of the WUA market, since demand for WUA is ultimately derived from demand for retail broadband products. The review is informed by general industry analysis undertaken by ComReg, and draws on information contained in ComReg's quarterly report. It should be noted that this general discussion of internet trends considers a wide range of internet services, not all of which may be considered substitutes in the context of the market analysis.

³⁵ European Commission Recommendation on relevant product and service markets, Commission for European Communities, 17 December 2007, Paragraph 20.

³⁶ Note that because the retail market is not considered to be susceptible to ex ante regulation, ComReg is not required to carry out a formal market analysis.

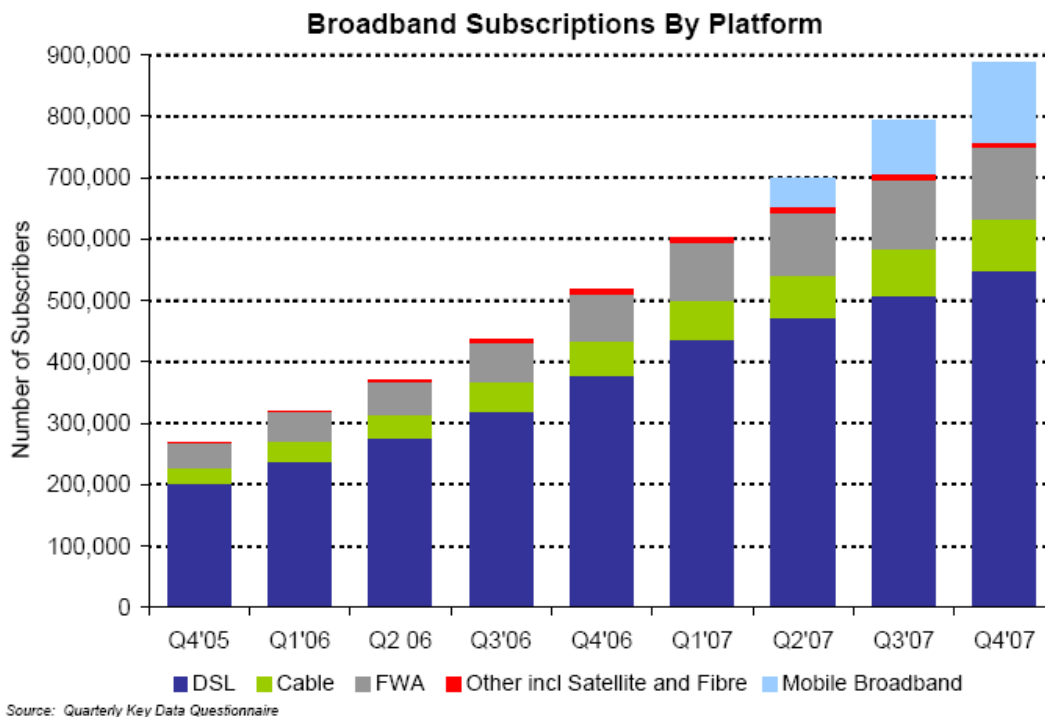
3.21. The diagram below illustrates the share of broadband subscribers split between Eircom and OAOs. At the end of the fourth quarter of 2007, Eircom DSL products made up 43% of all broadband subscriptions. Eircom's share of broadband subscriptions has been steadily declining over the last two years.³⁷ Whilst the share of DSL retailed by OAOs has fallen slightly; the share of other broadband platforms has increased from 27% to 38% of total broadband subscriptions over the 2 year period ending in the fourth quarter of 2007.



3.22. Broadband is available over various technology platforms. However, as is demonstrated by the following graph, over the past five years DSL has consistently been the predominant technology. However, the share of broadband subscribers using DSL is decreasing. FWA and Cable are both increasing their respective shares of subscriber numbers, while broadband provided via Fibre to the Home (FTTH) and satellite networks remain at low levels of uptake.

³⁷ It should be noted that data on mobile broadband has been included in this figure only since Q2 2007.

³⁸ Irish Communications Market Quarterly Key Data Report - March 2008, Commission for Communications Regulation

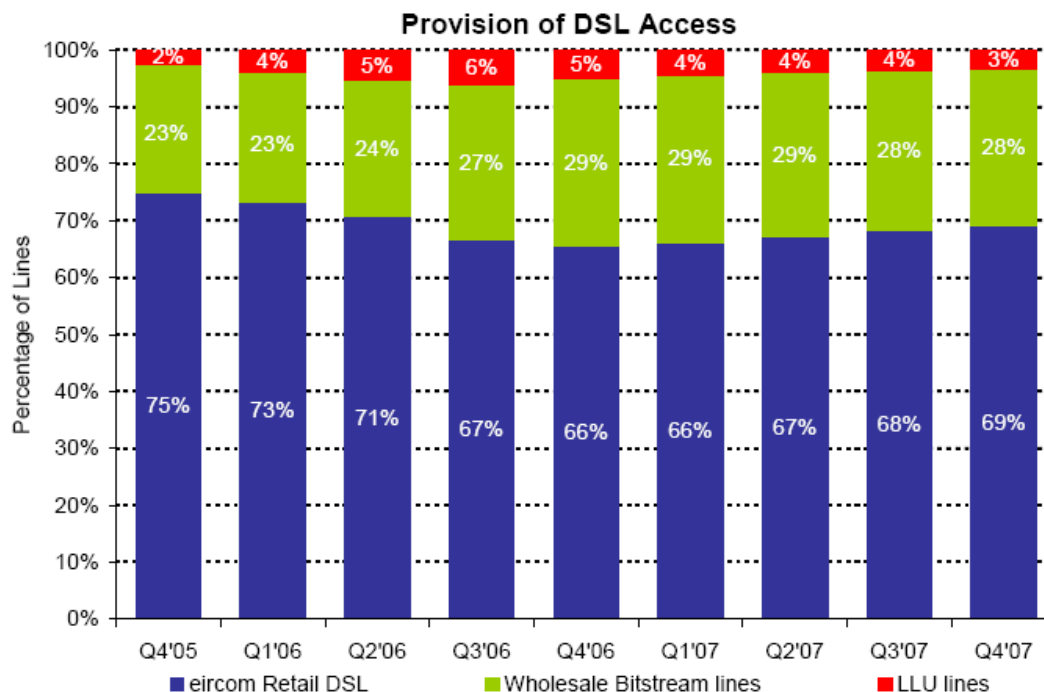


3.23. The following section considers the trends for each technology platform:

DSL

3.24. DSL remains the largest broadband access platform in terms of subscriptions, accounting for 62% of all broadband subscriptions at the end of the fourth quarter of 2007.

3.25. Eircom provides retail services directly to customers over its DSL network, and to wholesale customers in the form of wholesale DSL (bitstream) and LLU. Those wholesale customers can then use the wholesale input as a means of providing retail internet services. The following graph illustrates the split of DSL retail subscriptions between Eircom, LLU based subscriptions, and those DSL subscriptions provided using a bitstream service.



Source: Quarterly Key Data Questionnaire

- 3.26. Eircom’s share of the DSL market has remained fairly stable at 69% over the last year. This compares with an EU average incumbent share of retail DSL of 56.1% in July 2007.³⁹
- 3.27. BT, Smart, Access Telecom, and Magnet are the other major DSL operators. In addition to these larger OAOs, there are a number of other smaller operators providing broadband access via DSL. Examples of unbundled operation include Magnet, which has unbundled 39 exchanges to date in Dublin, Cork, Limerick, Galway, Waterford and Portlaoise⁴⁰ and BT, which is offering a product with a download speed of 8 Mega-bits per second (Mbps) out of 14 exchanges.⁴¹ Smart has a full new generation network and uses 37 unbundled exchanges in key population centres to provide triple play offers with a download speed of 4 Mbps.⁴²

Cable

- 3.28. At the end of the fourth quarter of 2007, there were 82,500 subscribers to cable broadband. This amounts to 9.3% of all broadband subscriptions.
- 3.29. Of the cable operators, NTL and Chorus are multiple systems operators (licensed to provide services in many areas). They are part of UPC Ireland, and have complementary rather than overlapping coverage areas. In addition, there are a few

³⁹ Based on a report by the European Commission in October 2007 available at:

http://ec.europa.eu/information_society/policy/ecomms/doc/implementation_enforcement/broadband_access/Broadband_data_july07_final.pdf

⁴⁰ <http://www.magnetbusiness.ie/about/index.htm>

⁴¹ http://www.btireland.ie/AtHome_bb_8mb.shtml

⁴² http://smarttelecom.ie/smartngn_coverage.html

small geographically-specific operators. These cable networks were initially designed to provide television services, but some parts of the network have been upgraded to also provide broadband. Therefore, while the cable footprint covers more than 75% of households, only part of that network is capable of being used to provide telephony and/or internet access. At present, cable broadband networks reach 400,000 households in Ireland.

Fixed Wireless Access (FWA)

- 3.30. At the end of Q4 2007, there were 118,400 broadband subscribers using FWA, which amounts to 13.4% of all broadband subscribers.
- 3.31. Currently, there are 189 Fixed Wireless Access Local Area (FWALA) licences issued to 19 operators in both the 3.5 GHz and 10.5 GHz bands. The coverage of FWALA is large in terms of territory, and also in terms of population (fixed wireless broadband is available in all major metropolitan areas).
- 3.32. There are also a number of FWA operators providing retail broadband over unlicensed networks. FWA operators have mainly deployed their networks in dense urban areas, indicating that they are directly competing with wired infrastructures⁴³, or filling the gaps not served by wired infrastructure e.g. splitters on line. FWA is often an effective means of providing access to areas of low population density where cable and DSL technologies may be technically or economically less suitable.
- 3.33. Recent and upcoming developments in the technology used to provide broadband over FWA, in particular the development of WiMAX, is expected to enhance the ability of FWA operators to compete with DSL and cable operators. For example, the price of WiMAX customer premises equipment is expected to fall significantly within the period of this review. The development of the WiMAX standard will offer higher data throughputs and increased functionality (such as mobility).

Mobile

- 3.34. Mobile broadband access via High Speed Downlink Packet Access (HSDPA) has been available in Ireland since the beginning of 2007. By the fourth quarter of 2007 there were 127,500 mobile broadband subscriptions, which (if included in the broadband market share figures) amounted to 14% of the market⁴⁴.
- 3.35. All 3G network operators (O2, Hutchison 3G, and Vodafone) provide HSDPA mobile broadband access services in Ireland, with theoretical speeds of up to 3.6 Mbps on the downlink. Future developments in mobile broadband standards will provide greater data throughput. Upgrades to HSDPA can increase the downlink speed to 14.4 Mbps, while 28 Mbps is available with HSPA+ (evolution). Looking further into the future, the Long Term Evolution (LTE) standard claims that it can provide 100 Mbps downlink on a 20 MHz channel.

⁴³ Source: ComReg Fixed Wireless Access coverage maps

⁴⁴ Irish Communications Market Quarterly Key Data Report - March 2008, Commission for Communications Regulation

Fibre access network

- 3.36. At the end of the fourth quarter of 2007 there were approximately 4000 broadband subscribers served over a fibre connection. This includes a range of fibre access installations such as fibre to the home (FTTH), fibre to the curb (FTTC) and fibre to the premises (FTTP). This is equivalent to less than 0.5% of broadband subscriptions.
- 3.37. The subscriptions are split between Smart Telecom and Magnet, which are the only operators currently providing fibre broadband in Ireland.

Satellite

- 3.38. At the end of the fourth quarter of 2007 there were approximately 4000 subscribers to satellite broadband in Ireland. This figure represents less than 0.5% of broadband subscriptions.
- 3.39. There are a number of operators providing broadband via satellite, including Digiweb, Eircom, Hughes Networks, and Smart Telecom

Defining a retail broadband market

Introduction

- 3.40. The last section outlined key trends in retail internet services, and described the main options available to retail customers. This section goes on to consider the extent to which products may be seen as substitutes in market analysis terms. Generally, the functionality and price of each option varies, and this will affect the extent to which customers will consider products to be suitable substitutes. For example, an end-user that values high speed access would be unlikely to choose dial-up internet access, while an end-user that values mobility would prefer a mobile rather than fixed broadband connection. This means that not all broadband products and services are necessarily in the same market.
- 3.41. Understanding the dynamics of the retail broadband market assists ComReg in analysing the associated upstream markets. In considering the definition of the retail market, ComReg's starting point is to consider the extent to which technologies offer similar functionality and price, such that a customer would be likely to see the alternative products as suitable substitutes, and this would act to constrain the ability of market actors to behave independently.
- 3.42. For the purpose of this market review, the market definition exercise is conducted in accordance with an established methodology that is specified in the EC's SMP guidelines. In this regard, the conclusions arrived at in applying this specific methodology are not prejudiced by analysis undertaken by ComReg for a different purpose, or based upon a different framework.

Is dial-up internet access in the same product market as broadband internet access?

- 3.43. ComReg proposes that dial-up narrowband access is not in the same product market as broadband access. This is primarily because of functional differences between the two products. The key functional differences are as follows:

Market Review

- Broadband internet access offers significantly higher speeds than narrowband access, which allows the user access to a greater range of internet based services (including video streaming and IP telephony), typically at a higher quality of service.
 - A broadband connection allows the retail customer to use voice and data services simultaneously, whereas a narrowband user is not able to make or receive a voice call while accessing the internet.
- 3.44. ComReg believes that consumers value the additional features associated with broadband internet access. For this reason, broadband providers tend to highlight these characteristics when marketing broadband access products. This view is consistent with consumer research conducted in other jurisdictions, for instance by Ofcom in the UK, which shows that consumers consider these features to be important.⁴⁵
- 3.45. When broadband was first launched as a retail product in Ireland, the entry level service was priced at a premium compared with the typical dial-up internet service. Despite the higher price of broadband, a considerable number of consumers were willing to pay the premium, thus demonstrating the value associated with these features from the outset. Over time the pricing of broadband and dial-up internet has converged, and greater numbers of customers have switched from dial-up internet to broadband. The one-way movement of consumers towards broadband access suggests that broadband access has superseded dial-up internet access as a means of accessing the internet.
- 3.46. For example, at the time of the last review of the market for Wholesale Broadband Access, there were 693,058 retail internet subscribers, of which 21,560 were retail broadband subscribers (third quarter of 2003). By the end of the fourth quarter 2007 there were a total of 1.21 million active internet subscriptions in Ireland, of which 886,000 customers subscribed to broadband.⁴⁶ The trend suggests that the market for internet access has grown overall, and that narrowband internet is being superseded by broadband access. ComReg expects that this trend will continue, as the price of retail broadband continues to fall relative to dial-up access, and the functionality and quality of broadband services advances.
- 3.47. For the reasons given above, ComReg considers that dial-up internet is in a separate product market from broadband access.

Is broadband internet access in the same product market as internet access via leased lines?

- 3.48. ComReg has considered the extent to which customers using broadband internet access via a high speed link such as DSL or cable modem would switch to internet access provided over a leased line, in response to a small but significant price increase in the high speed variant.

⁴⁵ Ofcom Review of the wholesale broadband access markets 2006/07, Identification of relevant markets, assessment of market power and proposed remedies, Explanatory Statement and Notification, 15 November 2007.

⁴⁶ Broadband figures include ADSL, Cable, Fibre, FWA, Mobile, and Satellite.

- 3.49. The functionality and pricing of leased line products differ considerably from retail broadband internet access products. Leased lines offer dedicated, transparent transmission capacity between two points, providing bandwidth that is always available.
- 3.50. Leased lines tend to offer a high capacity symmetric link, and this may be an important feature for customers who have requirements for high upload volumes (such as businesses that require connectivity between separate business branches). For these reasons, leased lines are more expensive than a standard broadband access connection, and are typically targeted at large corporate customers.
- 3.51. Given the distinct pricing and functional differences between retail broadband and leased line connections, these products would not (in the majority of cases) be considered to be suitable substitutes. Therefore ComReg considers that internet access via leased lines is in a separate market.

Are fixed and mobile retail broadband access in the same market?

- 3.52. Two forms of internet access are offered by mobile operators. Customers can access the internet from a mobile phone, or alternatively, can attach a mobile Data-Card or modem to a computer.
- 3.53. ComReg considers that broadband access on a mobile phone is not functionally equivalent to that provided over a fixed high speed link to a computer. The functionality of mobile phone internet is limited in terms of screen size, resolution, and availability of applications. For these reasons, broadband internet provided via a mobile phone is unlikely to be considered a substitute for broadband access, and therefore is in a separate retail market.
- 3.54. ComReg has considered whether mobile broadband products provided using a data-card or a wireless modem are similar enough in terms of functionality and price to fixed internet access products to be defined as a suitable substitute.
- 3.55. The price of mobile broadband is similar to fixed broadband prices (when the upfront cost of the modem is averaged out over a 12 month subscription period). ComReg notes that the high growth rate of mobile broadband compared to the growth of fixed broadband (particularly fixed wireless broadband) suggests that some degree of substitutability is occurring between fixed and mobile broadband.
- 3.56. ComReg considers that there are functional differences that may limit the extent to which mobile broadband is substitutable for fixed retail broadband. At present, mobile broadband customers are less able to upgrade the quality or speed of their service (for example, if the needs of the customer change). For this reason, mobile broadband services may be less capable of supporting applications that require high speeds and quality of service (for example, triple-play applications, gaming, VOIP). Furthermore, more restrictive monthly data caps placed on mobile broadband products would limit the value of mobile broadband for heavy internet users.
- 3.57. Typically mobile broadband products are targeted at individuals, rather than households or offices. While mobile broadband products can be connected to

wireless routers, the standard mobile broadband modems are designed to connect to one computer at a time through the USB or Data-Card port in a computer. Fixed broadband services, however, usually include a multiple port modem or a wireless router, thereby suggesting that fixed broadband services are better suited to households or offices where multiple users may require simultaneous connectivity.

- 3.58. For households and offices that already have a fixed telephone line, the incremental cost of purchasing DSL broadband to that customer is lower. Further, DSL broadband can be purchased as an ‘add-on’ to the customer’s monthly telecommunications package, and attached to a single bill (assuming the same service provider is used for the telephone and broadband services).
- 3.59. ComReg consider that mobile broadband products would hold appeal (as a substitute for fixed broadband) for a specific group of customers that fit the following profile:
- Do not require a fixed telephone line
 - Value mobility
 - Do not require a high-end broadband service (in terms of speed and quality of service).
 - Are not heavy internet users
- 3.60. However, ComReg’s preliminary view is that this group of customers is not yet of sufficient size such that a hypothetical monopolist fixed broadband provider would be prevented from imposing a profitable SSNIP of fixed broadband.
- 3.61. The diversification of some mobile operators into the provision of DSL broadband suggests that mobile broadband is not considered by operators to be a close supply side substitute for fixed broadband. For example, Vodafone (a mobile broadband network operator) purchased Perlico (a DSL broadband provider) and now offers a range of fixed and mobile products. Similar patterns have been observed in other jurisdictions. For example, in the UK, both O2 and Vodafone offer mobile broadband as well as DSL broadband services. The effective overlaying of fixed and mobile networks by an individual operator would not be commercially or economically justified if the respective networks were providing substitutable products.
- 3.62. Overall, ComReg considers that while there is likely to be some substitutability on the fringe of the market, the majority of fixed broadband access retail customers would be unlikely to switch to mobile broadband access in response to a SSNIP of fixed broadband. In addition, practice in the supply of broadband services suggests that operators are not likely to consider fixed and mobile as substitutes. On balance, then, ComReg considers that retail mobile internet access is in a separate market from retail fixed broadband internet access.

Do all forms of fixed broadband access belong in the same market?

- 3.63. ComReg considers that all forms of fixed broadband access are in the same product market. This is consistent with guidance recently given by the EC, which notes that where alternative means of access are available, the functionality of fixed broadband

Market Review

access services are likely to be comparable, and where prices are also comparable, then a customer is likely to be indifferent to the technology used.⁴⁷

3.64. ComReg considers that the product specifications and pricing for retail broadband services offered by different forms of fixed access are broadly similar. The following table shows the product specifications and prices for a group of mid-range broadband products with similar product characteristics, but delivered over different types of fixed access networks:

Operator	Product name / technology platform	Product speed	Set-up price	Monthly Price	Conditions
Eircom ⁴⁸	Broadband Home Plus / DSL	2Mb	Free	€29.99	20 Gb download limit, Free wireless modem, Free Setanta Online subscription.
	Broadband Home Starter / DSL	1Mb	€29.99	€24.99	10 Gb download limit, Free wireless modem, Free Setanta online subscription.
UPC ⁴⁹	Broadband Express / Cable	6Mb	Free	€30.00	30Gb download limit, voice not included.
	Broadband Value / Cable	1Mb	Free	€20.00	20Gb download limit, voice not included.
ClearWire ⁵⁰	ClearPerformer / FWA	2Mb	Free	€39.95	10 GB download limit, voice not included.
	ClearFreedom / FWA	1Mb	Free	€29.95	10 Gb download limit, voice not included.
Irish Broadband ⁵¹	Breeze 2Mb / FWA	2Mb	Free	€35.99	No download limit, Not including voice,

⁴⁷ Commission Recommendation on relevant product and service markets, Commission for European Communities, 17 December 2007, pg 30.

⁴⁸ www.eircom.ie

⁴⁹ <http://www.upc.ie/internet/>

⁵⁰ <http://www.clearwire.ie/Clear-Options-34.html>

					requires installation of external antenna.
	Ripwave Plus / FWA	1Mb	€37.50	€26.95	No download limit.
	Home Plus / DSL	2Mb	Free	€28.95	No download limit.
	Home Start / DSL	1Mb	Free	€21.95	No download limit.
Digiweb ⁵²	Metro Value / FWA	2 Mb	€9	€29.95	20Gb download limit applies, Includes voice, Requires installation of external antenna.

3.65. The table shows that the pricing of the cable and DSL products are similar, while the FWA products are priced on average approximately 30% higher than cable and DSL (Note: the average monthly price of the Digiweb product is €38.33 when the set-up price is spread over a 12 month subscription period). However, DSL customers are required to purchase telephone line rental in addition to the broadband product. Telephone line rental is priced at approximately €25 per month. The perception of pricing equivalence will therefore depend to some extent on the customer's requirement for fixed line telephony. For example, customers that require a fixed telephone line may be less willing to switch away from their DSL based retail internet provider. However, such customers may consider cancelling their fixed telephone line and switching to DigiWeb's wireless broadband/voice bundle at a price that is lower than the comparable Eircom product.

3.66. ComReg considers that FWA and Cable retail broadband products are sufficiently similar to DSL retail broadband products in functionality and price, such that a significant number of customers would switch in response to a small but significant price increase. On balance, ComReg considers that FWA and cable retail broadband products are in the same market as DSL retail broadband products.

What is the significance of bundling in defining the retail broadband market?

3.67. Retail broadband services are often bundled together with other products, such as fixed or mobile voice calls, and/or cable television in order to benefit from economies of scope in the supply of those services. Customers often benefit from discounts when they purchase services in a bundle, and may prefer a single point of contact and single bill for services supplied together.

⁵¹ <http://www.irishbroadband.ie/products.php?cbo=1>

⁵² www.digiweb.ie

- 3.68. From the supply side, bundling products into one service offering is likely to achieve savings in production, distribution and transaction costs. Bundling may offer suppliers the possibility of reducing churn in a market which is characterised by high customer acquisition costs, and may increase the revenue per customer even when the price of individual services is decreasing.
- 3.69. On the matter of how bundles should be treated within a market analysis, the EC states that service elements constitute markets in their own right if a sufficient number of customers would ‘unpick’ the bundle if a SSNIP were introduced.
- 3.70. ComReg has considered whether it is appropriate to define a market that combines broadband access with other retail services. In Ireland there are various types of broadband bundles, and most operators offering retail broadband have optional bundles. There are also operators focused on providing retail broadband access that are independent of a bundle. Therefore, customers in Ireland may buy broadband on its own, or combined with voice, or with cable TV, or all three.
- 3.71. ComReg considers that in this fluid environment, if there were to be a small but significant non-transitory increase in the price of a bundle, customers would (and do) choose to purchase the service elements separately, or would be able to switch between different bundles. This indicates that the service elements constitute relevant markets in their own right, and that the various bundles available do not constitute relevant markets.
- 3.72. For the purposes of defining the retail broadband market, then, ComReg’s preliminary conclusion is broadband access should be considered as a relevant product market in itself, not as part of a bundled product.

Geographical scope of the retail market⁵³

- 3.73. ComReg has observed some degree of geographical variation in demand and supply of retail broadband across Ireland. Eircom had equipped 503 exchanges (44%) with DSL by September, 2007.⁵⁴ At the end of 2007, 1.4 million out of 2.2 million⁵⁵ telephone lines could support broadband. At this point in time ComReg understands that approximately ten percent of lines in Ireland are not served by terrestrial broadband networks (satellite broadband may be available throughout these areas). At the end of 2007 Eircom stated that “[we] anticipate that 96% of the working telephone lines in Ireland will be connected to a broadband exchange by the end of 2009”⁵⁶.
- 3.74. In order to ensure that affordable broadband services are available throughout all of Ireland, the Government has introduced the National Broadband Scheme (NBS), which will support the provision of broadband access to households that currently fall outside the reach of existing broadband networks. ComReg expects that the

⁵³ It is not necessary for ComReg to conclude on the precise geographic scope of the retail market, because this analysis is intended only to inform the analysis of the wholesale market.

⁵⁴ source: “First quarter 2007/08 results announcement”, Eircom, 28th November 2007.

⁵⁵ <http://investorrelations.Eircom.net/about/>

⁵⁶ <http://home.Eircom.net/about/press/2007/December/11819201?view=Standard&main=yes>

implementation of the NBS will see the provision of broadband access to all households in Ireland within the period of this review.

- 3.75. However, the availability of competing broadband access providers will still vary depending on location. Information provided to ComReg by industry participants suggested that the availability of alternative forms of broadband access in Ireland is geographically limited. Therefore the broadband options available to a given retail customer will depend on the location of the customer. In general, the availability of alternative platforms is correlated with the population density of a given area (i.e. customers in metropolitan are more likely to have alternatives than customers in rural areas).
- 3.76. Despite the geographic variation in network coverage, retail broadband providers generally offer uniform prices across the country. These prices are not subject to regulation, which suggests the existence of a national pricing constraint. As such, there is no clear evidence of sub-national retail markets.

Preliminary conclusion on retail market definition

- 3.77. ComReg's preliminary conclusion is that the retail market for broadband internet access is distinct from retail internet access via a narrowband connection, from access via leased lines, and from mobile broadband access. All forms of broadband access from fixed locations form part of the same market because customers would be able, and likely, to switch to access via an alternative platform (where available) given a small but significant increase in price.

Defining the relevant wholesale market

Product market

- 3.78. At present, Eircom provides WUA products as a requirement of existing legislation. Eircom is required to provide ULMP, as well as a combined GLUMP and a line share product, for both loops and sub-loops. ComReg is also required to facilitate co-location, and to provide associated facilities necessary to support the products (labelled above as 'LLU products').
- 3.79. OAOs use LLU products to provide a range of retail products, primarily retail broadband and/or narrowband voice. Some OAOs may use LLU products to access customers that are not in reach of their own network. Others may use LLU products as their sole means of reaching the retail market. The control and flexibility offered by WUA means that OAOs can differentiate their retail offerings, and can bundle them in various combinations.
- 3.80. As noted previously, the WUA market is traditionally associated with access to the local metallic loop, which is generally considered to be the least replicable component of a fixed broadband network. The 'local loop' is often referred to as the access component of a broadband network. The access network is the infrastructure (including for example, wires, cables and equipment) lying between a consumer/business premises (the point at which a connection reaches the customer) and the local exchange. In order to access this infrastructure, OAOs typically require

facilities associated with LLU. For example, backhaul between cabinet or exchange based equipment (co-location point) and the OAOs required handover point.

- 3.81. However, the deployment of NGN may change the architecture and design of broadband networks, such that sections of the metallic local loop are overlaid (or replaced) by fibre. For example, fibre may be deployed between the local exchange and the street cabinet (a metallic loop would still exist between the street cabinet and end-customer premises).
- 3.82. In considering the scope of the WUA market in an NGN environment, ComReg notes that the provision of WUA is intended to address competition problems in wholesale and ultimately retail broadband markets. Accordingly, ComReg considers that taking a technologically neutral approach will ensure that the WUA market is sufficiently broad in its scope to address competition issues in an NGN environment.
- 3.83. The starting point for the market definition exercise is to hypothesise a narrow interpretation of the WUA market defined by the EC, and then to assess whether this should be broadened to include close substitutes. As noted above, the EC defines the WUA market as:⁵⁷

Wholesale (physical) network infrastructure access (including shared or fully unbundled access) at a fixed location.

- 3.84. The analysis is forward-looking, so is not bound by the current situation (existing products and technologies). Accordingly, the current set of LLU products, which provide access to the metallic loop, are not a suitable starting point for consideration of the analysis. Rather, the WUA market identified by the EC in its recommendation suggests that a technology neutral approach should be taken in determining the boundaries of the market. Therefore, ComReg considers the appropriate starting point to be access to Eircom's wholesale (physical) infrastructure (including shared and unbundled access) at a fixed location.
- 3.85. From that starting point, ComReg will consider whether the WUA market should also include the following potential substitutes:
- Building a competitive access network
 - Purchasing access to another operator's access network
 - Purchasing Wholesale Broadband Access products (eg bitstream)
- 3.86. ComReg also considers whether self-supply should form part of the WUA market. Based on its preliminary conclusions on the relevant product market, ComReg then examines the geographic scope of the market. Each of these possibilities is discussed in turn below.

Building an access network

⁵⁷ Commission Recommendation on relevant product and service markets, Commission for European Communities, 28 December 2007

Market Review

- 3.87. ComReg has considered whether an operator would consider investing in its own infrastructure as an alternative to purchasing WUA.
- 3.88. Evidence in the market suggests that there are circumstances where this may be possible. For example, an operator may choose to build fibre out to a new housing development, or may choose to use a mix of platforms to supplement its own network, or its existing use of WUA. The analysis must consider the extent to which an operator would find building new infrastructure to be a good substitute for WUA, and must consider if this would happen to the extent that it constrained the hypothetical monopolist supplier of WUA.
- 3.89. ComReg considers it unlikely that an operator would replicate the incumbent's fixed network in response to a SSNIP of WUA. In particular, the high investment costs and the time requirements associated with building the network would mean that such a deployment would not be commercially viable.
- 3.90. Based on its analysis of the retail market, ComReg has identified four possible types of alternative network which should be examined as potential substitutes for WUA. These are:
- Cable
 - Fixed Wireless Access (FWA)
 - Direct fibre connection to the home (FTTH)
 - Mobile

Cable

- 3.91. ComReg has considered whether a cable operator that is currently purchasing WUA (for example as in-fill for its cable network) would switch to build new cable infrastructure in response to a small yet significant non-transitory increase in the price of WUA. This could include extending the cable infrastructure, or upgrading existing infrastructure to allow the offer of retail broadband. The preliminary view is that it would be unlikely that a cable operator would extend the cable infrastructure in response to a small yet significant increase in the price of WUA because of the high cost involved.
- 3.92. The team has also considered the extent to which a cable operator would upgrade existing cable infrastructure to enable it to carry retail broadband in response to a small yet significant increase in the price of WUA. While there has been recent investment in upgrading cable infrastructure in Ireland, the coverage remains limited, and the investment costs are high. The preliminary view is therefore that a switch from WUA to upgrading cable network infrastructure would not be likely to an extent which would constrain a hypothetical monopolist of WUA.

FWA

- 3.93. ComReg has considered whether an FWA operator that is using WUA would switch to investing in new FWA infrastructure in response to a SSNIP of WUA. There are examples already in the market of operators which use a mix of FWA and other technologies to deliver retail broadband.

Market Review

- 3.94. ComReg's preliminary view is that the investment costs associated with Fixed Wireless networks are lower than those associated with a wire-line network (such as cable, copper or fibre). However, the investment costs are still considerable. For example, the operation of FWA requires a licence, and requires spectrum which may not necessarily be available on demand. The process of securing spectrum, gaining planning permission, and deploying FWA infrastructure would be costly and would take considerable time. As such, this option would be less feasible for OAOs that do not already have access to spectrum and infrastructure in place.
- 3.95. In its data direction and subsequent meetings with operators, ComReg asked OAOs the extent to which they would find the deployment of a FWA network to be a substitute for WUA. The response indicated that there is some degree of substitutability in specific circumstances. For example, in sparsely populated areas, and where operators use FWA for in-fill. However, operators would generally not consider FWA investment to be a close substitute for WUA, and would not switch to the extent that would prevent a WUA operator from imposing a successful SSNIP of WUA.

FTTH

- 3.96. ComReg has considered the extent to which an operator would consider building direct fibre connection to the home (FTTH) in response to a SSNIP in WUA. The use of FTTH is generally associated with supply to new housing developments, or to Greenfield business sites, because the cost of supplying and building market share in an existing customer base would be prohibitive.
- 3.97. There are examples in the Irish market of operators using FTTH. FTTH tends to be used for a very specific purpose in a specific location, and is not likely to be viable in the mass market. ComReg notes that for those operators using this technology, it is a small part of their overall business, and they tend to have more customers on services delivered using wholesale inputs than they do on FTTH. Because of the limited scale of FWA, and the specificity in how FTTH is used, ComReg's preliminary view is that switching from WUA to FTTH deployment would not be likely to occur to an extent that would prevent a WUA operator from imposing a profitable SSNIP.

Mobile

- 3.98. Finally, ComReg considered whether an operator would be likely to switch to building a mobile network in response to a small but significant non-transitory increase in the price of LLU products. In the analysis of the retail market, ComReg noted that mobile broadband access is growing rapidly. However, differences in functional characteristics and in pricing led ComReg to propose that retail fixed and mobile broadband were not part of the same product market.
- 3.99. ComReg believes that these differences are apparent also at a wholesale level. An operator would not be likely to find that they could offer a similar range of products over a mobile network as they could using WUA. ComReg does not consider that an operator would consider new mobile infrastructure to be a good substitute for WUA.

Market Review

- 3.100. ComReg's preliminary conclusion is that an operator would not switch to invest in any new network in response to a SSNIP of WUA to the extent that would constrain a WUA operator.

Purchase access to another operator's access network

- 3.101. Having proposed that an operator would not build new infrastructure in response to a SSNIP of WUA, ComReg now goes on to consider whether an operator would seek to purchase a wholesale input from another operator with an alternative network to that of the incumbent in response to a small price increase in WUA.
- 3.102. ComReg proposed in its discussion of the retail broadband market that an end-user would find retail broadband services provided over all fixed access networks to be sufficiently close substitutes. This is because functional characteristics and pricing are sufficiently similar to allow customers to switch between products in response to a small but significant price increase.
- 3.103. ComReg has considered whether a purchaser of WUA would consider switching to purchase a wholesale product offered over an alternative network. The preliminary view is that it would not, because of constraints on supply side substitution. There is currently no product available which would allow an operator of, for example, a cable or FWA network to offer a service which was functionally similar to LLU. The development of a WUA product on alternative networks would require significant investments in time and money, and would not be possible within a reasonable timeframe.
- 3.104. This suggests that an OAO could not readily switch to purchasing WUA on another access network in response to a SSNIP of WUA by a hypothetical monopolist. Therefore, wholesale access on alternative platforms would not form part of the same product market as WUA.

Should wholesale broadband access be considered part of the same product market as wholesale unbundled access?

- 3.105. ComReg has considered whether a retail provider of broadband services based on WUA would switch to purchase WBA in response to a SSNIP of LLU products. ComReg notes that OAOs may use a mix of LLU and bitstream to deliver retail services. The team has explored the functional and cost characteristics of LLU compared with those of bitstream in order to understand on what basis OAOs might switch from LLU to bitstream.
- 3.106. From the perspective of the retail market, it is often possible to supply the same retail broadband services using unbundled local loop products and bitstream. However, an operator would typically see unbundled loops as offering greater control and flexibility over the retail offering. For example, an unbundled loop can be used to offer a broader range of retail products than WBA (including for example narrowband voice), and can also be used to offer a bitstream product. WBA can therefore be considered to be downstream from WUA.
- 3.107. WUA and WBA differ functionally, in that WUA provides greater scope for the differentiation of retail products compared with WBA, where the operator is more

restricted by the incumbent's offering. By installing its own broadband equipment in an exchange, an operator can use the unbundled loop to offer services over alternative DSL standards that offer higher data speeds and lower contention than allowed by the incumbent's bitstream products. Bitstream is often seen as a stepping stone to WUA, rather than as a substitute.

- 3.108. ComReg has also considered the investment costs associated with unbundling a local loop compared with purchasing a wholesale DSL product. Unbundling a local loop requires investment in infrastructure, along with access to associated services such as backhaul. Therefore the LLU product would typically appeal to operators that are confident that sufficient economies of scale can be achieved. This investment represents a sunk cost for operators, which would not be recovered if the operator were to switch back to WBA.
- 3.109. Submissions provided by industry participants to ComReg suggest that the relative pricing of LLU against bitstream is a major factor for operators when deciding on how to reach retail customers.
- 3.110. ComReg's preliminary view is that an operator would not switch from purchasing WUA to purchasing WBA in response to a SSNIP of LLU products, firstly because the functional characteristics of the products are not sufficiently similar, and secondly because the investment costs for WUA are significantly higher than those for WBA, and these costs would not be recovered by an OAO if it were to switch to purchasing WBA.

Should self-supply of wholesale access be considered part of the same market?

- 3.111. ComReg has considered whether self-supply of wholesale access should be considered as part of the WUA market. The issue of self-supply arises where a vertically integrated firm that currently supplies a product or service to its own retail arm would be likely to switch to supply external wholesale customers, given a small but significant price increase. If it is likely to switch to external supply, then its present self-supply should be considered part of the market. This is because, in this circumstance, the ability to switch supply may act as a constraint on the pricing of existing wholesale products.
- 3.112. In considering whether self-supply should be considered as part of the market for wholesale unbundled access, ComReg proposes that self-supply should only be considered for those operators who supply their retail arm based on their own network inputs. This is because including the wholesale elements that operators purchase from another operator and then both supply to their own retail arm and sell on to another operator as a reseller, could significantly overstate the operator's ability to influence a hypothetical monopolist's commercial behaviour. Applying the SSNIP test, it is unlikely that a hypothetical monopolist provider of wholesale access based on own network inputs would be constrained from implementing a 5-10% price increase above the competitive level by the provision of this service by resellers. This is because the resellers' wholesale inputs would also presumably be subject to the 5-10% price increase by the hypothetical monopolist.

Market Review

3.113. It is ComReg's view that self-supply should be considered part of the market where the following conditions apply:

- Where the operator already has spare capacity available which could be offered in the wholesale market. This means that the networks must be sufficiently rolled out and of sufficient capacity and coverage so as to comprise a viable alternative for wholesale customers.
- Where offering new or additional wholesale capacity does not incur significant investment costs, either in infrastructure or in services such as billing or account management.
- Where it is likely and probable that a vertically integrated operator would act in this way.
- Where a customer could switch relatively easily to purchase a new supplier's product or service, without incurring significant costs (for example, in connecting to the alternative suppliers' networks).

3.114. These conditions would apply to all operators in the market, so that self-supplied capacity which met these conditions would be included within the relevant market. ComReg has taken account of a recent report prepared for the EC which notes that *"Only in the case where a rival firm has reached a network roll-out and geographical coverage comparable with the existing operator(s), where the necessary spare capacity is available, wholesale billing and account management systems exist, and where switching costs are low, supply substitution appears to impose a strong enough pricing constraint on the existing wholesale products. In this case the rival firm's self provided inputs could be included in the same relevant wholesale market together with incumbent's wholesale offerings"*.⁵⁸

3.115. It is ComReg's view that the reasoning above applies to self-supply in the WUA market. The incumbent's wholesale offerings would therefore form part of the market, as this meets the criteria established above. ComReg has considered the extent to which any other operators would also meet the criteria.

3.116. In the case of all other network operators, ComReg considers that none of the criteria are met. Operators do not have existing spare capacity, and network coverage is limited. The provision of new or additional capacity would incur significant investment costs. It is not likely that a vertically-integrated alternative operator would choose to offer a wholesale product on a scale which would constrain the WUA operator.

Preliminary Conclusion

3.117. ComReg's preliminary proposal is that the WUA market comprises wholesale physical network infrastructure access, including shared and fully unbundled access, at a fixed location. An operator that currently owns FWA, cable or fibre infrastructure would not consider building new infrastructure as an alternative to

⁵⁸ Martin Cave, Ulrich Stumpf and Tommaso Valletti, July 2006, "A review of certain markets included in the Commission's Recommendation on Relevant Markets subject to ex ante Regulation", available from: http://ec.europa.eu/information_society/policy/ecomms/info_centre/documentation/studies_ext_consult/index_en.htm, p. 17.

Market Review

investing in WUA, because of the time and costs involved. Further, it would not be possible for an operator to buy a WUA product on another operator's (other than the incumbent) infrastructure. At present, it is not technically possible to provide WUA on a cable, FWA, or FTTH network, and the time and costs involved in developing such a product means that it would not be likely within the timeframe of this review.

- 3.118. ComReg's preliminary view is that the functions and investment requirements for WBA are sufficiently different to those associated with WUA, such that WBA is in a separate product market. It is also ComReg's preliminary view that the incumbent's self-supply would form part of the WUA market.

Q. 1. Do you agree with ComReg's preliminary proposal that the relevant product market is for wholesale unbundled access?

Q. 2. Do you agree that this market does not include access via new infrastructure, and does not include wholesale access via alternative platforms?

Q. 3. Do you agree with ComReg's preliminary view that wholesale broadband access is not in the same product market as wholesale unbundled access?

Q. 4. Do you agree with ComReg's preliminary view that the incumbent's self-supply would form part of the wholesale unbundled access market?

Relevant Geographic Market Definition

3.119. At present, WUA is supplied on a national basis. ComReg has considered whether there is structural or behavioural evidence to suggest that there may be any sub-national markets for WUA. This has involved examining whether there are different supply and/or demand characteristics which are associated with different competitive pressures in different areas.

3.120. ComReg notes that there are no functional differences in WUA products offered in different areas. The product does not vary.

3.121. The roll-out of WUA has not been uniform across the country, and demand tends to be associated with areas of higher population density. This indicates variation in demand conditions, such that some areas are economically more attractive for unbundling access than others. ComReg has considered whether this variation would lead towards the definition of separate geographic markets. ComReg does not consider that there is sufficient certainty concerning areas where there may be higher

Market Review

demand for unbundled access to identify them as constituting separate geographical markets.

- 3.122. ComReg recognises that Eircom's WUA prices are currently set by regulation, and that there is a uniform price at a national level. It cannot be assumed that, absent regulation, a common price would be applied. However Eircom applies a uniform price throughout the country in the downstream retail broadband market, despite no regulation of prices. OAO pricing in the retail broadband market, which again is not subject to regulation, is also uniform throughout the country. This leads ComReg to conclude that it is not necessarily the case that an absence of price regulation in WUA would inevitably lead to geographical pricing differences.

Preliminary Conclusion

- 3.123. ComReg's preliminary conclusion is that the relevant geographic market is national in scope.

Q. 5. Do you agree with ComReg's preliminary conclusion that the relevant geographic market is national? Please provide a reasoned response.

4. Relevant Market Analysis

Introduction

- 4.1. Having defined the scope of the relevant product and geographic markets, the next step is to determine if the relevant market is effectively competitive or if SMP exists.
- 4.2. The Community regulatory framework for electronic communications networks and services has aligned the concept of SMP with the competition law definition of dominance advanced by the European Court of Justice (“ECJ”) in *United Brands v. Commission*:⁵⁹

“The dominant position thus referred to [by Article 82] relates to a position of economic strength enjoyed by an undertaking which enables it to prevent effective competition being maintained on the relevant market by affording it the power to behave to an appreciable extent independently of its competitors, customers and ultimately of its consumers.”

- 4.3. Article 14 of the Framework Directive effectively mirrors this definition of dominance and equates SMP with:

“A position of economic strength affording it [the undertaking] the power to behave independently of competitors, customers and ultimately consumers”.

- 4.4. The EC’s SMP Guidelines focus on the competitive constraint imposed on an undertaking by existing and potential competition.⁶⁰ The EC stresses that the existence of a dominant position cannot be established on the sole basis of large market shares. Rather, the existence of a high market share indicates that the undertaking might be in a dominant position. The EC recommends that in the existence of a high market share, a number of criteria may be used as a guide to measuring the power of an undertaking to behave independent of competitors, customers, and consumers.⁶¹ For the purpose of this market analysis, ComReg considers the following criteria to be particularly relevant in assessing the extent of Eircom’s market power. ComReg has therefore focused its analysis on the these criteria:

- Control of infrastructure not easily duplicated
- Absence of or low countervailing buying power

⁵⁹ Case 27/76 *United Brands v Commission* [1978] ECR 207, para. 65.

⁶⁰ Although an undertaking may not be subject to competitive constraints from existing competitors, potential competitors or large buyers, in markets subject to ex-ante regulation an undertaking may still be restricted from profitably sustaining prices above, or reducing output below competitive levels by way of regulatory controls imposed by the NRA. Notwithstanding this, it is necessary to also consider the potential ability of the undertaking to exert market power in the absence of such ex-ante regulation. To do otherwise might lead to a finding of non-dominance on the basis of regulatory remedies that would cease to exist following the review and in the absence of which the operator may be able to exert market power and possibly engage in anti-competitive behaviour. The purpose of the regulatory remedies is to mitigate the likely anti-competitive effects arising from a position of SMP. The key question is therefore how is the operator in question likely to behave if it were free from regulatory constraints and if the continued imposition of remedies is as such warranted.

⁶¹ European 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) 11.7.2002

Market Review

- Economies of scale
 - Economies of scope
 - Vertical integration
 - Absence of potential competition
 - Barriers to expansion
- 4.5. ComReg considers that the relative importance of each factor may vary from one analysis to the next as the market characteristics/dynamics change. Consequently, flexibility needs to be applied in applying the above criteria. In addition, many of the above factors, while presented separately, may in fact be interrelated and all available evidence must be considered as a whole before a determination on SMP can be made.
- 4.6. This analysis goes on to consider potential constraints on competition in the WUA market. The analysis considers firstly existing competition in the market, secondly potential competition, and finally an assessment of countervailing buyer power examines the impact of any strong buyers.

Existing Competition

- 4.7. ComReg's analysis of existing competition in the WUA market considers three key elements. First of all, an examination of **market structure** identifies the mechanics of supply and demand. Secondly, a review of **market shares** presents data and assesses trends. Thirdly, ComReg assesses whether any competitor is able to **act independently** of other competitors. The analysis is based on an examination of historical trends and a consideration of likely future developments in the market.

Market Structure

Supply

- 4.8. Eircom is currently the only supplier of wholesale unbundled access in Ireland.
- 4.9. ComReg has considered the extent to which potential changes in Eircom's access network over the next few years may modify conditions in the WUA market. The deployment of NGN networks could potentially change the structure of the local network architecture. For example, where fibre is rolled out to the street cabinet, the intermediate node at the MDF may cease to exist. This would in effect bypass the current connection point for WUA, and would pose both economic and technical difficulties for operators using WUA in its current form.
- 4.10. ComReg recognises the advantages of modernising networks, and welcomes the potential to offer new and innovative services to customers in a cost-effective way. However, ComReg's approach to the WUA market focuses on the need to ensure that OAOs have access to wholesale inputs which will allow them to compete in the related retail markets, and this focus remains irrespective of changes in how Eircom structures or supplies its access network.

Demand

- 4.11. WUA is purchased by OAOs to enable them to offer a range of retail narrowband and broadband products and services. It is ComReg's view that wholesale unbundled access offers OAOs the opportunity to innovate, and to differentiate their service offerings both in terms of product characteristics and price. This is because wholesale unbundled access allows OAOs to offer products and variants of products which are not necessarily offered by the incumbent.
- 4.12. Information supplied to ComReg in response to its data direction indicates that OAOs which are unbundling local loops are typically using it to offer higher speed broadband than is offered by Eircom, and to offer a variety of bundles including narrowband voice, broadband internet, and TV.
- 4.13. At the end of September 2007, around 18,150 local loops had been unbundled, which amounts to around 4% of all DSL lines in Ireland.⁶² This compares to a European average of around 23%.⁶³ This includes fully unbundled lines and shared lines.

⁶² CSFB: European First Tel Factsheet- December 2007

⁶³ ComReg Quarterly Review, 07/106 Dec 07.

Market Review

Shared lines account for around 7% of the total number of unbundled lines. Typically an OAO may choose to use a shared line where the narrowband voice service remains with the incumbent, and may use a shared line as an intermediate step towards full unbundling. The level of unbundling remained fairly constant through 2007, following a slight decrease in 2006.

Market Shares and Concentration Levels over Time

- 4.14. Market shares are not on their own determinative of SMP but are nonetheless a useful starting point for defining instances where SMP is more likely to arise. It is clear from EU jurisprudence and the SMP Guidelines that concerns about SMP are more likely to arise in instances where an undertaking holds a large market share over a period of time. According to established case law and the SMP Guidelines:⁶⁴

“...very large shares are in themselves, and save in exceptional circumstances, evidence of the existence of a dominant position. An undertaking which has a very large market share and holds it for some time... is by virtue of that share in a position of strength...”

- 4.15. The European Court of Justice stated further in *AKZO*⁶⁵ that a market share of persistently above 50% could be considered to be very large so that in the absence of exceptional circumstances pointing the other way, an undertaking with such a market share could be considered to be dominant.
- 4.16. ComReg recognises that large market shares are not in themselves sufficient to form the basis of a finding of SMP and that other factors that may contribute to SMP must also be taken into account.
- 4.17. In order to quantify the market, ComReg issued a data direction to stakeholders in the broadband market in December 2007. This was supported by discussion with operators, and ComReg sought detailed information from current and potential suppliers and purchasers of WUA. As the data direction was issued prior to the market definition exercise, ComReg asked for information to be provided in such a manner as to facilitate various alternative potential definitions of the market.
- 4.18. ComReg’s preliminary finding is that Eircom has 100% of the WUA market. This remains unchanged from the last market review.

Ability to Act to an Appreciable Extent Independently of Existing Competitors

- 4.19. The previous section has established that Eircom has a market share of 100% in the WUA market. While this is very strongly indicative of dominance, ComReg has considered whether there may be factors in the market which qualify the market power suggested by the market share alone. This section examines the extent to which the supplier in the WUA market can act independently.

⁶⁴ Case 85/76 *Hoffmann-La Roche v Commission*, [1979] ECR 461, [1979] 3 CMLR 211, para. 41; and the SMP Guidelines, para. 75.

⁶⁵ Case C-62/86 *AKZO Chemie BV v Commission* [1991] ECR I-3359, para. 60.

Market Review

- 4.20. It is important to consider not only the current state of the market, but also the extent to which competitors are likely to be able to act independently over the lifetime of this review. It is ComReg's preliminary view that it is unlikely that there will be direct competition to Eircom in the WUA market over the lifetime of this review. OAOs are not likely to develop and make available a WUA product on their own networks.
- 4.21. However, it may be that a degree of competition in a downstream market could act as an indirect constraint on Eircom's ability to act independently in the WUA market. ComReg has therefore considered whether there are indirect constraints arising from a downstream market which would qualify any market power in the WUA market.
- 4.22. The notion of indirect pricing constraints is that even when there are no close product substitutes in an upstream market, the price elasticity of demand can be high. This would be the case if it were shown that an increase in the wholesale price caused downstream customers to switch to another product, so that not only demand for the downstream product fell, but also demand for the wholesale input. In the case of WUA, the downstream products could include a range of retail products delivered over WUA, and could include a wholesale bitstream product.
- 4.23. ComReg has considered the following:
- Would a downstream operator be forced to pass on any increase in the WUA, and if so, what proportion of increase would be passed on? The cost of the wholesale input makes up a considerable part of the retail price, but not all of it. The level of any increase in the wholesale price would therefore be diluted when passed through to the retail level. ComReg considers that WUA inputs would make up approximately 30-40% of the retail price. The question of indirect pricing is therefore the behavior of consumers in response to a retail price increase of around 3%.
 - Following a price increase of this order, would there be sufficient demand substitution at a retail level to render the wholesale price increase unprofitable? In its assessment of the retail broadband market, ComReg proposed that all forms of retail broadband from fixed locations form part of the same product market, because retail customers are generally indifferent to the underlying technology, and there is broadly common product characteristics and pricing across platforms. There is therefore the potential for substitution at a retail level. In analysing the market, ComReg has to consider whether there is likely to be sufficient substitution to render a wholesale price increase unprofitable.
- 4.24. ComReg considers that customers who were buying retail broadband provided via WUA would be able to switch to retail broadband provided over other platforms such as cable and FWA in response to a SSNIP triggered by a wholesale price increase. However, these alternative platforms have limited roll-out and availability within Ireland, and this would reduce the number of customers that could actually switch. Another possibility may be that customers buying WUA-based retail broadband could switch to another DSL product provided via bitstream. While this option may not have the availability constraints of alternative networks, and so there may be demand substitution in the retail broadband market, ComReg's view is that the lack

Market Review

of wholesale substitution on the supply side would limit the extent to which customers would be able to switch.

- 4.25. Would retail customers of a vertically-integrated hypothetical monopolist be able to switch to the integrated operator's retail arm, particularly if it did not raise its retail prices? In ComReg's view, if an integrated hypothetical monopolist raised its wholesale prices, but sustained its retail prices below that offered by wholesale purchasers, it would be able to gain retail customers from competitors which relied on the purchase of wholesale inputs. This would make a wholesale price increase profitable for the vertically-integrated operator, and would indicate no indirect constraint.
- 4.26. Overall, ComReg's preliminary view is that there is evidence of some indirect pricing constraint from the retail level, but that it is not nearly significant enough to constrain the WUA operator at a wholesale level.

Preliminary Conclusion on existing competition

- 4.27. ComReg's preliminary conclusions from analysing existing competition in the WUA market are that Eircom has a persistent market share of 100%, and that this is not likely to change over the lifetime of this review. While there is some indirect impact arising from a degree of competition from downstream markets, it is not sufficient to constrain the ability of Eircom to act independently.

Potential Competition

- 4.28. In assessing the possibility for existing and potential new entrants to act as a constraint on the undertaking alleged to have SMP over the period of this review, ComReg has analysed the nature and extent of any barriers to firms both entering and expanding in the relevant market. This section examines the barriers to entry to the WUA market. This includes a consideration of the potential impact of sunk costs, economies of scale and density, control of infrastructure, and organisational integration.

Barriers to Entry

- 4.29. Barriers to entry generally comprise any disadvantage that a new entrant faces when entering a market that incumbents do not currently face. According to the Explanatory Memorandum accompanying the Relevant Markets Recommendation.⁶⁶

"...high structural barriers may be found to exist when the market is characterised by substantial economies of scale, scope and density and high sunk costs."

Sunk Costs

- 4.30. The mere existence of sunk costs does not automatically imply that entry barriers are high. It is acknowledged that a certain level of sunk costs will be involved in entering most markets, and that the incumbent may also have had to pay a similar level of sunk cost before it entered the market. Notwithstanding this, the OECD's 2005 report on Barriers to Entry notes that in some circumstances it is more difficult for new

⁶⁶ Explanatory Memorandum to the Recommendation, p. 10.

Market Review

entrants to break into a market than it was for the incumbent that was the first firm to enter and that:

“when a market is already occupied by an incumbent potential entrants might face an entrenched brand or brands, as well as demand that is insufficient to permit efficient operation”.

- 4.31. The OECD Report notes further that where sunk costs are high, an established incumbent who has already incurred substantial sunk costs may have the ability to respond to new entry by charging prices above its own average costs but below what the new entrant would need to cover its sunk costs of entry. The sunk costs create a decisional asymmetry that is capable of deterring entry because incumbents have already paid them and entrants have not. If sunk costs are high relative to the post-entry price or expected profit opportunity from being in the market, then entry may be deterred - *“In general, the higher the sunk costs of entry, the less likely it is that a firm will enter”.*
- 4.32. Entry to, and expansion in, the WUA market would involve considerable sunk costs. Initial investment is required in product development, equipment, trenches, duct and underground plant. While there may be some resale value, the majority of these costs are not likely to be recovered on any eventual exit from the market. ComReg notes that, in considering the effect of sunk costs, it is not necessary to assume that a market entrant would have to invest in an access network of the magnitude of Eircom’s network. Considerable costs would need to be sunk in order to enter the WUA market even in a limited way.
- 4.33. ComReg’s preliminary view is that sunk costs constitute a barrier to entry for any operator which does not already own an access network, and constitute a lesser but still significant barrier to entry for an operator which has an access network but not the elements required to offer a wholesale unbundled access product.

Economies of Scale, Scope and Density

- 4.34. Economies of scale, scope and density refer to potential advantages that larger incumbents may enjoy over smaller new entrants. Economies of scale generally refer to the cost advantage which a large-scale operator may have over a smaller operator where the marginal cost of production decreases as the quantity of output produced increases. Economies of scope refer to the potential efficiencies which may be gained by a firm jointly producing a range of goods and services, e.g., where a cable network could be used to provide TV, voice telephony and Internet access services simultaneously. Economies of density refer to potential efficiencies associated with supplying customers who are geographically concentrated.
- 4.35. It is ComReg’s view that the WUA market is characterised by economies of scale, scope and of density. Economies of scale are achieved from the point where connections from several premises share ducting in the connection to the MDF or equivalent. A large-scale supplier or prospective supplier of WUA would be able to achieve economies of scale in the connection infrastructure at the MDF, in the ducting, and in the supporting facilities needed to offer unbundled services (for example, product development, technical support, billing and so on).

Market Review

- 4.36. ComReg has considered the Minimum Efficient Scale (MES) which would need to be achieved by a supplier of WUA, in order to be cost efficient or to minimise average costs. The MES has to be considered in light of the eventual retail market, because a purchaser of WUA would have a minimum number of retail customers, below which it would not be economic to offer service, and the wholesale supplier's offer would need to reflect this.
- 4.37. Economies of scope may be achieved by the supplier of WUA, which could use its access network to offer wholesale products such as WUA and WBA, and to offer its own retail products.
- 4.38. The ability to achieve scale and scope economies is linked to the importance which economies of density have on the WUA market. Again, this has to be considered in light of the eventual retail market, where the cost of supply per customer decreases in line with the number of customers supplied. The response to ComReg's data direction clearly indicated that WUA is most viable in areas which have high population density, and the pattern of WUA roll-out so far confirms this. This provides evidence of associated economies of density in the market. An entrant would have to achieve a significant market share to be competitive on cost, and this is indicative of economies of density.
- 4.39. In considering the extent to which economies of scale, scope and density constitute barriers to entry, ComReg notes that there are high sunk costs associated with entry and expansion within the WUA market. This acts to exacerbate the effects of economies of scale, scope and density.

Control of Infrastructure/Inputs Not Easily Replicated

- 4.40. The SMP Guidelines note control of infrastructure not easily duplicated as a relevant criterion for assessing whether SMP exists. This may be relevant where, for example, access to a certain infrastructure is necessary to produce a particular product or service, the required infrastructure is exclusively or overwhelmingly under the control of a certain undertaking and there are high and non-transitory barriers associated with replacing the infrastructure in question⁶⁷. According to the SMP Guidelines, it is not necessary for the infrastructure to be deemed "essential" within the meaning of EU competition law. Ownership of a significant infrastructure may confer an absolute cost advantage on the incumbent and the cost and time involved in operators replicating the infrastructure in question may pose a significant barrier to entry. In addition, it may be possible for the owner of the infrastructure in question to leverage their market power into horizontally or vertically related markets.
- 4.41. In order for an operator to be able to compete with Eircom in the supply of WUA, it would need to establish an access network with the capacity to offer WUA, and would need to have the motivation to do so. In the Market Definition, ComReg's

⁶⁷ See Revised ERG Working Paper on the SMP concept for the new regulatory framework, ERG (03) 09 rev3, September 2005, available from:

http://erg.eu.int/doc/publications/public_hearing_concept_smp/erg_03_09rev3_smp_common_concept.pdf#search=%22ERG%20working%20paper%20SMP%22, p. 5.

Market Review

preliminary view was that the deployment of alternative infrastructure, such as direct fibre connection, or FWA, would not be considered as a substitute product for WUA. In considering the extent to which Eircom's control of infrastructure not easily replicated acts as a barrier to entry, ComReg has considered whether an operator's ability to invest in its own infrastructure and self-supply would constrain Eircom's behaviour in the market. The preliminary conclusion is that instances of investment in own infrastructure are examples of replication of Eircom's network, but that they are still limited in extent, and form a small part of the overall access market. Therefore, it is considered that Eircom has control of infrastructure which is not easily replicated, and that this constitutes a barrier to entry.

Vertical Integration

- 4.42. A vertically integrated operator can enjoy significant efficiencies arising from its presence in upstream and downstream markets. Such efficiencies can also be passed to consumers in the form of cheaper prices, lower transaction costs and/or enhanced product quality. However, vertical integration can also constitute an entry barrier where the presence of a firm at multiple levels of the production or distribution chain raises the costs of new entry (e.g. where prospective new entrants perceive the need to enter multiple markets simultaneously to pose a viable competitive constraint on the integrated operator) and/or increases the possibilities for the integrated operator to foreclose competition at one or more levels in the value chain.
- 4.43. A supplier of WUA needs to have a means of acquiring retail customers, and for an integrated operator, this would mean that it developed downstream capability such as its own retail operation. Eircom is a major provider of retail broadband, and so is in a strong position to consolidate its position in the WUA market.
- 4.44. A firm with market power in one market may also by virtue of its vertically integrated position be capable of leveraging that market power into related markets. For example, where the only or primary source of access for certain upstream inputs which are necessary for competing in downstream markets is via the vertically integrated operator, the potential for the integrated operator to leverage its control into downstream markets could act as a disincentive to new entry into those related markets and in turn reinforce entry barriers at the upstream level.
- 4.45. ComReg has considered the extent to which an integrated operator could leverage market power between the wholesale unbundled access market and the retail broadband market. Eircom is the primary source of wholesale inputs into retail broadband services, and has its own retail broadband operation. Absent regulation, there would be an incentive for an integrated operator to apply a margin squeeze between wholesale costs and retail prices.

Preliminary Conclusion

- 4.46. ComReg has assessed the nature and extent of barriers to entry and expansion and the overall scope for competition in the WUA market. Its preliminary conclusion is that significant barriers exist primarily in the form of the need for sunk costs; economies of scale and density; control of infrastructure not easily replicated; and vertical integration. While ComReg has assessed the impact of the range of potential factors

proposed by the EC, it has focused this analysis on the most significant barriers to entry and expansion. It is ComReg's view that these barriers are high and non-transitory, and therefore act as a deterrent to potential competitors. As such, potential competitors do not pose a significant constraint in the WUA market.

Countervailing Buyer Power

4.47. Another potential constraint on an undertaking's ability to exercise market power is buyer power. Countervailing buyer power can arise if, for example, a particular purchaser is sufficiently important to its supplier to influence the price or other terms and conditions of supply. The circumstances where countervailing buyer power might be observed include where a customer:

- Accounts for a significant proportion of the supplier's total output;
- Is well-informed about alternative sources of supply; and
- Is able to switch to other suppliers at little cost to itself or to self-supply the relevant product relatively quickly and without incurring substantial sunk costs.

4.48. ComReg notes that, in Ireland, there are a small number of actual and potential buyers for WUA, and so individual buyers may well account for a significant proportion of total output. However, in the market for WUA, there is no alternative source of supply, and this reduces any potential countervailing buyer power which could exist.

Preliminary Conclusion

4.49. ComReg has assessed whether or not countervailing buyer power exists in the WUA market and its preliminary conclusion is that it does not exist to the extent which would qualify Eircom's market power.

Overall Preliminary Conclusion on Market Analysis

4.50. ComReg has analysed developments in the structure of the market since the previous review and the nature and extent of any competitive constraints posed by existing and potential competitors and any countervailing buyer power in the market(s) under consideration.

4.51. ComReg's preliminary conclusions are that:

- Existing competitors do not pose a significant competitive constraint
- Barriers to entry are high and non-transitory
- Potential competition is negligible
- Countervailing buyer power is negligible.

4.52. Based on these conclusions, ComReg is of the preliminary view that Eircom has significant market power in the WUA market.

Q. 6. Do you agree with ComReg's preliminary analysis of the WUA market?

5. Proposed Designation of Undertakings with Significant Market Power

- 5.1. Where ComReg determines, as a result of a market analysis carried out by it in accordance with Regulation 27 of the Framework Regulations, that a given market identified in accordance with Regulation 26 of the Framework Regulations is not effectively competitive, ComReg is obliged to designate an undertaking under Regulation 27(4) of the Framework Regulations as having significant market power.
- 5.2. Having regard to the preliminary conclusions of the above market analysis, ComReg is therefore of the provisional view that:

Eircom should be designated as having SMP in the market for Wholesale Unbundled Access.

Q. 7. Do you agree with ComReg's preliminary view that Eircom has SMP in the Wholesale Unbundled Access market? Please provide a reasoned response.

6. Competition Problems

Introduction

- 6.1. This section highlights a number of potential competition concerns associated with the lack of effective competition that may arise in the relevant market. In view of the significant potential for such competition problems to arise, ComReg deems *ex ante* regulation to be an appropriate complement to competition law for dealing with competition concerns arising in the relevant market. Finally, ComReg sets out a number of proposed remedies which it considers to be based on the nature of the competition problems identified and proportionate and justified in the relevant circumstances. The appropriateness and proportionality of the proposed remedies is further demonstrated by the Regulatory Impact Analysis carried out below in accordance with the Ministerial Direction (issued by the Minister for Communications Marine & Natural Resources pursuant to section 13 of the Communications Regulation Act, 2002) published in February 2003.

Potential Competition Problems

- 6.2. It is important to note that it is not necessary for ComReg to point to examples of actual anti-competitive activity within the meaning of Article 82 of the Treaty and/or Section 5 of the Competition Act, 2002 that have occurred or are occurring. The finding of dominance indicates the potential for competition problems to arise, and this is sufficient to justify the imposition of *ex ante* regulation. In considering the form which *ex ante* regulation should take, ComReg has been guided by experience in the market, in particular by the types of competition problem which continue to arise.
- 6.3. In determining what form of *ex ante* regulation is warranted in the relevant market, ComReg has carried out an assessment of potential competition problems that are likely to arise assuming SMP regulation is absent. In the absence of SMP regulation, a dominant undertaking has the potential ability to influence a range of competition parameters, including prices, innovation, output and the variety or quality of goods and services provided. Three broad types of competition problems may arise where an undertaking has SMP in one or more markets. These potential problems involve conduct by the SMP operator that is aimed at:
- exploiting customers by virtue of its SMP position;
 - leveraging its market power into adjacent vertically or horizontally related markets; and
 - foreclosing or excluding competitors such as to protect its existing dominance on the market or markets in question.

Each type of problem is now described.

Exploitative Practices

- 6.4. Economic theory suggests that where a firm possesses market power it is in a position to increase prices above and/or reduce output below competitive levels, thereby allowing higher than normal profits to be earned. These higher profits effectively create a wealth transfer from the consumer to the firm with market power.

It is ComReg's view that an operator which was dominant in the market for WUA would be able to engage in exploitative practices, and would have the incentive to do so.

6.5. Examples of potentially exploitative behaviour by an SMP operator include:

Denial of access – this may be a constructive denial and not necessary an outright and categorical refusal to supply. Examples of these practices could include delaying tactics such as protracted negotiations for new entrants, discriminatory use or withholding of information, quality discrimination, strategic design, disproportionate entry criteria as well as unreasonable terms and conditions associated with access. For example, in the situation where OAOs may wish to co-locate in order to implement WUA, the SMP operator could reasonably be expected to plan for expansion of MDF space, power supply and so on, so that it is physically possible for co-location. A failure to do so could be considered as denial of access.

Excessive Pricing – According to EU competition law, excessive pricing refers to a situation where the prices charged by a dominant undertaking are not closely equivalent to the value to the consumer and/or the cost of producing or providing the relevant service.⁶⁸ In line with established competition law practice, ComReg would have concerns about excessive pricing in markets where price levels are persistently high and there is no effective pressure (e.g. from new entry or innovation) to bring them down to competitive levels, nor is there likely to be over the time period of the review. ComReg suggests that, given the barriers to effective competition analysed earlier, and in the absence of SMP regulation, there would be an incentive for Eircom to price excessively. This would raise input costs to retail operators and ultimately raise prices to end-consumers.

In order to address the potential for excessive pricing, ComReg notes that *ex ante* regulation is generally required. Competition law applied on an *ex post* basis is often unsuitable in preventing excessive pricing, and this is evidenced by the scarcity of successful *ex post* excessive pricing cases within EC Jurisprudence. An *ex post* approach to excessive pricing does not offer adequate protection for consumers, as the effect on the market is often too late.

Eircom's wholesale prices in the WUA market are currently regulated. The methodology for setting the price level is under review, and the consultation is taking place in parallel with this market review. ComReg notes that the price for unbundled access in Ireland is amongst the highest in Europe, and this has a clear effect on wholesale demand, and eventually on the development of the retail broadband market.

Inefficiency/Inertia – A firm with SMP in a relevant market may also, by virtue of the lack of effective competition in that market, be insulated from the need to innovate and improve efficiency to stay ahead of rivals.

⁶⁸ Case C 27/76 United Brands v. Commission, [1978] ECR 207, [1978] 1 CMLR 429. In United Brands the ECJ held that: "...charging a price which is excessive because it has no reasonable relation to the economic value of the product supplied... is an abuse".

It may also decide to withhold investment in related markets to delay or impede the development of competition in those markets, e.g., where the SMP firm has control over certain key inputs necessary to compete in downstream markets and delays upgrading those inputs or providing newer, potentially more cost effective, inputs in line with technological developments.

This may limit the development of new technology and/or lead to costlier and less efficient methods of production and consequently higher prices for consumers than would otherwise exist under competitive market conditions. Such inefficiency could potentially be considered an abuse under competition law given that Article 82(b) of the EU Treaty specifically gives as an example of an abuse the limitation of production, markets or technical development to the prejudice of consumers. For example, in *Merci Convenzionali Porto di Genova v. Siderurgica Gabrielli*⁶⁹ the refusal of dock workers (who had a monopoly for the loading and discharging of cargo on behalf of third parties in the port of Genoa) to use modern technology for the unloading of vessels meant that operations were more expensive than they would otherwise be. This failure to use new technology was found to constitute an abuse.

As an SMP operator in the provision of WUA, there is no effective pressure (absent regulation) on Eircom to innovate and provide an efficient service. Therefore there is little incentive to implement product upgrades or process improvements in the WUA services. This could include, for example, the provision of efficient backhaul solutions, where OAOs may express demand for a product which is not addressed. Other examples of the types of competition problem associated with inefficiency or inertia which could arise in the WUA market would include cumbersome order management processes, or delays in providing required metrics. These types of inefficiency related problems delay OAOs in unbundling exchanges.

Leveraging

Vertical Leveraging

- 6.6. Vertical leveraging arises where a vertically integrated operator has dominance at one level in the production or distribution chain, e.g., the wholesale level, and can potentially transfer this market power into potentially competitive downstream retail markets. This would mean that a vertically integrated operator that is dominant in the WUA market may have the incentive to use this power to affect the competitive conditions in related retail markets, such as the market for retail broadband, or the markets for other services that use WUA products as an input (for example, the WBA market. Examples of vertical leveraging can include refusal to deal, certain tying practices, margin squeeze, cross subsidisation to facilitate predatory pricing type behaviour, practices aimed generally at raising rivals' costs⁷⁰, etc.

⁶⁹ Case C-179/90 [1991] ECR I-5889.

⁷⁰ Unlike predatory pricing, certain practices can be employed which unfairly raise a rival's costs and reduce competition and which do not necessarily require the SMP undertaking to incur short run losses. For example, an integrated firm with market power in an upstream market may have incentives to raise the price of the inputs it sells to its downstream rivals, thereby potentially raising their costs and reducing demand for their products. Furthermore, the integrated operator could potentially give priority to its own traffic at network bottlenecks or apply standards that are easier for its own retail affiliate to meet than for its downstream competitors. (See Krattenmaker, T.G. and S.C. Salop (1986) "Anticompetitive Exclusion: Raising Rival's Costs To Achieve Power over Price", Yale Law Journal, 96:209-93; Salop, S.C. and D.T. Scheffman (1987), "Cost-Raising Strategies", Journal of Industrial Economics, 36:19-34).

- 6.7. ComReg's analysis has indicated that Eircom has a continuing high market share in the WUA market, and that there is a limited existence of other factors which would act to significantly dilute Eircom's potential market power within the timeframe of this review. ComReg therefore suggests that Eircom, as a vertically-integrated operator, would have the incentive to leverage its market power in the absence of SMP obligations.
- 6.8. In assessing the potential for vertical leveraging, ComReg has to consider whether a vertically integrated operator offers a product or service to OAOs which is equivalent to the product or service offered to the vertically integrated operator's downstream operation. Because the operator is integrated, it may be difficult to compare products used internally with those offered in the merchant market, and may be difficult to compare how products are developed and implemented. There may therefore be the potential and the incentive for a number of non-price means of leveraging market power. A lack of transparency in how products and services are developed and implemented internally to the SMP operator could make it difficult to demonstrate equivalence.
- 6.9. Vertical leverage may also be apparent in the use of price. A number of industry participants have suggested that the high prevailing price of LLU products (and also the price relative to other types of wholesale input, such as Wholesale Broadband Access) prohibits operators from competing effectively with Eircom in the broadband retail market. This has contributed to the relatively low uptake of unbundled access in Ireland, and has limited the ability of unbundled operators to innovate and price-lead in the downstream market. ComReg is currently reviewing the unbundled access pricing methodology.

Horizontal Leveraging

- 6.10. Horizontal leveraging involves an undertaking which is dominant in one market using its market power to exert undue influence in other markets that are at the same level in the production or distribution chain. Examples of horizontal leveraging can include certain tying/bundling practices and cross subsidisation/predatory pricing type behaviour.

Exclusionary Practices

- 6.11. In addition to any potential leveraging into vertically or horizontally related markets, the operator may attempt to defend its existing SMP position in the relevant market(s) by engaging in predatory behaviour or conduct aimed at foreclosing the market(s) concerned. Examples of potentially predatory behaviour include predatory pricing, exclusionary actions aimed at raising customer switching costs, raising rivals' costs and so on.
- 6.12. Dominance in the WUA market could, absent regulation, potentially lead to exclusionary practices by Eircom as other operators seek to gain access to unbundled local loops.
- 6.13. For example, the SMP operator has an incentive to frustrate the process whereby retail customers can switch to an alternative product or an alternative provider.

OAOs may wish to migrate retail customers between wholesale products, and may wish to carry out single or bulk migration of their customer base. This should involve minimal disruption or delay from the customer's perspective. Specific examples of the types of action which could disrupt the migration process could include requesting additional customer authorisation mechanisms, or preventing the uplift of a large number of retail customers to alternative service provision. This type of action would impose an additional and artificial switching cost on retail customers.

- 6.14. An SMP operator may attempt to foreclose entry of a competitor in the downstream market by denying access to an exchange, or by delaying the process unnecessarily.
- 6.15. An SMP operator may also act to foreclose WUA based competition by creating or exploiting information asymmetries. An example of this would be any differences in interface between the SMP operator's internal access to Information Technology (IT) systems, and OAO access. The infrastructure associated with Operational Support systems (OSS) and Business Support Systems (BSS) is supported by IT systems, which are continually evolving. OAOs do not have visibility or input into IT changes, and these changes have a potentially negative impact on development time and functionality, and on the efficiency of the wholesale product set. For instance, if OAOs are not aware of the IT development process and its timetable, they will be unable to contribute or to make a request for service at the appropriate point. Further, it may be that operational changes of this kind are not implemented simultaneously or to the same standard for external and internal access.
- 6.16. Information asymmetries may also apply to future planning by the SMP operator. For example, the potential for Eircom to extend the fibre core network to the cabinet and launch new higher specification products has significant implications for operators considering WUA. A perceived lack of information propagates uncertainty, and as a result may discourage OAOs from deploying infrastructure in Eircom exchanges. Further, such information asymmetries lead inevitably to the SMP operator planning network development based on its own retail requirements rather than considering wholesale OAO requirements.
- 6.17. An SMP operator providing WUA to its competitors may have an incentive to impose additional costs on those operators. For example, wholesale customers require metrics on order processing, service assurance and activation faults, which allow OAOs to view the overall performance of Eircom's LLU product from a provisioning and service assurance perspective. Failure by Eircom to provide such data to its wholesale customers would place the burden on its individual customers to prove activation faults and measure deficiencies in the LLU product, which imposes a cost on those operators (individual operators are not best placed to collect performance metrics on Eircom's LLU product). This would also create uncertainty for LLU operators, and reduce confidence in Eircom's product.
- 6.18. Another example would be where the SMP operator requires unbundled OAO(s) to purchase a service, which comes at a considerable cost to OAO(s), whilst not requiring its own retail arm to use this service. The imposition of additional costs effectively raises rivals' costs, and so reduces the ability of OAOs to compete with Eircom in the retail broadband market.

Preliminary Conclusion on competition problems

- 6.19. In summary, ComReg's preliminary view is that there is the potential and incentive for an SMP operator to engage in actions which inhibit competition in the WUA market. ComReg has provided some examples of competition problems, but notes that it is not necessary to catalogue examples of actual abuse. Rather, ComReg notes that the purpose of ex ante regulation is to prevent the possibility of such abuses.

Q. 8. Do you agree with ComReg's assessment of potential competition problems in the WUA market? Do you have evidence of any other competition problems? Please provide a reasoned response.

7. Regulatory Impact Assessment

Introduction

- 7.1. Regulatory Impact Assessment (RIA) is an analysis of the likely effect of proposed new regulation or regulatory change. The RIA should help identify regulatory options, and should establish whether proposed regulation is likely to have the desired impact. The RIA is a structured approach to the development of policy, and analyses the impact of regulatory options on different stakeholders.
- 7.2. ComReg's approach to RIA is set out in the Guidelines published in August 2007.⁷¹ This approach was developed taking into account the Government's Better Regulation programme.⁷² ComReg's overall aim in conducting a RIA is to ensure that all proposed measures are appropriate, proportionate and justified.

Principles in Selecting Remedies

- 7.3. In choosing remedies pursuant to Regulation 9(6) of the Access Regulations (and where appropriate Regulation 14(2) of the Universal Service Obligations), ComReg must ensure they are:
 - based on the nature of the problem identified;
 - proportionate and justified in the light of the objectives laid down in section 12 of the Communications Regulation Act of 2002; and
 - only imposed following consultation in accordance with Regulations 19 and 20 of the Framework Regulations.
- 7.4. The relevant objectives, as set out in section 12 of the Communications Regulation Act, 2002 which must be taken into account when applying remedies are as follows:
 - to promote competition;
 - to contribute to the development of the internal market; and
 - to promote the interests of users within the Community.
- 7.5. ComReg's principal objective is to ensure that the operation of the WUA market provides optimum encouragement for the development of competition in the retail broadband market. To this end, ComReg aims to ensure that a dominant operator is prevented from the potential exploitation of its market power in the WUA market, as this would impact on the wholesale market and on the downstream retail markets which depend on WUA as an input.
- 7.6. ComReg notes that this is a second round market review, and that regulatory remedies were put in place following the last market review. While the market analysis has considered the market definition absent regulation, the assessment of regulatory impact should, in ComReg's view, predominantly take into account the fact that the market currently operates in the presence of regulation.

⁷¹ "Guidelines on ComReg's Approach to Regulatory Impact Assessment" ComReg doc 07/56a, 10 August 2007

⁷² Regulating Better, Department of the Taoiseach, January 2004

- 7.7. In line with the approach outlined in the Government's White Paper⁷³, ComReg considers that, in a market which is already regulated, the focus should be on answering the following:
- Is regulation still necessary in this market?
 - Does current regulation achieve objectives as simply as possible?
 - Are changes to regulation required?
- 7.8. In order to assess the efficacy of existing regulation, and to consider prospective regulation, ComReg included specific questions on this topic in its data direction, and received useful feedback from industry. As this consultation took place at an early stage of the review, it has allowed ComReg to take account of industry views as part of the process of analysing regulation in the WUA market. Responses to the data direction have been a valuable input when considering regulatory options.

Is regulation still required in the WUA market?

- 7.9. The last review of the market for WUA imposed a full suite of obligations on the SMP operator. The market analysis indicated that Eircom had a 100% market share, and that this was not appreciably qualified by any other factors in the market. A range of actual and potential competition problems were identified, and in order to address these, remedies were proposed.
- 7.10. In considering whether regulation is still required in the WUA market, ComReg notes that the broad dynamic of the market is relatively unchanged since the time of the last review. Eircom still has 100% share of the WUA market, and this is not likely to change within the lifetime of this review. Barriers to entry remain high and non-transitory. This review has come to a preliminary view that Eircom has SMP, and therefore ComReg is obliged to impose some regulation.
- 7.11. ComReg's analysis of the retail market indicates increasing competition. In the last few years, the overall market for retail broadband has grown strongly. Retail broadband is now available on various platforms (for example, cable, FWA, DSL). Retail customers have choice regarding the level of service, quality of service, and type of tariff. However, this is still conditional on location, and there remains strong geographical variation. This has been recognised by the Government's National Broadband Scheme.
- 7.12. This market review is concerned with the wholesale inputs required to address the retail broadband market. The market definition questioned whether operators wishing to address the retail broadband market could choose to build their own infrastructure. So, for example, FWA and cable operators have invested in infrastructure which allows them to offer a range of retail products, including retail broadband. However, these networks are still limited in terms of the areas they cover, and this is reflected in the relatively low retail market shares. The market

⁷³ Regulating Better, Department of the Taoiseach, January 2004

definition also noted that unbundled products are not currently available on alternative networks such as cable, fibre or FWA, and operators do not have the option of purchasing wholesale inputs from an operator other than Eircom. Operators are therefore still dependent on wholesale inputs from Eircom to reach a mass customer base. This means that competition in the retail market depends on the availability of an appropriate wholesale input.

- 7.13. ComReg therefore proposes that the need for a WUA product is established, and that it is an essential input for OAOs to compete in the retail broadband market. In ComReg's view, it is very unlikely that a WUA product would be offered without regulation. ComReg is unaware of any case in which an operator offers an unbundled product absent regulation. The direct benefit of having a WUA product is that OAOs are more able to compete in the retail broadband market, and that this then has a positive impact on consumer services, and on the prices for those services.

Does current regulation achieve its objectives as simply as possible?

- 7.14. ComReg's approach is to consider regulation as incremental. The lightest measure is the obligation not to discriminate. Should this be insufficient to address competition problems on its own, ComReg may apply a transparency obligation. If this is still not sufficient, ComReg may consider an access obligation, generally supported by cost accounting and accounting separation obligations. The final measure to be considered is the imposition of price controls.
- 7.15. At present, the WUA market is regulated. In considering the extent to which current regulation achieves its objectives as simply as possible, ComReg has to balance the need to minimise the burden on Eircom against the requirement for a fit-for-purpose WUA product as an input to the retail broadband market.
- 7.16. The analysis which ComReg has carried out begins by considering whether an obligation not to discriminate would be sufficient in the WUA market. A non-discrimination obligation would oblige Eircom to supply products and services of an equivalent quality to all operators, including to its own internal operation. ComReg proposes that this obligation is necessary but not sufficient on its own, given the types and range of competition problems in the market.
- 7.17. A non-discrimination obligation establishes a form of behaviour in the market, but does not address what type of product or service should be offered, nor how it should be offered. Recourse to a non-discrimination obligation tends to be on an ex post basis, so that an operator alleges a breach after the event. ComReg's review of competition problems indicated actual and potential issues which could be addressed by a non-discrimination obligation, but often there was an underlying problem at a more fundamental level, to do with the nature of the product being offered. While a non-discrimination obligation would be a necessary supporting obligation to address this, it would not be adequate on its own.
- 7.18. ComReg then considers whether a transparency obligation in addition to a non-discrimination obligation would be sufficient to address competition problems. A transparency obligation ensures that all operators and ComReg can observe price and non-price terms in the market. It provides, for example, that Eircom can be obliged to publish a Reference Offer for the products offered in the WUA market, and can be

obliged to publish supporting industry documentation. In tandem with an obligation not to discriminate, this means that regulation would require equivalent treatment of operators, and the means of viewing this. ComReg's initial view is that a transparency obligation is necessary, but not sufficient.

- 7.19. In considering the obligation not to discriminate and the transparency obligation together, ComReg has a preliminary view that the operation of current regulation is not adequate in providing a means of ensuring that Eircom does not discriminate between OAOs and its internal operation, and is not adequate in ensuring that this can be demonstrated. ComReg proposes that there is a need for better measures of performance in the products and processes which Eircom offers to OAOs and uses internally, and in the production of information about these measures. This requirement cannot be met solely by the lighter regulatory options.
- 7.20. As non-discrimination and transparency are considered necessary but not sufficient on their own, the next level of regulation considered is the imposition of an access obligation. Taken together, access obligations ensure that operators have the right to access wholesale products, and to implement them, and that access is provided in a manner which is fair, reasonable and timely, and to a standard equivalent to that provided to Eircom's retail arm.
- 7.21. ComReg noted earlier that, in its view, it would be unlikely that a WUA product would be offered absent regulation. An access obligation gives operators the right to request WUA products, and establishes the principles setting the terms on which the products should be made available. In ComReg's view, an access obligation is a fundamental requirement in this market, and experience in the market confirms the need for an obligation of this kind.
- 7.22. In reviewing the operation of current regulation, ComReg has identified elements of the current access obligation which require development. The access obligation needs to be updated to reflect technological changes in the market, primarily the introduction of a technology-neutral definition which moves away from a restricted application to the metallic path. The access obligation as it is currently expressed does not explicitly provide for migration to and from wholesale products (although this is implicit), and this has been raised by industry as a significant competition problem. Finally, the access obligation needs to better consider how the products and performance of products can be established, with a view to demonstrating that the products are fit-for-purpose, and that there is no discrimination. In ComReg's view, this means that competition problems around the constitution and implementation of Service Level Agreements (SLAs) must be addressed.
- 7.23. The most onerous form of regulation is the imposition of price controls. Currently, Eircom is obliged to ensure that prices for WUA products are cost-oriented. This is implemented at present by means of a price control. ComReg has considered whether it is still necessary to ensure that prices for WUA products are cost-oriented, and whether this should be ensured via price controls. Given Eircom's 100% market share, and ComReg's preliminary view that there is limited constraint offered by qualifying factors (such as potential competition and countervailing power), there is no identifiable constraint on Eircom's pricing. As a vertically integrated operator, Eircom would have the ability and motive to increase prices absent regulation. This

Market Review

would be the case even if other obligations such as non-discrimination, transparency and access were in place.

- 7.24. It is ComReg's view that the imposition of cost-based price controls in the wholesale market are essential to ensure that the SMP operator does not charge a monopoly price, which would have a negative effect on the wholesale and the associated retail markets. ComReg has reviewed experience in more mature markets where WUA is longer established than it is in Ireland, and notes that in no case has the regulator been able to withdraw price controls.
- 7.25. ComReg has considered the extent to which NGN-based WUA prices should be subject to price control, and is proposing that, given the uncertainty surrounding the cost base of new services, and given ComReg's intention to support investment in infrastructure, it may be appropriate to forebear from price control where WUA services are provided in an NGN environment in certain specified circumstances.
- 7.26. In considering the extent to which current regulation is effective, ComReg notes that separate detailed consultations into the methodology for pricing LLU and line share are underway, and will be published in parallel to this market review. For the purposes of this market analysis, ComReg considers that there remains a requirement to ensure that prices are cost-oriented. ComReg has also considered the potential for a margin squeeze, and proposes that this should be addressed specifically as a remedy.
- 7.27. Currently, Eircom is obliged to comply with requirements regarding separated accounts and cost accounting. These are considered necessary to ensure appropriate cost recovery mechanisms, and to monitor any price controls. In order to demonstrate the cost orientation of a service or product, it is necessary for Eircom to establish cost accounting systems that capture, identify, value and attribute relevant costs in accordance with agreed regulatory accounting principles.

Are changes to regulation required?

- 7.28. Based on the review of competition problems and of the effectiveness of current regulation, ComReg believes that regulation is still required in the WUA market, and that a full suite of remedies are needed. In the sections above, ComReg has indicated areas where it is proposed that current regulation needs to be developed. This may be because current regulation is not sufficiently effective, or to take account of changes in the market.
- 7.29. The key changes to current regulation which are proposed are as follows:

Access obligation

- Extension of the access remedy to take account of the revised market definition. The principle which should be established is that the approach is technology neutral, and is not confined to the current technology or product set.
- Extension of the obligation that services should be provided on terms and conditions which are fair, reasonable and timely to include the development of Key Performance Indicators (KPIs) as a support for SLAs.

Market Review

- Proposal that ComReg may intervene to ensure that SLAs meet their objectives
- An obligation that Eircom should develop an Internal Reference Offer in order to demonstrate equivalence between the WUA services and the processes associated with implementation, and the relevant services which it provides to itself.

Transparency and non-discrimination obligations

- Extension of these obligations to support the proposed changes to the access obligations.

Price control

- A general obligation not to price/margin squeeze.
- A potential forbearance from price control of NGN-based WUA services

The impact of proposed changes

Impact on Stakeholders

- 7.30. ComReg recognises that the burden of the proposed regulation will fall primarily on Eircom. In ComReg's view, it is not likely that Eircom would choose to develop and supply WUA products absent regulation. However, ComReg believes that WUA is necessary for the development of a competitive retail broadband market. Experience in the market to date indicates that it is necessary for regulatory involvement in ensuring access to a fit-for-purpose product, and in ensuring that operators can purchase wholesale inputs which allow them to provide a retail service which is at least as good as Eircom's own retail service.
- 7.31. ComReg therefore believes that the suite of remedies proposed is necessary, proportionate and justified on the basis of its analysis of the market, and of the actual and potential competition problems which need to be addressed.
- 7.32. ComReg has proposed that several developments to existing regulation should be considered, and these are summarised above. Of these, ComReg recognises that, in particular, the development of Key Performance Indicators (KPIs) and of an Internal Reference Offer (IRO) will entail additional direct costs for Eircom. However, ComReg notes that these obligations do not require changes to the products or associated processes. Rather, the concern is to find means of demonstrating that WUA products are fit-for-purpose, in the case of KPIs, and that there is no discrimination between OAOs and Eircom's retail operation, in the case of the IRO.
- 7.33. ComReg has proposed that the development of KPIs and an IRO will be subject to further consultation, and notes that the potential impact of these measures will be examined during this process. For the other measures proposed, Comreg considers that they are largely a refinement of existing obligations, and that the processes and procedures are for the most part already in place.
- 7.34. ComReg believes that experience of regulating this market indicates a strong need for these measures. ComReg's intention is that, should these obligations be imposed

Market Review

following this consultation, the implementation would ensure that the burden on Eircom is minimised.

- 7.35. It is ComReg's preliminary view that the proposed measures would be positive for other stakeholders in the market, particularly for OAOs.
- 7.36. The proposed measures constitute an additional regulatory burden for ComReg, and this would entail both ComReg's support for the development of measures such as KPIs and an IRO, and the need to ensure implementation and compliance. However, ComReg believes that these measures are essential for the development of the market, and the ultimate benefit of consumers.

Impact on Competition

- 7.37. Because Eircom is the only operator in Ireland with a network of the type and ubiquity to potentially be amenable to unbundling, ComReg does not expect there to be direct competition within the WUA market itself. The analysis of the wholesale unbundled access market has been undertaken with the aim of ensuring that operators are able to purchase wholesale inputs which enable them to compete in the retail broadband market. Eircom is a vertically integrated operator, and regulation is required to ensure that it cannot leverage market power between the wholesale and retail markets.

Q. 9. Do you agree with ComReg's Regulatory Impact Assessment?

8. Proposed Remedies

- 8.1. In light of the potential competition problems arising from the preliminary conclusion of SMP in the relevant market and ComReg's preliminary view that there are unlikely to be sufficiently significant developments within the period of this review which will prevent Eircom from acting independently of its competitors or customers, ComReg proposes to impose a number of obligations which it considers to be based on the nature of the potential competition problems identified and proportionate and justified in light of the obligations laid down in section 12 of the Communications Regulation Act of 2002.
- 8.2. ComReg's consideration of appropriate remedies in the market for Wholesale Unbundled Access is discussed below in terms of:
 - Access to and use of specific network elements and associated facilities;
 - Transparency;
 - Non-discrimination;
 - Price Control and Cost Accounting; and
 - Accounting Separation.

Access to and use of specific network facilities

- 8.3. ComReg proposes, pursuant to Regulation 13 of the Access Regulation, to continue to impose an obligation on Eircom regarding access to the local loop.
- 8.4. As stated in the Access Regulations, obligations can be imposed on operators 'to meet reasonable requests for access to, and use of, specific network elements and associated facilities, inter alia in situations where the national regulatory authority considers that denial of access or unreasonable terms and conditions having similar effect would hinder the emergence of a sustainable competitive market at the retail level, or would not be in the end-user's interest'.
- 8.5. The market analysis has indicated that, currently and within the period of this review, in order to deliver retail broadband services to end-users which require wholesale unbundled access as an input, and so allow them to compete with Eircom in the downstream market, OAOs will need access to Eircom's network. A requirement on the SMP provider to provide wholesale access to its network is needed to facilitate competition in downstream markets by enabling competitors to compete without the need to invest in a ubiquitous access network.
- 8.6. ComReg has noted that the definition of the market proposed by the EC has changed since the time of the last review, in order to take into account technological changes in the market. It is ComReg's view that the aim of the proposed access obligation remains the need to ensure that OAOs can purchase all wholesale inputs associated

Market Review

with the access path which are necessary to reach the retail customer. In its explanatory note, the EC explains that:⁷⁴

“As regards the first market, [ie WUA]technological change implies including all relevant physical infrastructure necessary to reach the end consumer, as opposed to a strict limitation to the metallic loop or sub-loops.”

- 8.7. ComReg proposes that the access obligation will apply to all infrastructures, including associated facilities, required to provide a technologically and commercially viable retail service. This could include, for example, access to ducts and sub-ducts, access to dark fibre and to cabinet space. The access obligation would also apply to connectivity/backhaul between cabinet or exchange based equipment (co-location point) and the OAO's required handover point.
- 8.8. The access obligation would include (but not be limited to) those products currently offered in Eircom's ARO (current version 1.21) and its associated LLU industry documentation.⁷⁵
- 8.9. Eircom currently offers five products in the WUA market, and these are detailed in its ARO. The products are line sharing (LS); ULMP; GLUMP; co-location; and sub-loop unbundling. It is ComReg's view that an access obligation would include, but would not be limited to, those products.
- 8.10. Co-location is a pre-requisite for OAOs to avail of wholesale products in the WUA market. For example, an OAO that wishes to purchase LLU within an exchange or cabinet requires the ability to co-locate a DSLAM in that exchange or cabinet in order to use the local loop.
- 8.11. ComReg considers that an OAO wishing to purchase WUA may require co-location for various reasons. This is particularly the case where Next Generation Networks are deployed, and certain products may require an OAO to co-locate at different points in the network (such as at the street cabinet). On that basis, ComReg considers that the reasonableness of requests by OAOs for access to co-locate equipment should be considered on a case by case basis.
- 8.12. Eircom should be obliged to provide access to co-location where an operator has made a reasonable request for access. ComReg also believes that once co-location has been granted that an OAO should be entitled to use it in the most efficient manner possible. This may mean that an OAO should be entitled to use the space rented for more than one purpose. In ComReg's view it is essential that co-location is managed in a timely and efficient manner.
- 8.13. It is likely that the specification of “all relevant physical infrastructure” will change as products and services develop. ComReg's proposed approach is therefore to establish the principle that the access obligation will apply to all necessary

⁷⁴ EC Explanatory note paragraph 4.2.2.

⁷⁵ In addition, there are two requirements which are currently not captured in the Access Reference Offer – these are the specific offering of cabin co-location for Roches St. exchange; and the compact disc provided to operators of “bulk data”. ComReg also proposes that these should be maintained.

infrastructure and associated facilities, and to recognise that the nature of this infrastructure will evolve.

ComReg proposes to impose an access obligation on Eircom to provide access to all Wholesale Unbundled Access infrastructure and associated facilities on a technologically neutral basis. The obligation would include, but would not be limited to, those products currently offered in Eircom's ARO and supporting LLU documentation. It would also apply to fibre optic cable in the access network and to connectivity/backhaul between cabinet or exchange based equipment and regional handover points.

- 8.14. ComReg proposes that Eircom should continue to have an obligation pursuant to Regulation 13(2)(c), not to withdraw access to facilities already granted, unless the withdrawal and the timelines around the withdrawal have been approved by ComReg. ComReg believes that this obligation is necessary to ensure that OAOs have sufficient certainty to provide retail services to the marketplace and so compete with Eircom.
- 8.15. ComReg notes that Eircom's gradual migration to NGN technology might give rise to instances where Eircom might wish to withdraw access to existing facilities. ComReg has considered the issue with regard to withdrawal of access where an operator may be required to retain facilities already in place in a time when it is re-designing its network architecture and redeploying network infrastructure and where access facilities, if not withdrawn, could impede development
- 8.16. This has particular relevance for WUA as NGN developments might result in a reduction in the number of network nodes therefore possibly allowing for the closure of exchanges. WUA operators who have made significant investment in exchange based equipment require some certainty in relation to their investments and it is ComReg's view that a sufficient notice period must be afforded OAOs before exchanges can be closed in order to allow time for OAOs to plan for withdrawal of access and to provide a measure of certainty to OAO business planning.
- 8.17. In its position paper 'Regulatory aspects of Next Generation Networks', ComReg noted that:⁷⁶

The provision of a functionally and economically equivalent alternative and an advanced notice period of between three and five years would be warranted prior to any intended withdrawal of MDF access

- 8.18. It is proposed that Eircom should continue to seek ComReg approval before withdrawing access to existing facilities, and that ComReg's decision will be proportionate and justifiable and will take into account the potential impact on the market. It is proposed that no MDF which is already unbundled or is likely to be unbundled may be removed with less than 5 years' notice, except in exceptional circumstances. ComReg would provide more specific guidance as to which exchanges this would apply to in due course.

⁷⁶ Regulatory aspects of Next Generation Networks, ComReg doc No 07/40, 8 July 2007

ComReg proposes that Eircom should continue to have, as part of its Access obligation, an obligation not to withdraw access to facilities already granted, unless this withdrawal, and the associated timescales have been approved by ComReg. It is proposed that no MDF which is, or may be, unbundled may be removed with less than 5 years' notice.

- 8.19. ComReg proposes, pursuant to Regulation 13(2)(c) and 13 (3) of the Access Regulations, to oblige Eircom to continue to provide information which supports wholesale unbundled access. Information should include that necessary for the provision of services, such as technical specifications, network characteristics, terms and conditions for supply and use, and prices. This could also include information which may be available through access to ordering systems and billing systems, where appropriate. This obligation would apply to all information necessary for an OAO to provide a retail service which is at least of a similar quality to Eircom's own offer.
- 8.20. Information should also include appropriate performance metrics. ComReg notes that performance metrics are required for two purposes. First of all, ComReg needs to be able to judge the extent to which the product is fit-for-purpose. Secondly, ComReg needs to have transparency around the service which Eircom offers its retail operation in order to compare this with WUA services offered to OAOs.

ComReg proposes to continue to oblige Eircom to provide specified information which supports existing and future wholesale unbundled access services as part of its access obligation.

- 8.21. ComReg proposes to continue to impose the obligation on Eircom to meet reasonable access requests and to address any disputes accordingly. This obligation is pursuant to Regulation 13(1) of the Access Regulations.
- 8.22. ComReg believes that OAOs will need to avail of products within the relevant wholesale market that will allow them to develop retail offerings to compete in the retail market. An access remedy allows OAOs to make reasonable requests for products according to their specifications pursuant to Regulation 13 (2) (a) or (f) of the Access Regulations.
- 8.23. An obligation to meet reasonable access requests would allow OAOs to request variants of products and is appropriate given the experience of OAOs and ComReg to date in requiring Eircom to introduce new products. Systems and processes provided by Eircom should be fully scalable in response to market demand. ComReg expects Eircom to consider requests from OAOs in the light of Regulation 13 (4), and to consider requests and to respond in a timely manner offering a solution which is in accordance with their obligation of non-discrimination.
- 8.24. ComReg considers that an obligation to meet reasonable access requests implies that resources should be managed efficiently such that OAOs are not unduly disadvantaged. For example, if duct space is not managed efficiently (for instance if unused or obsolete cables are left in place), then it would not be fair or reasonable to use this as a claim that there is no available duct space. ComReg expects that it is fair and reasonable to ensure that infrastructure including, but not limited to, duct

space, MDF space, co-location footprints, and power supplies are managed in such a way that OAOs are not hindered in accessing them.

- 8.25. ComReg believes that the competition problems identified earlier indicate a specific need to address the ability to migrate retail customers between wholesale products on fair and reasonable terms, conditions and charges as required. This is not a new requirement since it is in any case implicit in the obligation to provide access since it would not be reasonable to deny access to a particular loop simply on the basis of its current usage. Nor would it be reasonable to provide access in such a way that the end-user experiences unreasonable levels of disruption since this would also constitute constructive denial. ComReg views the ability to “migrate to” and “migrate from” a product as being a characteristic of all wholesale products, and migration should be easily implemented in a way which is best for retail customers. This could include, for example, the ability for OAOs to migrate, and to bulk migrate, retail customers from one wholesale product to another. It could also include the ability for OAOs to migrate from full loop unbundling to sub-loop unbundling.
- 8.26. The access obligation for WUA is intended to apply to all suitable forms of access necessary to allow flexibility in relation to the delivery of services to end-users. This would include the development of efficient backhaul solutions. For example OAOs may want to install dark fibre in order to provide connectivity, therefore an OAO may require that a wholesale access product be made available that allows either the OAO or a third party communications service provider to install fibre and provide service. Another example would be the ability of two or more OAOs to connect between their equipment co-located in the same Eircom exchange, possibly to allow one OAO to provide backhaul services to another. Finally, an example relevant to an NGN environment could be where an OAO may unbundle at the cabinet and use the copper loop to reach its end customers, with a requirement for fibre backhaul to the exchange.
- 8.27. An obligation to meet reasonable access requests would allow OAOs to request variants of products and is appropriate given the experience of OAOs and ComReg to date in requiring Eircom to introduce new products. Systems and processes provided by Eircom should be fully scalable in response to market demand. ComReg expects Eircom to consider requests from OAOs in the light of Regulation 13 (4), and to consider requests and to respond in a timely manner offering a solution which is in accordance with their obligation of non-discrimination.

ComReg proposes to continue to impose the obligation on Eircom to meet reasonable access requests as part of its Access obligation. Reasonable access will apply to the need for a scalable product, provided in a timely manner. ComReg considers that it is reasonable to expect that Eircom’s resources will be managed efficiently in order to facilitate OAO access. Reasonable access requests will include, but not be limited to, requests for variants of products, and requests to migrate customers between wholesale products and variants of these products, including between Sub Loop Unbundled and NGN related products.

Market Review

- 8.28. ComReg proposes that, pursuant to Regulation 13 (3) of the Access Regulations, those wholesale unbundled access services which Eircom supplies should be provided on terms and conditions which are fair, reasonable and timely. ComReg considers that this obligation should apply to products and services which the SMP operator supplies to OAOs, and those which it supplies to itself.
- 8.29. For all WUA products, services and associated information supplied to OAOs, ComReg proposes that terms and conditions should be supported by an SLA.
- 8.30. ComReg proposes that the SLA should ensure that Eircom has a commercial incentive to provide a fit-for-purpose product supported by appropriate processes. These processes should address all elements necessary to offer the WUA product, including the ability to migrate efficiently between wholesale products.
- 8.31. In ComReg's view, the SLA should also specify a level of compensation that adequately compensates the customer for the impact resulting from the failure to deliver the service as described in the SLA. This would provide Eircom with an incentive to deliver service to a pre-defined and pre-agreed level of performance or compensate their customer accordingly. The process of compensation should not be burdensome on either party, and indeed the provision of SLA service credits should be automatic.
- 8.32. ComReg notes that issues have been raised repeatedly concerning the adequacy of the SLA in ensuring good service, and in providing restitution for any failure to provide good service. ComReg proposes that it may intervene to revise certain terms and conditions of the SLA should it fail to meet its objectives.
- 8.33. ComReg is of the view that SLA service credits on their own may not provide sufficient incentive to Eircom to provide quality wholesale products. It is important that the overall product quality standards are set, measured and maintained in order to promote sustainable competition.
- 8.34. ComReg is of the view that product quality metrics should be set and measured separately to the commercial SLA, and product quality metrics should be defined with KPIs. If the KPI targets are not reached, or the KPI targets dip below the performance threshold for the measurement period, then ComReg should be able to make a finding of non-compliance and take appropriate enforcement action to compel compliance with Eircom's access obligation and any related conditions of fairness, reasonableness and timeliness that are imposed. Accordingly, ComReg believes that metrics of this nature should form part of the product specification.
- 8.35. ComReg therefore proposes that a set of KPIs and performance levels will be developed for all LLU products. These KPIs will be set by ComReg in consultation with industry and will be subject to regular review. This is necessary to ensure that fit-for-purpose products are offered. This will be subject to further consultation.
- 8.36. In view of the competition problems identified above, ComReg considers that it is essential to be able to compare the service which Eircom provides to itself with the service which is available to OAOs. This applies to the content of the service, and also to the manner of its delivery and implementation. The objective is to ensure that

there is no discrimination and to guide OAOs as to the nature and level of service they can expect.

- 8.37. ComReg has considered whether Eircom should be obliged to produce an IRO which would allow comparison of the service which Eircom offers OAOs and the service which it provides to itself. According to guidance from the European Regulators' Group this is particularly helpful as a means of providing early indication of discrimination issues.⁷⁷ ComReg proposes that Eircom should be obliged to produce an IRO which would be used to demonstrate that its WUA offer allows OAOs to provide a retail offering of at least an equivalent quality to that provided by Eircom's own retail arm.

Eircom should continue to provide wholesale unbundled access services on terms and conditions which are fair, reasonable and timely. These terms and conditions should be supported by Service Level Agreements as part of its access obligation. ComReg proposes that the provision of service credits should be automatic. ComReg proposes to intervene should the SLA fail to meet its objectives

Performance metrics for LLU products will be defined by ComReg in consultation with industry, and will be subject to regular review. Eircom should be obliged to comply with these Key Performance Indicators (KPIs) concerning WUA products and their implementation. Failure to achieve these targets may become a matter for regulatory compliance.

Eircom should be obliged to develop an Internal Reference Offer which demonstrates that its WUA offer allows OAOs to provide a retail offering of at least an equivalent quality to Eircom's own retail offer.

The implementation of these last two obligations will be subject to further consultation.

- 8.38. Pursuant to Regulation 13(2)(b) of the Access Regulations ComReg is of the preliminary view that Eircom should have the obligation to negotiate in good faith with the undertakings requesting access.

Eircom should be obliged to negotiate in good faith with undertakings requiring access.

- 8.39. ComReg proposes that Eircom should continue to be required to provide access to wholesale unbundled access services to competitors on a non-discriminatory basis. Furthermore ComReg proposes that Eircom should be required to promptly provide competitors with information necessary for access to its wholesale unbundled access services on a non-discriminatory basis.

Eircom should continue to be required to provide access to wholesale unbundled access services to competitors at an equivalent standard, at an

⁷⁷ Revised ERG Common Position on the approach to Appropriate remedies in the ECNS regulatory framework, May 2006 (06) 33

equivalent time, and in equivalent circumstances as it provides to its own retail arm as part of its Access obligation.

- 8.40. ComReg proposes that pursuant to Regulation 13(2)(e) of the Access Regulations, Eircom should continue to promptly grant open access to technical interfaces, protocols, or other key technologies and should also be required to provide such OSS or similar software necessary to ensure fair competition in the provision of services to OAOs.
- 8.41. ComReg believes that there is an incentive for Eircom to limit access or make access more difficult. It is necessary for OAOs to have open access to technical interfaces, protocols, and OSS for them to take up products and allow them to compete with Eircom at the retail level.

Eircom should continue to grant open access in a timely manner to technical interfaces, protocols, or other key technologies and should be required to provide such Operational Support Systems ('OSS') or similar software necessary to allow OAOs to efficiently order the product and manage all aspects of the product life cycle, and for the provision of related information in order to ensure fair competition in the provision of services as part of its Access obligation.

Q. 10. Do you agree with ComReg's proposal to impose an access obligation?

Q. 11. Do you agree with how ComReg proposes to impose that obligation?

Please provide reasons for your response

Transparency

- 8.42. ComReg proposes that a transparency obligation should continue to be imposed on Eircom. It is stated as part of the Access Directive⁷⁸ that transparency may be used in relation to 'interconnection and/or access, requiring operators to make public specified information, such as accounting information, technical specifications, network characteristics, terms and conditions for supply and use, and prices'.
- 8.43. Transparency is a necessary means of ensuring that ComReg and OAOs can observe price and non-price terms and conditions for Eircom's wholesale unbundled access products. Non-price transparency is required to cover such areas as access to information in terms of service provision and service assurance, IT system development as it may have the potential to impact on the wholesale product set, IT planning, processes and procedures, service delivery and service assurance performance.
- 8.44. A transparency obligation is required to support any accounting separation obligations, as this would allow the calculation of costs and prices (i.e. internal price

⁷⁸ Article 10, S.I. No. 305 of 2006, "European Communities (Electronic Communications Networks and Services)(Access) Regulations 2003.

transfers) to be rendered visible. This would also allow ComReg to monitor compliance with any non-discrimination obligations, and address competition problems relating to cross subsidisation, price discrimination and the application of price squeezes.

- 8.45. The Access Regulations provide for publication of a reference offer that is sufficiently unbundled to ensure that undertakings are not required to pay for facilities which are not necessary for the service requested – this should include a description of the relevant offerings broken down into components according to market needs and a description of the associated terms and conditions, including prices.
- 8.46. Eircom is currently required to publish an Access Reference Offer (latest version 1.21), supported by additional Industry LLU documentation. This should include the Copper Loop Frequency Management Plan (CLFMP). ComReg proposes that this obligation should be maintained.
- 8.47. ComReg proposes that a transparency obligation is required to support the publications of performance metrics as proposed in the access obligation.
- 8.48. ComReg proposes that a transparency obligation is required to support the access obligation concerning SLAs. A transparency obligation would require Eircom to publish all industry SLAs on its wholesale website.
- 8.49. In addition, ComReg proposes that Eircom should be obliged to define and publish KPIs. ComReg proposes to consult further on the appropriate methodology and implementation process.
- 8.50. ComReg proposes that Eircom should be obliged to define an Internal Reference Offer, and that a transparency obligation will be required to support this access obligation.
- 8.51. ComReg proposes that the transparency obligation will apply to any reasonable information or data which an OAO may require in order to be able to efficiently offer products and services in the market, based on Eircom's wholesale inputs. ComReg would expect that, where information requested is reasonable, it should be provided according to a format agreed by all parties, and within an agreed timescale.

ComReg proposes that a transparency obligation should continue to be imposed on the SMP operator.

The implementation of the transparency obligation will include a requirement to publish an Access Reference Offer for all products in the wholesale unbundled access market, and to publish additional industry documentation as required.

Eircom should publish industry SLAs on its wholesale website.

The transparency obligation will apply to the publication of performance metrics regarding Eircom's delivery of services encompassed by this market

and comparable services enjoyed by Eircom retail such that a meaningful comparison can be made between these sets of metrics.

Eircom should be obliged to meet KPIs defined by ComReg in consultation with industry. These Key Performance Indicators will be published by Eircom and Eircom should be obliged to meet the service levels specified in those indicators. The implementation of this obligation will be subject to further consultation.

Eircom should be obliged to develop and publish an Internal Reference Offer.

Eircom should be obliged to provide OAOs with information which they may reasonably require in order to be able to efficiently offer products and services in the market, based on Eircom's wholesale inputs.

Q. 12. Do you agree with ComReg's proposal to impose a transparency obligation? Do you agree with how ComReg proposes to impose that obligation? Please provide a reasoned response.

Non-discrimination

- 8.52. In order to promote competition, ComReg proposes to continue to impose the remedy of non-discrimination on Eircom. It should be noted that the rationale for *ex ante* obligations is not the identification of a particular abuse that has occurred but rather the existence of a position of SMP enjoyed by an operator on a relevant market and where scope and incentives exist for it to engage in anti-competitive behaviour. The imposition of a SMP obligation and associated remedies is intended to guard in advance against anti-competitive abuses occurring.
- 8.53. In general non-discrimination requires that the SMP undertaking 'applies equivalent conditions in equivalent circumstances to other undertakings providing equivalent services, and provides services and information to others under the same conditions and of the same quality as it provides to its own internal division, or those of its subsidiaries or partners'. A non-discrimination obligation requires that OAOs are treated no less favourably than an incumbent's internal divisions.
- 8.54. ComReg's preliminary view is that in addition to transparency, a non-discrimination obligation should be applied on Eircom. ComReg regards the application of an obligation of non-discrimination on Eircom as necessary for dealing with competition problems identified in this market.
- 8.55. ComReg proposes that there are three principal components to an obligation not to discriminate:
- Eircom should be obliged not to discriminate between OAOs, and should provide equivalent services in equivalent circumstances. It is important to ensure that there is no discrimination regarding quality of service between one wholesale customer of the SMP operator and another, which could afford one operator a competitive advantage.

- Eircom should be obliged not to discriminate between OAOs and its own downstream operations. In particular ComReg proposes that Eircom be required to provide information and services to alternative operators in timescales, on a basis, and of a quality, which are at least as good as those provided to Eircom's retail arm and associates.
 - Eircom should be obliged not to discriminate amongst its wholesale offerings in terms of the quality of service offered. That is, Eircom should ensure that differences in the quality of provision of its various wholesale products does not negatively impact on the take-up of particular products. This obligation would apply to products within the WUA market and to products in other markets which address the same ultimate retail markets.
- 8.56. Finally, it is important that information gained by Eircom as a result of their provision of wholesale services to another operator is not improperly used by Eircom's downstream arms in any manner. In the absence of regulation, a downstream part of the operation could use information obtained by an upstream part, and use this to target other operators' customers.
- 8.57. In order to ensure that there is no discrimination which would adversely affect the retail broadband market, ComReg considers that Eircom's retail operation should not be able to avail of new wholesale inputs until these inputs are also available for use by OAOs.

ComReg proposes to continue to impose the remedy of non-discrimination on Eircom.

During the lifetime of this review, where Eircom has an obligation to offer certain Wholesale products which have not yet been made available at the date of any Decision made on foot of this review, it may not offer these or functionally similar products to its retail arm until such time as these Wholesale products are available to OAOs in accordance with the obligations proposed.

Q. 13. Do you agree with ComReg's proposal to impose an obligation not to discriminate? Do you agree with how ComReg proposes to impose that obligation? Please provide reasons for your response.

Price Control and Cost Accounting

Price control

- 8.58. In order to promote competition, ComReg proposes to continue to impose price controls in respect of WUA products and services. Absent of regulation, a vertically integrated operator with market power in wholesale markets may be able to exert its market power by charging an excessive price for wholesale inputs, and may be able

to foreclose the retail market by means of a margin squeeze. ComReg proposes that Eircom should be subject to a general obligation not to squeeze margins.

- 8.59. The previous market review established that Eircom should be obliged to offer prices⁷⁹ for WUA which are cost-oriented. The implementation of this cost-oriented price control has included ComReg's determination of the price for ULMP⁸⁰, and for Line Share.⁸¹ ComReg is currently consulting on reviewing the methodology for setting a rental price for shared access to the unbundled local loop⁸², and expects to consult further on the methodology for setting a cost-oriented price for fully unbundled access in the first half of 2008.
- 8.60. ComReg notes that despite the implementation of price controls under the previous market review, Irish LLU prices remain amongst the highest in the EU. The ongoing review of the methodologies associated with ensuring that all prices for WUA products and associated facilities are cost-oriented is therefore imperative. It is ComReg's aim to ensure that OAOs are able to buy WUA inputs at prices which reflect the underlying costs of an efficient operator, and which therefore allow them to compete in the retail broadband market. At the same time, ComReg wishes to ensure that Eircom is compensated for operational efficiencies.
- 8.61. ComReg has considered the implications of the deployment of NGN. In the WUA market, this could include a move to unbundling at the cabinet rather than at the exchange (sub-loop unbundling), with fibre used for backhaul back to the exchange. ComReg has taken a technology neutral approach to its definition of the WUA market, and indicates that in such a move to NGNs, the underlying competitive market conditions remain, and would be addressed within the WUA market approach.
- 8.62. However, ComReg is aware that the cost profile of unbundling at the cabinet with fibre backhaul to the exchange is as yet unknown, and might differ from the current products on offer in the WUA market. While ComReg proposes to oblige Eircom to ensure that prices are cost-oriented, it is considering whether direct intervention is necessary in setting prices for NGN-based sub-loop unbundling.
- 8.63. ComReg proposes that it may consider forbearing from direct intervention in setting prices for NGN-based WUA services (notably fibre backhaul from cabinet to MDF) if certain criteria are met, namely:
- Prices can be agreed between operators by commercial negotiation
 - Prices are set on a non-discriminatory basis
 - ComReg is satisfied that there has been no unfair leverage of market power in negotiations where market power has been deemed to exist
 - ComReg is satisfied that prices are reasonable by reference to the costs and risks associated with the provision of the underlying services. In this regard ComReg

⁷⁹ These prices can be located on www.Eircom.wholesale.ie in the Access Reference Offer (ARO) price list.

⁸⁰ D15/04

⁸¹ D8/01, Sept 2001

⁸² 08/23 19 March 2008

Market Review

will take account of the associated risk of investment in new fibre optic cable in the access network in particular.

- Eircom retail has not launched a product over the relevant infrastructure
- A conclusion on pricing is reached quickly. In particular agreement on *all* associated prices would have been agreed. ComReg believes a period of two months would be reasonable to allow a conclusion to be reached

If any of these criteria were not met ComReg would intervene immediately.

If agreement were reached in a manner satisfactory to ComReg, ComReg would indicate a minimum and maximum period for which prices should not change and over which it would not intervene

ComReg would reserve the right to obtain any financial, operational or other information that it required to form a view as to either the reasonableness or cost oriented nature of pricing before, during or after commercial discussions have taken place.

ComReg proposes that Eircom should be obliged to ensure that the relationship between its wholesale and retail pricing does not constitute a margin squeeze.

ComReg proposes that Eircom should be obliged to offer WUA services at prices which are cost-oriented.

ComReg proposes that Eircom should be obliged to maintain the current price control pending the outcome of further consultation

ComReg is proposing that, for NGN-based WUA services, it may consider forbearing from direct intervention in setting prices if certain criteria are met,

Cost Accounting

8.64. As ComReg has proposed to impose price control obligations on Eircom in respect of WUA, ComReg proposes to impose a supporting obligation with regard to cost accounting systems. The obligation of cost accounting systems supports the obligations of price control and accounting separation, and can assist ComReg in monitoring the obligation of non-discrimination.

8.65. In order to demonstrate compliance of a service or product with a price control obligation, it is necessary for Eircom to establish cost accounting systems that capture, identify, value and attribute relevant costs to its services and products in accordance with agreed regulatory accounting principles, such as cost causality. A key part of this process is the stage which identifies those parts of the underlying activities or elements that directly support or are consumed by those services or products. These elements are referred to as network components. As these components are frequently used to provide more than one product or service, it is also necessary to determine how much of each component is used for each service or product.

8.66. As operators may operate in both SMP and non SMP designated markets, the division of services and products, and the corresponding costs, capital employed and

Market Review

revenues between the different markets should be reflected in costing systems, and coherence and integrity of information should be assured. Where such particular costs form part of the cost of an SMP service ComReg needs to have visibility as to the basis of and amount of allocation across all services.

- 8.67. In 2005 ComReg had been engaged in an initial public consultation on the detailed implementation of accounting separation and cost accounting remedies under the new framework. No decision notice was issued as a result of this consultation. ComReg intends, during 2008, to re-consult on the detailed implementation of accounting separation and cost accounting remedies originally discussed in 2005.
- 8.68. ComReg proposes to maintain the existing requirement of cost accounting system obligations on Eircom until the detailed implementation consultations are complete.

ComReg proposes to maintain the existing requirement of cost accounting system obligations on Eircom until the detailed implementation consultations are complete.

Q. 14. Do you agree with ComReg's proposal on price controls? Do you agree with ComReg's proposal on cost accounting? Please provide a reasoned response.

Accounting Separation

- 8.69. Separated accounts help disclose possible competition problems and make visible the wholesale prices and internal transfer prices of a dominant operator's products and services.
- 8.70. ComReg intends to implement accounting separation on a service and/or product basis. ComReg believes it is not sufficient to implement such an obligation at a market level as it is important to discourage possible cross-subsidisation of pricing.
- 8.71. Since the previous market review, ComReg has been engaged in a public consultation on the detailed implementation of accounting separation and cost accounting remedies under the new framework.

ComReg proposes to maintain the existing requirement of accounting separation obligations on Eircom until the detailed implementation consultations are complete.

Q. 15. Do you agree with ComReg's proposal on accounting separation? Please provide reasons for your response.

Annex A: Consultation Questions

Q. 1. Do you agree with ComReg's preliminary proposal that the relevant product market is for wholesale unbundled access?	34
Q. 2. Do you agree that this market does not include access via new infrastructure, and does not include wholesale access via alternative platforms?.....	34
Q. 3. Do you agree with ComReg's preliminary view that wholesale broadband access is not in the same product market as wholesale unbundled access?.....	34
Q. 4. Do you agree with ComReg's preliminary view that the incumbent's self-supply would form part of the wholesale unbundled access market?	34
Q. 5. Do you agree with ComReg's preliminary conclusion that the relevant geographic market is national? Please provide a reasoned response.....	35
Q. 6. Do you agree with ComReg's preliminary analysis of the WUA market?.....	46
Q. 7. Do you agree with ComReg's preliminary view that Eircom has SMP in the Wholesale Unbundled Access market? Please provide a reasoned response.	47
Q. 8. Do you agree with ComReg's assessment of potential competition problems in the WUA market? Do you have evidence of any other competition problems? Please provide a reasoned response.	53
Q. 9. Do you agree with ComReg's Regulatory Impact Assessment?	60
Q. 10. Do you agree with ComReg's proposal to impose an access obligation?	68
Q. 11. Do you agree with how ComReg proposes to impose that obligation? Please provide reasons for your response.....	68
Q. 12. Do you agree with ComReg's proposal to impose a transparency obligation? Do you agree with how ComReg proposes to impose that obligation? Please provide a reasoned response.	70
Q. 13. Do you agree with ComReg's proposal to impose an obligation not to discriminate? Do you agree with how ComReg proposes to impose that obligation? Please provide reasons for your response.....	71
Q. 14. Do you agree with ComReg's proposal on price controls? Do you agree with ComReg's proposal on cost accounting? Please provide a reasoned response.	74
Q. 15. Do you agree with ComReg's proposal on accounting separation? Please provide reasons for your response.....	74

Glossary of Terms

The glossary of terms represents many, but not necessarily all of the acronyms and phrases associated with both LLU and the various European regulators.

<i>Acronym</i>	<i>Full title</i>	<i>Description</i>
Bitstream	Bitstream	Bitstream is a service whereby an operator (typically, but not always, the incumbent) installs a high speed access link to the customers premises (e.g. by installing DSL equipment in the local access network) and then makes this access link available on a non-physical basis to third parties. The service may also include transmission to a higher level in the network where the DSL customer has a point of presence.
Broadband	Broadband	Telecommunication in which a wide band of frequencies is available to transmit information. Because a wide band of frequencies is available, information can be multiplexed and sent on many different frequencies or channels within the band concurrently, allowing more information to be transmitted in a given amount of time
Cable	Cable	A system of providing television to consumers via radio frequency signals. It is transmitted to televisions through fixed optical fibers 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.
ComReg	Commission for Communications Regulation	National regulatory agency for Ireland
DSL	Digital subscriber line	A family of technologies that provide digital data transmission over the wires of a local telephone network
DSLAM	Digital Subscriber Line Access Multiplexer	Allows telephone lines to make faster connections to the Internet. It is a network device, located near the customer's location, that connects multiple customer Digital Subscriber Lines (DSLs) to a high-speed Internet backbone line where multiple data streams are combined into one signal over a shared medium.
EC	European Commission	The European Commission embodies and upholds the general interest of the European Union, and is the driving force in the Union's institutional system. Its four main roles are to propose legislation to Parliament and the Council, to administer and implement Community policies, to enforce Community law (jointly with the Court of Justice) and to negotiate international agreements, mainly those relating to trade and cooperation.
ERG	European Regulators Group	Established by by the European Commission to provide a suitable mechanism for encouraging cooperation and coordination between national regulatory authorities and the

		Commission, in order to promote the development of the internal market for electronic communications networks and services, and to seek to achieve consistent application, in all Member States, of the provisions set out in the Directives of the new regulatory framework.
Fibre	Fibre Optic Cable	Optical fibre is a glass or plastic fibre designed to guide light along its length. Optical fibres are widely used in fibre-optic communication, which permits transmission over longer distances and at higher data rates than other forms of communication. Fibres are used instead of metal wires because signals travel along them with less loss, and they are immune to electromagnetic interference.
FTTH	Fibre to the home	A form of fiber optic communication delivery in which the optical signal reaches the end-user's living or office space
FWA	Fixed wireless access	The use of radio links for the transmission of voice and data communications
GLUMP	Geographic number portability and Unbundled Local Metallic Path service	Eircom provides OAOs with number portability combined with exclusive use of a metallic path between the incumbents exchange facility and a customer's premises
IP	Internet Protocol	Method for moving information from one network to another on the internet
LLU	Local loop unbundling	The regulatory process of allowing multiple telecommunications operators use of connections from the incumbents telephone exchange's to the customer's premises.
Local Loop	Local loop	The physical circuit connecting the network termination point at the subscriber's premises to the main distribution frame or equivalent facility in the fixed public telephone network providers network
LS	Line share	Line share provides OAOs with shared use of a metallic path between an Eircom exchange facility and a customer's premises. Eircom retains the voice-band frequency spectrum of the circuit and continues to provide voice services and the OAO is able to use the remainder of the frequency spectrum.
MAN	Metropolitan area network	A network serving businesses and residences in an urban setting
Margin Squeeze	Margin Squeeze	A margin or price squeeze occurs when the difference between the wholesale price and the retail price of the final good or service does not give an efficient downstream firm a reasonable profit margin.
MDF	Main distribution frames	A signal distribution frame for connecting equipment (inside an exchange) to cables and subscriber carrier equipment (outside an exchange).
NBS	National broadband scheme	Provision of broadband services to certain target areas in Ireland in which broadband services are not available or are unlikely to be available in the foreseeable future.
NGN	Next generation networks	The evolution in telecommunication core and access networks that will be deployed over the next 5-10 years. One network transports all information and services (voice, data, and all sorts

Market Review

		of media such as video) by encapsulating these into packets
NRA	National regulatory agency	A state or government agency which regulates businesses in the public interest
OAO	Other alternative operators	Operators, other than the incumbent, providing telecommunication services
OfCom	Office of Communications	National regulatory agency for the United Kingdom
PSTN	Public switched telephone network	PSTN refers to the international telephone system based on copper wires and carrying analog voice data. This is in contrast to newer telephone networks based on digital technologies such as ISDN
Significant Market Power	SMP	
Satellite	Satellite	Communication that involves the use of an active or passive satellite to extend the range of a communications, radio, television, or other transmitter by returning signals to earth from an orbiting satellite.
SLU	Sub loop unbundling	Process by which a sub-section of part of the local loop is unbundled (ie. The physical circuit connecting the network termination point at the subscriber's premises to the nearest cabinet).
ULMP	Unbundled local metallic path	ULMP provides OAOs with exclusive use of a metallic path between the incumbents exchange facility and a customer's premises
VOIP	Voice over internet protocol	The transport of voice traffic across the internet
Wholesale Broadband Access	WBA	Non-physical or virtual network access including 'bit-stream' access at a fixed location.
WUA	Wholesale unbundled access	Wholesale (physical) network infrastructure access (including shared or fully unbundled access) at a fixed location

Market Review