



Commission for
Communications Regulation

Decision Notice and Decision Instrument

Market Analysis – Leased Line Market Review

Response to Consultation on draft Decision Instrument Final Decision Notice and Decision Instrument

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Contents

1 Foreword..... 1

2 Background 2

3 Introduction 5

4 Overview of ComReg Approach..... 6

5 Request for clarification by stakeholders 7

6 Notification to the European Commission 9

7 Response to consultation on draft Decision Instrument 9

8 (Summary of) Market Definition of Market for Wholesale Terminating
Segments of Leased Lines..... 17

Appendix A: Decision Instrument..... 18

Annex A..... 27

Appendix B – Regulatory Impact Assessment 28

Appendix C: Glossary of Terms..... 33

1 Foreword

The term “leased lines” refers to fixed, permanent telecommunications connections providing symmetric¹ capacity between two points. A leased line is permanent, in that capacity is available between the two fixed points, although capacity could be reserved or shared through the associated network depending on the nature of the leased line.

A retail leased line is typically used by business users to connect office sites or to access the Internet. It is a matter for the end user to determine the nature and mix of services carried over a leased line. A wholesale leased line may be used as an input to the provision of a retail leased line, or may be used as an input to provide other retail services, such as fixed and mobile voice services, or Virtual Private Networks (“VPN”). A wholesale leased line may also be used by an operator seeking to extend parts of its network without there being a direct corresponding retail service.

The EU electronic communications regulatory framework requires that ComReg define relevant communications markets appropriate to national circumstances, in accordance with the market definition procedure outlined in the Framework Regulations. In addition, ComReg is required to conduct an analysis of the relevant markets to decide whether or not they are effectively competitive. If it transpires that such a market is not working effectively or in a competitive manner, then, on foot of a finding of Significant Market Power (SMP), ComReg is obliged to impose at least one remedy on the dominant player.

ComReg set out its proposed initial view of the leased line markets in a consultation published in October 2007 (ComReg 07/77), and updated this analysis in its response to consultation in August 2008 (ComReg 08/63). In the initial consultation paper (ComReg 07/77), ComReg proposed that the market for the minimum set of retail leased lines and the market for wholesale trunk segments of leased lines are competitive. However, ComReg considered that the remaining market (for wholesale terminating segments of leased lines) remains uncompetitive, and that Eircom was dominant in this market. This view was maintained in the response to this Consultation (ComReg 08/63).

This document sets out ComReg’s final decision and the remedies that ComReg believes are necessary to address the competitive problems identified in the market for wholesale terminating segments of leased lines.

ComReg welcomes the opportunity to remove regulation where it is clear that all operators can compete on a level playing field, to provide the types of products and services that serve as a crucial backbone to our economy. ComReg believes that this is a positive indication of the investment that has occurred in the wider national telecommunications network, and will continue to work to facilitate such investment and innovation.

John Doherty
Chairperson

¹ It is ComReg’s view that a leased line would be characterised by broad rather than absolute symmetry, in the sense that upstream and downstream capacities would not necessarily be equal, but should be broadly equivalent.

2 Background

- 2.1 In line with its statutory obligations², the Commission for Communications Regulation (“ComReg”) must carry out a review of the markets for leased lines, and determine whether or not they are competitive. If it transpires that any such market is not working effectively or in a competitive manner, then, on foot of a finding of SMP, ComReg is obliged to impose at least one remedy on the dominant player³.
- 2.2 ComReg published its first round Market Analysis: Wholesale Terminating and Trunk Segments of Leased Lines and Retail Leased Lines (National) review of the market for leased lines on 4 June 2004 (04/59). The response to consultation and draft direction was published on 17 January 2005 (05/03). This was notified to, and accepted by, the European Commission (16 Feb 2005). A Decision Notice (D7/05) was published on 30 March 2005.
- 2.3 Since the time of the 2005 review, the European Commission (the Commission) has reviewed the product and service markets which may be susceptible to ex ante regulation⁴. The Commission has proposed that the minimum set of retail leased lines should be removed from the list of relevant markets, since wholesale regulation should ensure that there is competitive supply at the retail level. In addition, the Commission reasons that, in the presence of wholesale regulation, this market does not meet the three criteria test⁵ since there are no significant barriers to entry⁶.
- 2.4 ComReg has assessed the extent to which the market in Ireland for the minimum set of retail leased lines up to and including 2 Mb/s continues to be susceptible to ex ante regulation. By applying the three criteria test, ComReg proposes that, in the presence of wholesale regulation, entry barriers to the retail market are no longer high and non-transitory, and therefore the first criterion is not met. ComReg’s conclusion is that, although Eircom has a high share of the retail market, remedies in the wholesale market, which were imposed following the previous market review, allow existing and potential competitors to enter and compete. In the presence of wholesale regulation, the retail market must therefore be considered not to be susceptible to ex ante regulation. ComReg is therefore proposing to remove this market from regulation and to withdraw its previous finding⁷ that Eircom had SMP on this market.
- 2.5 The Commission’s revised Recommendation is that there is one leased line market potentially susceptible to ex ante regulation, namely the market for wholesale

² Regulations 25, 26 and 27 of the European Communities (Electronic Communications Networks and Services) (Framework) Regulations S.I. No. 307 of 2003, as amended

³ Regulation 9 of the European Communities (Electronic Communications Networks and Services) (Access) Regulations S.I. No. 305 of 2003, as amended

⁴ This review cumulated in a Revised Commission recommendation 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 dated 17 December 2007 OJ L 344/65.

⁵ Ibid, Recital 5 and paragraph 2 of the Revised Commission Recommendation. The three criteria are, briefly, (i) are there high and non-transitory barriers to entry, (ii) does the market structure tend towards effective competition over time and (iii) would the application of competition law alone adequately address the market failure(s).

⁶ Ibid, Recital 15.

⁷ March 2005 D7/05

Decision Notice: Market for Terminating Segments of Wholesale Leased Lines

terminating segments of leased lines⁸. This Recommendation further states that “national regulatory authorities should analyse the product and service markets identified”. The initial consultation of the second round review Document No. 07/77 was published prior to the publication of the Commission’s revised Recommendation. However, ComReg’s view of the leased lines market as set out in its initial consultation paper is in line with the Commission’s revised Recommendation.

- 2.6 An initial consultation setting out ComReg’s initial view of the second round market analysis of the set of Leased Line markets was published on October 1st, 2007⁹.
- 2.7 In the Consultation, ComReg outlined its approach to the analysis of the relevant market. Having defined the scope of the relevant product and geographic market, the next step is to determine if the relevant market is effectively competitive or if SMP exists.
- 2.8 The European 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*:
- “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”*¹⁰.
- 2.9 Article 14 of the Framework Directive¹¹ 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”.
- 2.10 The above definition of SMP identifies three key sources of competitive constraint that may affect an undertaking’s ability to profitably sustain price levels above, or to restrict output below competitive levels. These potential constraints derive principally from:
- Existing competitors;
 - Potential competitors; and
 - Strong buyers¹².

⁸ Ibid, Annex, Market 6, “Wholesale terminating segments of leased lines, irrespective of the technology used to provide leased or dedicated capacity”.

⁹ Market Analysis: Leased Lines Markets (ComReg document 07/77)

¹⁰ Case 27/76 *United Brands v Commission* [1978] ECR 207, para. 65.

¹¹ Transposed into Irish law by Regulation 25 of the European Communities (Electronic Communications Networks and Services) (Framework) Regulations S.I. No. 307 of 2003, as amended

¹² 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 SMP 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

Decision Notice: Market for Terminating Segments of Wholesale Leased Lines

- 2.11 In this Consultation, in coming to a view on the extent to which each of the above possible constraints actually influence an undertaking's ability to exert market power in reality, ComReg considered the factors set out in the Commission's guidelines on the assessment of SMP¹³.
- 2.12 ComReg's analysis considered potential constraints on competition in the markets for the wholesale trunk segments and the wholesale terminating segments of leased lines¹⁴. In line with approach described above, the analysis considered firstly existing competition in the market, secondly potential competition, and finally an assessment of countervailing buyer power examined the impact of any strong buyers.
- 2.13 This analysis was contained in the response to this consultation, which, together with a consultation on the draft Decision Instrument, was published on August 6th, 2008¹⁵. The deadline for responses to this consultation was September 3rd, 2008. Following a request from Eircom for an extension to this date, this deadline was extended to September 17th, 2008.
- 2.14 ComReg also consulted with the Competition Authority in relation to its findings on these markets, further to Regulation 27(1) of the Framework Regulations, and provided the Authority with a summary of its preliminary findings.
- 2.15 Further to a request for clarification on a number of issues, primarily in the context of the boundary split, a response by way of an Information Notice was published on September 5th, 2008¹⁶. In order to allow stakeholders sufficient time to consider this clarification in the context of the consultation document, the deadline for responses was further extended to October 3rd, 2008.
- 2.16 In line with the requirements set out in Article 7(3) of the Framework Directive¹⁷, ComReg notified the European Commission (EC) of its intentions to take measures as set out in the draft Decision Instrument. Brief comments were subsequently received from the EC in response to this notification concerned the application of a remedy in respect of Wholesale Leased Line product, and these are outlined in Section 6.

operator in question likely to behave if it were free from SMP regulatory constraints and if the continued imposition of remedies is as such warranted.

¹³ 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).

¹⁴ In line with the Commission recommendation in force at the time of the Consultation, ComReg defined and analysed the market for wholesale trunk segments and the market for wholesale terminating segments.

¹⁵ Market Analysis: Leased Lines Markets Response to Consultation and Consultation on Draft Decision ComReg Document 08/63

¹⁶ Information Notice - Clarification further to ComReg Document 08/63 - Market Analysis: Leased Lines Markets Response to Consultation and Consultation on Draft Decision

¹⁷ Directive 2002/21/EC on a common regulatory framework for electronic communications networks and services (Framework Directive)

3 Introduction

- 3.1 ComReg has considered in detail all responses to consultation, and considers that there are separate markets for the trunk segments and the terminating segments of wholesale leased lines.
- 3.2 The boundary between trunk and terminating is not determined by one operator's specific network topology. Trunk segments connect high densities of traffic via high capacity connections, between and within major centres of population. OAO investment on these routes reflects the difference in the underlying economic conditions of supply and demand. This boundary will be clarified further in Section 5 of this document. This market for trunk segments of wholesale leased lines may also include connectivity between tandem exchanges where these exchanges connect areas of high traffic density via high capacity links. This means that, in the current network, trunk capacity will be high order transport capacity, which generally means capacity of the order of STM-1 and above. However, ComReg considers that the market for wholesale trunk segments should not be further differentiated by bandwidth. ComReg further considers that the market for wholesale trunk segments is national in scope.
- 3.3 Terminating segments generally supply lower densities of traffic on a less aggregated basis. Everything, outside of the trunk segment market is considered to be part of the terminating segment market, including the main points of handover. ComReg does not consider that the market for wholesale terminating segments of leased lines should be differentiated by bandwidth, and all products offering fixed permanent, point-to-point, broadly symmetric termination are in the same wholesale terminating segment market, regardless of the underlying technology.
- 3.4 Self-supply should be considered part of the market where an operator has capacity which it would be likely to offer on a wholesale market without significant costs, and within a reasonable timeframe.
- 3.5 ComReg considers that for the purposes of Regulation 26 of the Framework Regulations the relevant product market is the market for wholesale terminating segments of leased lines; and the relevant geographic market, for same purposes, for the wholesale terminating segments is national in scope.
- 3.6 ComReg has assessed the extent to which the market in Ireland for the wholesale trunk segments of leased lines continues to be susceptible to ex ante regulation. By applying the three criteria test¹⁸, ComReg proposes that, in the presence of robust wholesale regulation on the wholesale terminating segments of leased lines, entry barriers to the wholesale trunk segments of leased lines market are no longer high and non-transitory, and therefore the first criterion is not met. ComReg's conclusion is that, although Eircom has a high share of the wholesale trunk segments of leased lines market, remedies in the market for wholesale terminating segments of leased lines, which are proposed following this market review, allow existing and potential competitors to enter and compete. In the presence of wholesale regulation on the wholesale terminating segment of leased lines, the wholesale trunk segments of leased lines market must therefore be considered not to be susceptible to ex ante

¹⁸ As provided for in recital 5 and paragraph 2 of the Revised Commission recommendation 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 dated 17 December 2007 OJ L 344/65

Decision Notice: Market for Terminating Segments of Wholesale Leased Lines regulation. ComReg is therefore proposing to remove this market and to withdraw its previous finding¹⁹ that Eircom had SMP in this market.

4 Overview of ComReg Approach

- 4.1 In conducting its market definition ComReg has, subject to Regulations 25, 26 and 27 of the Framework Regulations²⁰, to take utmost account of such recommendation and of the European Commission Guidelines²¹ referred to in Article 15(2) of the Framework Directive²², and in accordance with the principles of competition law, defined relevant markets for including the geographical area within the State of such markets.
- 4.2 ComReg in conducting this analysis has sought to achieve the policy objectives as set out in the Framework Directive, namely
- promotion of an open and competitive market for electronic communications networks, services and associated facilities;
 - development of the internal market; and
 - promotion of the interests of European citizens.
- 4.3 ComReg has noted that the European Commission Guidelines state that a dominant position is found by reference to a number of criteria and its assessment is based on a forward-looking market analysis based on existing market conditions. ComReg has noted that although a high market share alone is not sufficient to establish the possession of SMP (dominance), the guidelines state that, very large market shares — in excess of 50 % — are in themselves, save in exceptional circumstances, evidence of the existence of a dominant position.
- 4.4 Nevertheless in considering whether market power exists, ComReg has not assumed market share provides a definitive indicator. It has also considered a number of factors including those listed in the Guidelines:
- overall size of the undertaking;
 - control of infrastructure not easily duplicated;
 - technological advantages or superiority;
 - absence of or low countervailing buying power;
 - easy or privileged access to capital markets/financial resources;
 - product/services diversification (e.g. bundled products or services);
 - economies of scale;
 - economies of scope;
 - vertical integration;
 - a highly developed distribution and sales network;
 - absence of potential competition; and
 - barriers to expansion.

¹⁹ March 2005 D7/05

²⁰ European Communities (Electronic Communications Networks and Services) (Framework) Regulations S.I. No. 307 of 2003, as amended

²¹ 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).

²² Directive 2002/21/EC on a common regulatory framework for electronic communications networks and services (Framework Directive)

- 4.5 ComReg also consulted with the Competition Authority, further to Regulation 27 of the Framework Regulations, pursuant to the Cooperation Agreement entered into between ComReg and the Competition Authority under Section 34 of the Competition Act 2002.
- 4.6 In choosing remedies, ComReg has ensured that each remedy is: based on the nature of the problem identified: proportionate and justified in the light of the objectives laid down in section 12 of the Act of 2002 further to Regulation 9(6) of the Access Regulations²³. All remedies are imposed following consultation in accordance with Regulations 19 and 20 of the Framework Regulations.
- 4.7 With regard to the access remedy, ComReg has considered whether the denial of such access or the imposition by operators of unreasonable terms and conditions having a similar effect — would hinder the emergence of a sustainable competitive market at the retail level, would not be in the interests of end-users, or would otherwise hinder the achievement of the objectives set out in section 12 of the Act of 2002 further to Regulation 13(1) of the Access Regulations. ComReg has also considered in imposing the access obligation (a) the technical and economic viability of using or installing competing facilities, in the light of the rate of market development, taking into account the nature and type of interconnection and access involved; b) the feasibility of providing the access proposed, in relation to the capacity available; (c) the initial investment by the facility owner, bearing in mind the risks involved in making the investment; (d) the need to safeguard competition in the long-term; (e) where appropriate, any relevant intellectual property rights; and (f) the provision of pan-European services further to Regulation 13(4) of the Access Regulations.

5 Request for clarification by stakeholders

- 5.1 Following the publication of the Response to Consultation document, ComReg received requests from certain stakeholders for clarification on the views expressed in this document. Of particular concern was in relation to how the proposed boundary split between trunk and terminating segments of wholesale leased lines would be implemented.
- 5.2 In response to these requests, ComReg published an Information Notice¹⁶ on September 5th, 2008.
- 5.3 In summary, the Information Notice clarified the text that set out the boundary between the markets for trunk and terminating segments of wholesale leased lines. Furthermore, ComReg clarified that “for the avoidance of doubt, ComReg’s position is that there is insufficient evidence at this time to identify connectivity between all tandem exchanges as being in the trunk market, but is prepared to consider such connectivity on a case by case basis.” ComReg also clarified that a distinguishing characteristic of the market for trunk segments of wholesale leased lines is that it always has an Other Authorised Operator (OAO) presence. The Information Notice goes on to explain “*it is clear that there are large parts of the core network where investment in alternative infrastructure has not occurred and where competitive products and services are unavailable. Where these (i.e. uncompetitive) supply conditions exist, ..., the services provided are regarded as being in the terminating segment market.*”

²³ the European Communities (Electronic Communications Networks and Services) (Access) Regulations S.I. No. 305 of 2003, as amended

- 5.4 Following analysis of the responses received to the consultation on the draft Decision Instrument, it was apparent to ComReg that stakeholders were uncertain as to how this boundary split would work in practice. In order to minimise uncertainty in relation to this matter a further explanation is provided below.
- 5.5 The Explanatory Memorandum²⁴ published by the European Commission to accompany the Framework Directive¹⁷ in 2003, sets out that “What constitutes a terminating segment will depend on the network topology specific to particular Member States and will be decided upon by the relevant NRA.” This is in accordance with ComReg’s position as set out in the market definition of 08/63. The definition of the market for wholesale trunk segments of leased lines is set out in, inter alia, paragraph 3.58 of the Response to Consultation document, and states that “When this proposed definition is translated into the network topology typically in use in Ireland, it would mean that, for example, a trunk segment of a leased line would be associated with connectivity between any tandem and double-tandem switch location.” The market for wholesale terminating segments of leased lines is defined in terms of what does not fall into the market for wholesale trunk segments of leased lines (see paragraph 3.56 of the Response to Consultation).
- 5.6 ComReg now considers that it would be helpful to catalogue specific urban centres which form the current scope of the market for trunk segments of leased lines. This is by way of clarification and does not change the market definition, analysis or subsequent remedies that have already been consulted on and determined.
- 5.7 Circuits which are provided using established infrastructure, between certain urban centres (as listed in Table 1 below), and which are of a capacity equal to or greater than STM-1 (155Mb/s) fall into the market for trunk segments of wholesale leased lines. Intra-urban routes, i.e. those circuits which run between exchanges located in the same urban area (for example, between Rochestown and Churchfield, both exchanges within the Cork urban area) would not fall into this market, as they do not have the same economic characteristics as described in 08/63. As explained in the response to consultation, trunk segments connect high densities of traffic via high capacity connections, between and within major centres of population. OAO investment on these routes reflects the difference in the underlying economic conditions of supply and demand. Therefore where OAO investment has not occurred, for instance in the cases between exchanges located in the urban centres set out below, it is clear that there is a difference in the economic conditions of supply such that these intra-urban routes fall into the market for wholesale terminating segments of leased lines.
- 5.8 ComReg understands that as infrastructure develops, this set of routes may expand. However, as noted in the discussion on market definition in 08/63, the investment required to roll-out new infrastructure is significant, and given the physical nature of the civil and other engineering works required to bring this infrastructure on-stream, this investment will not happen quickly. Therefore although ComReg believes that this clarification should endure over the lifetime of this market review, it reserves the right to amend this set, if deemed necessary. For the avoidance of doubt, ComReg notes that any subsequent amendment will not change the definition of the market for trunk segments of wholesale leased lines.

²⁴ Commission Recommendation 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)

Arklow
Carrick-on-Shannon
Cork
Drogheda
Dublin
Dundalk
Ennis
Galway
Letterkenny
Limerick
Mullingar
Shannon
Sligo
Waterford
Wexford

Table 1

- 5.9 Further clarification provided in the Information Notice re-iterated ComReg’s view that the wholesale WLL product is a remedy associated with the market for terminating segments of wholesale leased lines. The product may be provided using infrastructure that is also used for the provision of other products, however, these products do not necessarily fall into the same product markets.

6 Notification to the European Commission

- 6.1 As previously mentioned, ComReg, in accordance with its obligations under Article 7(3) of the Framework Directive, ComReg notified the European Commission of its intentions to take measures as set out in the draft Decision Instrument.
- 6.2 In its response, the European Commission invited ComReg to clarify the scope of the proposed measure in respect of the mandating of WLLs in its final measure.
- 6.3 The provision of Wholesale Leased Lines (WLLs) involves purchasing a full end-to-end leased line from the incumbent operator, while Partial Private Circuits (PPCs) allow an OAO to combine elements of their own network infrastructure with parts of Eircom’s network. The WLL product is essentially the same product that Eircom sell at the retail level, albeit currently priced using a “Retail Minus” mechanism. ComReg’s view is that competition would best be served by encouraging OAOs to use PPCs rather than traditional WLLs where possible, because this involves a greater investment in infrastructure by operators, and a lesser reliance on reselling Eircom’s product. WLLs may be provided using infrastructure that is used to provide other services that do not fall into the terminating segment market, (such as infrastructure used to provide wholesale trunk segments). However this in itself does not, in ComReg’s view, mean that a WLL would be provided over such infrastructure would be competitive.
- 6.4 The European Commission also reminded ComReg that draft measures relating to accounting separation and cost accounting, which are to be consulted upon at a later date, must be notified under Article 7(3) of the Framework Directive. This notification procedure must be followed once the proposed consultations on accounting separation and cost accounting are finalised.

7 Response to consultation on draft Decision Instrument

Introduction

- 7.1 Four responses from stakeholders were received to this consultation:
- Alto;
 - BT Ireland;
 - Colt Telecom; and
 - Eircom.
- 7.2 ComReg wishes to thank all respondents for their submissions. These submissions will be published in accordance with ComReg's "Guidelines on the treatment of confidential information"²⁵.
- 7.3 ComReg notes that the amendments to the Decision Instrument do not involve substantial changes to the nature, or type, of SMP obligations that it originally proposed to impose in Document No. 08/63.
- 7.4 This document sets out ComReg's responses to comments received on foot of Document No. 08/63. This document also finalises the Decision Instrument in relation to SMP to be imposed, on (or withdrawn from) Eircom. The SMP obligations applicable to Eircom in relation to the relevant market (as outlined in Appendix A) will be imposed and effective from the date of publication of this document.

Responses to consultation and ComReg's position

- 7.5 The structure of some respondents' submissions did not follow the usual question and answer structure, therefore in some cases ComReg has collated some of the questions to address the arguments made.

Q. 1. Do you agree that, in the presence of regulation of the wholesale market for leased lines, the market for the minimum set of retail leased lines should no longer be considered susceptible to ex ante regulation? Please provide reasons for your answer.

- 7.6 In relation to removal of regulation from the retail market, two respondents did not believe that it is appropriate to do so at this time, notwithstanding the revised Recommendation on Relevant Markets which was issued by the European Commission²⁶ which removed the market for retail leased lines from being susceptible to ex ante regulation. In both respondents' views, the wholesale regulation currently imposed is insufficiently robust to allow competitors to Eircom to compete on a level playing field. One respondent particularly noted that it believed that until a full pricing review of PPCs was completed, the current PPC product is not a fit for purpose wholesale input.
- 7.7 ComReg understands the concerns of these two respondents, but continues to believe that it would be inappropriate to regulate the market for retail leased lines for the reasons already explained in Document No. 08/63. In relation to PPC pricing, ComReg notes that it has already proposed to hold a further consultation on the

²⁵ ComReg document 05/24s "Guidelines on the treatment of confidential information."

²⁶ 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

Decision Notice: Market for Terminating Segments of Wholesale Leased Lines

detail of this, and believes that it would be inappropriate to comment further on this matter in advance of this consultation.

Q. 2. Do you agree that trunk and terminating segments fall within different markets? Do you agree with ComReg's proposed boundary between trunk and terminating segments? Please state the reasons for your opinions.

- 7.8 All respondents agreed that trunk and terminating segments fall within different markets, although not all agreed with the boundary between the two proposed by ComReg. Two respondents were concerned with the proposed boundary and warned that it does not fully take into account the limited geographic reach of the alternative infrastructure cited in Documents No. 07/77 and 08/63. The other two respondents agreed with ComReg's proposed boundary.
- 7.9 ComReg notes the concerns of the two respondents who feel that the cited competitive infrastructure has limited geographical reach, and to a certain extent agrees. As noted in Section 5, ComReg believes that the current geographic reach (which is different to the geographic scope of the market) is limited to those areas where the economic conditions have allowed the considerable barriers to entry to be overcome. As noted in Document No. 08/63, ComReg believes that the actual pattern of investment in Ireland supports this proposed definition of the boundary split, and confirms the different economic conditions of the supply of trunk and terminating segments.
- 7.10 ComReg also notes that entry to the market for wholesale trunk segments of leased lines has been facilitated to a certain extent by state funding. While this may affect the feasibility of further investment in this market, ComReg does not believe that this affects the sustainability of current trunk provision.

Q. 3. Do you agree with ComReg's reasoning on self-supply? Please provide reasons for your response.

- 7.11 One respondent agreed with ComReg's reasoning on self-supply. No other respondent expressed particular views on this matter.

Q. 4. Do you agree that the market for trunk segments should not be further differentiated by bandwidth? Please provide a reasoned response.

- 7.12 One respondent expressed its confusion, in its response, over the use of the phrase "further differentiated by bandwidth", claiming that this belied ComReg's poor understanding of the make-up of the market. This respondent claims that the trunk segment of a leased line comprises the core network element of that leased line. In particular, this respondent believes that ComReg contradicts itself between Documents No.s 08/63 and 08/74, when it (ComReg) states that the market for trunk segments pertains to circuits of high capacity (STM-1 and above), and therefore for capacities below STM-1, a leased line product is contained within the market for terminating segments". The respondent particularly believes at this point that capacity is not a defining characteristic of either a trunk or terminating segment of leased lines. No other respondent expressed the view that this market should be further differentiated by bandwidth.
- 7.13 ComReg does not believe that it is incorrect to say that capacity is not a defining characteristic of a trunk segment of a leased line. As explained in Document No. 08/63 (paragraphs 3.48 – 3.59), ComReg believes that there are differences in the economics of supply of trunk and terminating segments of wholesale leased lines because economies of scale and density can be achieved more rapidly or at lower

Decision Notice: Market for Terminating Segments of Wholesale Leased Lines

levels of investment in the market for trunk segments of wholesale leased lines than in the market for terminating segments of wholesale leased lines.

Q. 5. Do you agree that all high bandwidth products form part of the same market? Please provide reasons for your response.

Q. 7. Do you agree that the market for terminating segments should not be further differentiated by bandwidth? Please provide a reasoned response.

Q. 8. Do you agree that all products offering fixed permanent point-to-point symmetric termination belong in the same market? Please state the reasons for your opinions.

- 7.14 One respondent believes that there is significant distinction between the market for high and low bandwidth products, specifically that there is a separate market for high bandwidth terminating segments. This respondent expressed the view that products using copper as an underlying delivery mechanism restricts the bandwidth available to these products, and specifically that ComReg's view that "it is likely that technologies and infrastructure will be rolled out that will facilitate speeds of up to 25Mb/s" is incorrect, on the basis that such technologies are likely to be of an asymmetric nature and therefore unsuitable for the provision of symmetric, dedicated capacity. No other respondent expressed specific views on this point.
- 7.15 ComReg does not agree with the view that there is a distinctly separate market for high bandwidth terminating segments of leased lines. While there has been some infrastructure roll-out to facilitate the provision of trunk segments of leased lines, this is not the same as rolling-out an associated access network that would facilitate the provision of terminating segments of leased lines. In certain circumstances it may be commercially viable for an operator, in competition with a hypothetical monopolist, to build out a terminating segment to individual end-user premises. Indeed, ComReg notes that the civil engineering costs of building an individual terminating segment would be somewhat similar to those of building an individual trunk segment. However, a trunk segment, by its nature, can be used to provide service to a number of customers, while a terminating segment, again by its nature, can only be used to provide access to one customer. In fact, ComReg believes that the aggregation of capacity that is facilitated by trunk segments is required in order to reach the economies of scale necessary to make such an investment by an operator who does not possess a ubiquitous network. This, together with the fact that a hypothetical monopolist would be in a position to leverage its ubiquitous access network leads ComReg to believe that this that such investment by an operator is unlikely to occur to such an extent as would constrain such a hypothetical monopolist.
- 7.16 In relation to the alleged restriction associated with the underlying delivery mechanism, ComReg notes that even technologies that are asymmetric in nature can be used to deliver dedicated, symmetric bandwidth to end-users, depending on the deployment of such technologies. Furthermore, ComReg maintains the view that, from a demand perspective, a wholesale purchaser of leased lines would be able to substitute multiples of higher or lower capacity leased lines up and down the ranges of capacities on offer, although not from top to bottom. There may be breaks in the chain according to the eventual retail application, but at the wholesale level, ComReg does not believe that there are clear and consistent breaks in the possibility of substituting different bandwidths. This supports the supply-side analysis that there should be no further differentiation on the basis of bandwidth.

Decision Notice: Market for Terminating Segments of Wholesale Leased Lines

Q. 6. Do you agree that the market for trunk segments is national in scope? If not, please give reasoned arguments to support your views.

- 7.17 No respondent expressed an opinion that the market for trunk segments is not national in scope.

Q. 9. Do you agree that the market for the terminating segments of wholesale leased lines is national in scope? Please provide reasons for your response.

- 7.18 No respondent expressed an opinion that the market for terminating segments is not national in scope.

Q. 10. Do you agree with ComReg's analysis of existing competition in the wholesale leased line markets? Please provide reasons for your response.

- 7.19 Two respondents disagreed, and one agreed with ComReg's analysis of the level of competition in the markets for wholesale leased lines. One of the respondents who disagreed believed that the level of competition is higher than suggested by ComReg, while the other respondent believed that the level was lower. The respondent who agreed with ComReg's analysis of the level of competition in this market noted that Eircom's market share of the trunk market remains sufficiently high, to the extent that, if the analysis were to be based solely on market shares, Eircom could be deemed to have SMP in this market.

- 7.20 ComReg notes concerns raised by respondents about the level of competition in the trunk market. However, ComReg believes that this concern is based on a misinterpretation of the definition of the trunk market. The definition which ComReg proposed in the Consultation, and has upheld in this Response to Consultation, finds a trunk market limited to certain routes on the core network, concentrated in areas of highest traffic density, and within and between high concentrations of population. The trunk market is not, therefore, synonymous with the core network. As explained previously, only circuits which are provided using established infrastructure, between urban centres, and which are of a capacity equal to or greater than STM-1 (155Mb/s) fall into the market for trunk segments of wholesale leased lines.

- 7.21 ComReg acknowledges the point raised by one respondent which notes that a number of operators now provide high bandwidth connectivity. However ComReg believes that, as previously described, this connectivity does not extend the reach of the market for wholesale trunk segments.

Q. 11. Do you agree with ComReg's analysis of potential competition in the markets for wholesale leased lines? Please provide a reasoned response.

- 7.22 One respondent expressed the view that ComReg had underestimated the sunk cost involved in the establishment of a new network.

- 7.23 ComReg acknowledges that entry to the market for wholesale trunk segments of leased lines has been facilitated to a certain extent by state funding. While this may affect the feasibility of further investment in this market, ComReg does not believe that this affects the sustainability of current trunk provision.

- 7.24 In respect of the market for terminating segments of wholesale leased lines, ComReg believes that while it may be commercially viable for operators to undertake the necessary capital expenditure to reach an individual end-user, depending on the demand requirements of the end-user, it is unlikely in the extreme that operators not

Decision Notice: Market for Terminating Segments of Wholesale Leased Lines

currently in the possession of a ubiquitous access network would be able to do so on a sufficiently widespread basis that would allow them to compete effectively with a hypothetical monopolist.

Q. 12. Do you agree with ComReg's assessment of countervailing buyer power? If not, please provide reasons for your response.

- 7.25 One respondent agreed with ComReg's assessment of countervailing buyer power, whilst one other did not. The respondent who disagreed put forward the view that the market for high bandwidth terminating segments displays significant countervailing buyer power, which reflects competition between several suppliers.
- 7.26 As noted previously, ComReg is not of the view that a separate market for wholesale high bandwidth terminating segments of leased lines exists. Nonetheless, in considering the respondent's position on CBP, ComReg recognises that, in the market for wholesale terminating segments, self-supply particularly by mobile operators has increased recently. However, ComReg does not agree that this indicates a significant lowering of entry barriers to the wholesale market for the terminating segments of leased lines, as explained in Document No. 08/63. ComReg therefore maintains that CBP is not sufficient to constrain Eircom's behaviour in the market for the wholesale terminating segments of leased lines.

Q. 13. Do you agree with ComReg's proposed SMP designation? If you disagree, please provide reasons for your response.

- 7.27 In relation to the market for wholesale trunk segments of leased lines, two respondents agreed with the proposal to remove Eircom's SMP designation, whilst two respondents disagreed.
- 7.28 ComReg notes the views of those respondents who disagree with the proposal to remove Eircom's SMP designation in the market for wholesale trunk segments of leased lines.
- 7.29 ComReg is of the opinion that some concerns related to the withdrawal of the SMP designation in respect of the market for wholesale trunk segments of leased lines are based on a view of the market which is broader than that defined by ComReg through this market review process. The market for wholesale trunk segments which ComReg has defined is characterised by the presence of alternative infrastructure, as in this market, the economic conditions are such that it is commercially attractive for an OAO to invest.
- 7.30 In light of this, ComReg maintains its conclusions that, on balance, the market for trunk segments of wholesale leased lines is tending towards competition, and maintains its view that the removal of Eircom's SMP designation is appropriate.
- 7.31 In relation to the market for wholesale terminating segments of leased lines, three respondents agreed with ComReg's proposal to maintain Eircom's SMP designation, whilst one respondent disagreed with the proposal to maintain this designation.
- 7.32 ComReg reiterates it does not agree that there are separate markets for wholesale terminating segments based on the nature of the underlying infrastructure. ComReg has maintained a technology neutral approach throughout its analysis, and refers back to this discussion in the Market Definition.

Decision Notice: Market for Terminating Segments of Wholesale Leased Lines

- 7.33 ComReg maintains its conclusion that the market for the terminating segments of wholesale leased lines is not tending towards competition and is not likely to do so within the lifetime of this review.

Q. 14. Do you agree with ComReg's assessment of potential competition problems in the market for the terminating segments of wholesale leased lines? Please provide a reasoned response.

- 7.34 Two respondents agreed, while one respondent disagreed with this assessment. The latter disagreed on the basis that it believes that there is a separate market for high bandwidth wholesale terminating segments of leased lines.

- 7.35 ComReg confirms its view expressed in the Consultation and Response to Consultation that, in the market for the terminating segments of leased lines, the finding of SMP indicates the potential for competition problems to arise. This justifies the imposition of ex ante remedies.

- 7.36 It is also ComReg's position that, in light of the finding that the markets for retail leased lines and wholesale trunk segments are prospectively competitive, it is essential that the set of remedies available for the uncompetitive market for terminating segments of leased lines is robust and effective.

Q. 15. Do you agree with ComReg's proposal to impose an access obligation? Do you agree with how ComReg proposes to impose that obligation? If not, please provide reasons for your response.

Q. 16. 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.

Q. 17. 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.

- 7.37 Three of the four respondents agreed with ComReg's proposals on remedies, particularly welcoming the inclusion in the market of services provided using Ethernet. Other specific issues that were welcomed by these respondents were the requirement on Eircom to comply with a set of Key Performance Indicators (KPIs), the requirement on Eircom to support the provision of wholesale terminating segments of leased lines with a Service Level Agreement, and the requirement on Eircom to publish a Reference Offer. The respondent who disagreed with ComReg's proposals on remedies specifically regards the imposition of a requirement to continue to provide a Wholesale Leased Line (WLL) product as unlawful.

- 7.38 ComReg notes the latter respondent's opposition to the continued requirement on Eircom to provide WLLs. The provision of Wholesale Leased Lines (WLLs) involves purchasing a full end-to-end leased line from the incumbent operator, while Partial Private Circuits (PPCs) allow an OAO to combine elements of their own network infrastructure with parts of Eircom's network. The WLL product is essentially the same product that Eircom sell at the retail level, albeit currently priced using a "Retail Minus" mechanism. ComReg's view is that competition would best be served by encouraging OAOs to use PPCs rather than traditional WLLs where possible, because this involves a greater investment in infrastructure by operators, and a lesser reliance on reselling Eircom's product. As previously noted, WLLs may be provided using infrastructure that is used to provide other services

Decision Notice: Market for Terminating Segments of Wholesale Leased Lines

that do not fall into the terminating segment market, (such as infrastructure used to provide wholesale trunk segments). However this in itself does not, in ComReg's view, mean that a WLL would be provided over such infrastructure would be competitive. ComReg therefore continues to believe that the WLL product should continue to be mandated for a number of reasons, explained in document No. 08/63, but will continue to keep this matter under review.

- 7.39 Some respondents suggested that an obligation to publish an Internal Reference Offer (IRO) should be imposed on Eircom. ComReg will monitor how the obligations already proposed work in practice and may consult further on this potential remedy, if required.

Q. 18. Do you agree with ComReg's proposal to implement price controls in this market? Do you agree that PPCs should be offered at cost oriented prices and that FL-LRIC should be maintained in the interim? Do you agree that WLLs should ultimately be offered at cost-oriented prices with retail minus being retained in the interim? Do you agree that all wholesale terminating segments of leased lines should be offered at cost-oriented prices? How should this best be done?

Q. 19. Do you agree with ComReg's proposal on cost accounting? Please provide a reasoned response.

Q. 20. Do you agree with ComReg's proposal on accounting separation? Please provide reasons for your response.

- 7.40 One respondent agreed with ComReg's proposals in respect of price controls, cost accounting and accounting separation. One other respondent noted an obligation on Eircom not to cause a margin squeeze in respect of WLL is sufficient to ensure adequate pricing for WLLs, having regard to the fact that the market for retail leased lines is competitive. One further respondent is of the view that a review of PPC pricing is urgently required, and expressed the opinion that the current PPC product is not a fit for purpose wholesale input.

- 7.41 ComReg does not agree that the obligation not to cause a margin squeeze in respect of WLL is in itself a sufficient remedy in respect of adequate pricing for WLLs. It believes that the suite of remedies proposed in the Document No. 07/77, and reiterated in Document No. 08/63 is still required. One of the key elements in pricing for WLLs, and mandated wholesale products in general, is that the prices are transparent and non-discriminatory. An obligation not to margin squeeze on its own, does not necessarily achieve this. ComReg therefore maintains its view that a price control in respect of WLL is required.

- 7.42 ComReg notes that it has stated its intention to hold a consultation on how to best implement cost orientation in the market for wholesale terminating segments of leased lines, and this consultation will look at the effects of such an accounting mechanism on the PPC product. Furthermore, ComReg will shortly be consulting on the levels of PPC pricing.

Q. 21. Do you agree with ComReg's assessment of the regulatory impact of the proposed measures? If not, please provide reasons for your response.

- 7.43 No respondents expressed any views on ComReg's assessment of the regulatory impact of the proposed measures.

8 (Summary of) Market Definition of Market for Wholesale Terminating Segments of Leased Lines

- 8.1 There are separate markets for the trunk segments and the terminating segments of leased lines, and both are national in scope.
- 8.2 The boundary between trunk and terminating is not determined by any operator's specific network topology. Trunk segments connect high densities of traffic via high capacity connections, between and within major centres of population. OAO investment on these routes reflects the difference in the underlying economic conditions of supply and demand. Terminating segments generally supply lower densities of traffic on a less aggregated basis. Everything, outside of the trunk segment market, and including the main points of handover, is considered to be part of the terminating segment market.
- 8.3 Self-supply should be considered part of the market where an operator has capacity which it would be likely to offer on a wholesale market without significant costs, and within a reasonable timeframe.
- 8.4 The market for wholesale terminating segments should not be further differentiated by bandwidth.
- 8.5 All products offering fixed permanent, point-to-point, broadly symmetric termination are in the same wholesale terminating segment market, regardless of the underlying technology. For the avoidance of doubt, this means that services delivered using Ethernet fall into this market.
- 8.6 Further to stakeholder requests, ComReg feels it would be helpful to delineate, as far as practicable, specific routes which fall into the wholesale market for trunk circuits. This is by way of clarification and does not change the market definition, analysis or subsequent remedies that have already been consulted on and determined. Those circuits which facilitate routes which run between urban centres (as listed in Table 1), and which are of a capacity equal to or greater than STM-1 (155Mb/s) fall into this market for trunk segments of wholesale leased lines.

Appendix A: Decision Instrument

1 STATUTORY POWERS GIVING RISE TO THIS DECISION INSTRUMENT

- 1.1 This Decision Instrument (“Decision”) relates to the market for wholesale terminating segments of leased lines defined in the document entitled Market Analysis: Leased Lines Markets Response to Consultation Document No. 08/63 and as identified in the European Commission’s Recommendation²⁷ and is made by the Commission for Communications Regulation (“ComReg”):
- i. Having had regard to sections 10 and 12 of the Communications Regulations Act, 2002;
 - ii. Having taken account, of its functions under Regulation 6(1) of Access Regulations²⁸;
 - iii. Having where appropriate complied with the Policy Directions made by the Minister further to section 13 of the Communications Regulation Act 2002²⁹;
 - iv. Having taken the utmost account of the European Commission’s Recommendation³⁰ and the Significant Market Power Guidelines³¹;
 - v. Having had regard to the market definition, market analysis and reasoning conducted by ComReg in “Market Analysis: Leased Lines Markets Review” ComReg Document No. 07/77, the analysis and reasoning set out in Market Analysis: Leased Lines Markets Response to Consultation Document No. 08/63 and having regard to “Market Analysis: Leased Lines Market Review Final Decision Notice and Decision Instrument” ComReg Document No. 08/103 the reasoning and individual decisions set out previously in these documents, each of which form part of and shall where necessary, be construed with this Decision Instrument;
 - vi. Having taken account of the submissions received in relation to Document No. 07/77 and Document No. 08/63;

²⁷ 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 the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services – OJ L 344/65.

²⁸ S.I. No. 305 of 2003 the European Communities (Electronic Communications Networks and Services) (Access) Regulations 2003 (“Access Regulations”) which transposes Directive 2002/19/EC of the European Parliament and the Council of 7 March 2002 on access to, and interconnection of, electronic communications networks and associated facilities.

²⁹ Policy Directions made by Dermot Ahern T.D. (the then) Minister for Communications, Marine and Natural Resources on 21 February, 2003 and 26 March, 2004.

³⁰ 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 the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services – OJ L 344/65.

³¹ European Commission Guidelines on market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services of 11 July 2002 – OJ C 165/6.

- vii. Having notified the draft measure imposing SMP to the European Commission, further to Regulation 20 of the Framework Regulations whereby it was also made accessible to national regulatory authorities (NRAs) in other EU Member States, and the European Commission having informed ComReg that it had examined the draft measure and that it had no comments in relation thereto and pursuant to Article 7(5) of the Framework Directive³², ComReg could adopt the resulting draft measure;
- viii. Having consulted with the Competition Authority further to Regulation 27 of the Framework Regulations³³;
- ix. Pursuant to Regulations 25, 26 and 27 of the Framework Regulations and Regulations 9, 10, 11, 12, 13 and 14 of the Access Regulations.

2 SCOPE AND APPLICATION

- 2.1 This Decision Instrument applies to Eircom Limited and its subsidiaries, and any undertaking which it owns or controls and any undertaking which owns or controls Eircom Limited, and its successors and assigns (“Eircom”) in respect of activities falling within the scope of the market defined in Section 3 of this Decision Instrument.
- 2.2 This Decision Instrument is binding upon Eircom and Eircom shall comply with it in all respects.

3 MARKET DEFINITION

- 3.1 Pursuant to Regulation 26 of the Framework Regulations, the relevant product market in this Decision Instrument is defined as the market for the wholesale terminating segments of leased lines (“the Market”), as summarised in Section 8 of “Market Analysis: Leased Lines Market Review Final Decision Notice and Decision Instrument”, Document No. 08/103, and described in Section 3 of the document entitled “Market Analysis: Leased Lines Markets Response to Consultation”, Document No. 08/63 taking utmost account of the SMP guidelines and in accordance with the European Commission’s Recommendation.
- 3.2 The Market excludes circuits which run between any of the urban centres listed in Annex 1 to this Decision Instrument and which have a capacity equal to or greater than STM-1 (155Mb/s). For the avoidance of doubt, intra-urban routes entailing circuits which run between exchanges located in the same urban area are included. The table contained in Annex 1 may be amended from time to time by ComReg.
- 3.3 Pursuant to Regulation 26 of the Framework Regulations, the relevant geographic market with respect to the Market is defined as Ireland.

³² Directive 2002/21/EC of the European Parliament and the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services.

³³ S.I. No. 307 of 2003 the European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2003 which transposes Directive 2002/21/EC of the European Parliament and the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services.

4 DESIGNATION OF UNDERTAKING WITH SIGNIFICANT MARKET POWER (“SMP”)

- 4.1 Pursuant to Regulation 25 and Regulation 27 of the Framework Regulations, Eircom Limited (“Eircom”) is designated as having SMP on the Market.

5 SMP OBLIGATIONS

- 5.1 ComReg is imposing certain SMP obligations on Eircom in accordance with and pursuant to Regulations 9, 10, 11, 12, 13 and 14 of the Access Regulations, as detailed further below. All obligations imposed should be met by Eircom in a technically and economically efficient manner.

6 OBLIGATION TO PROVIDE ACCESS

- 6.1 Pursuant to Regulation 13(1) of the Access Regulations, Eircom shall meet all reasonable requests for access to network elements or associated facilities in the Market which are required by undertakings requesting access to provide products, services, elements, features or additional associated facilities, in the Market irrespective of technology and including as may be provided over Ethernet. For the avoidance of doubt, this includes the continued provision of Wholesale Leased Lines (“WLLs”) and Partial Private Circuits (“PPCs”) including handover.

- 6.2 Without prejudice to the generality of section 6.1, Eircom shall:

- i. Pursuant to Regulation 13(2)(a) of the Access Regulations, give third parties access to products, services, network elements or facilities in the Market, to include access to any additional wholesale inputs which are necessary to enable those third parties to provide end to end leased lines to end-users;
- ii. Pursuant to Regulation 13(2)(b) of the Access Regulations negotiate in good faith with undertakings, requesting access;
- iii. Pursuant to Regulation 13(2)(c) of the Access Regulations, not withdraw access to facilities granted without the prior approval of ComReg. For the avoidance of doubt, Eircom shall continue to make available the in-situ transfer of end to end leased lines;
- iv. Pursuant to Regulation 13(2)(e) of the Access Regulations, grant open access to technical interfaces, protocols and other key technologies that are indispensable for the interoperability of services or virtual network services;
- v. Pursuant to Regulation 13(2)(h) of the Access Regulations, provide access to Operational Support Systems (“OSS”) and similar software systems necessary to ensure fair competition in the provision of services; and
- vi. Pursuant to Regulation 13(2)(i) of the Access Regulations have an obligation to interconnect networks or network facilities.

7 CONDITIONS ATTACHED TO THE ACCESS OBLIGATIONS

- 7.1 Without prejudice to the generality of section 6 the obligations and requirements set out in that section shall, pursuant to Regulation 13(3) of the Access Regulations, be subject to conditions dealing with fairness, reasonableness and timeliness.
- 7.2 It shall be a condition of the obligations and requirements contained in section 6 that Eircom shall comply with a set of key performance indicators to ensure Eircom is

Decision Notice: Market for Terminating Segments of Wholesale Leased Lines

delivering a product, service, feature or additional associated facility which is fit for purpose. The set of key performance indicators will be subject to further consultation.

7.3 Pursuant to Regulation 13(3) of the Access Regulations, it shall be a condition of the obligation to provide the product, service, feature or additional associated facility referred to in sections 6, related to fairness, reasonableness and timeliness, that Eircom shall:

- i. Conclude legally binding and fit-for-purpose Service Level Agreements (“SLAs”) with Other Authorised Operators (“OAOs”) in respect of those products, services or associated facilities referred to in section 6;
- ii. Negotiate in good faith with OAOs in relation to the conclusion of legally binding and fit-for-purpose SLAs;
- iii. Ensure that all SLAs include provision for service credits arising from a breach of the SLA. Until further consultation from ComReg, agreed service credits shall be a matter of negotiation between Eircom and OAOs and recovery of service credits shall be in the first instance, a matter for OAOs and Eircom.
- iv. Update the industry SLA as required, such updates may also be required by ComReg;
- v. Publish the industry SLA (and any updates thereto) on the Eircom wholesale website;
- vi. Until further consultation from ComReg, maintain the detailed contents (including performance metrics) of the industry SLA; and
- vii. Provide to ComReg and publish on its website, on a monthly basis, performance statistics, which may be specified by ComReg, in respect of the services provided to OAOs. ComReg may at its discretion publish such statistics. In addition, ComReg may if it deems necessary, conduct audits of the reported performance statistics.

8 OBLIGATION OF NON-DISCRIMINATION

8.1 Eircom shall have an obligation of non-discrimination as provided for by Regulation 11 of the Access Regulations. This obligation will apply to all products, services, facilities in the Market irrespective of the technology required or used to provide leased or dedicated capacity including services provided over Ethernet.

8.2 Without prejudice to the generality of section 8.1, Eircom shall:

- i. Apply equivalent conditions in equivalent circumstances to other undertakings providing equivalent services; and
- ii. Ensure that information and services are provided to OAOs under the same conditions, according to the same timescales, on a basis, and of a quality, as Eircom provides for its own services or to those of its subsidiaries or partners.

8.3 Without prejudice to the generality of sections 8.1 and 8.2 Eircom shall provide to OAOs information which is required to support existing and future products, services and associated facilities in the Market in an accurate and timely manner. For the avoidance of doubt this applies to new products, services or associated facilities in the Market, irrespective of technology.

9 OBLIGATION OF TRANSPARENCY

- 9.1** Eircom shall have an obligation of transparency as provided for by Regulation 10 of the Access Regulations in respect of the Market. This transparency obligation shall apply irrespective of the technology used or required to provide leased or dedicated capacity including services provided over Ethernet
- 9.2** Without prejudice to the generality of the obligation in section 9.1, pursuant to Regulation 10(2) of the Access Regulations, Eircom shall publish and keep updated a Reference Offer (RO) that is separate to any other Reference Offer(s) for the services and facilities referred to in sections 6 and 8. For the avoidance of doubt, this obligation also applies to any new product, service or associated facility in the Market. The RO shall be published 3 months from the effective date or at a later date if agreed with ComReg. The RO shall be sufficiently unbundled so as to ensure that other undertakings availing of such facilities are not required to pay for facilities which are not necessary for the service requested and the RO shall include:
- i. A description of the relevant offerings broken down into components; and
 - ii. A description of the associated terms and conditions, including prices.
- 9.3** For the avoidance of doubt such a RO shall be substantially in same form and detail as Eircom's Reference Interconnect Offer and Access Reference Offer.
- 9.4** Pending publication of a separate RO, Eircom shall continue to publish the products, services and associated facilities in the Market.
- 9.5** Eircom shall publish at least three months in advance any proposed changes to the RO and any proposed changes to Wholesale prices and the application of such prices on its website for the purpose of notifying all interested parties of such changes. Eircom shall notify ComReg at least 5 days in advance of any such publication taking place. This period of 5 days may be varied from time to time with the agreement of ComReg. Proposed changes to the RO and proposed changes to wholesale prices and the application of such prices shall not be implemented without prior notification to ComReg and OAOs and prior approval from ComReg. For the avoidance of doubt, any new product, service or associated facility in the Market shall not be launched without prior notification to ComReg and OAOs and prior approval from ComReg.
- 9.6** ComReg may issue Directions to Eircom from time to time requiring it to publish specified information, such as accounting information, technical specifications, network characteristics, terms and conditions for supply and use and prices. As provided for by Regulation 10(5) of the Access Regulations, ComReg may issue Directions requiring Eircom to make changes to the RO to give effect to obligations imposed in this Decision Instrument and to publish the RO with such changes.
- 9.7** Without prejudice to the generality of the obligation in section 9.1, Eircom shall make public information, such as accounting information, technical specifications, network characteristics, terms and conditions for supply and use, and prices, in respect of the services and facilities referred to in Sections 6 and 8, as specified by ComReg from time to time.
- 9.8** Eircom shall publish all SLAs concluded and as from time to time amended. Following further consultation by ComReg, Eircom shall publish a standard industry SLA on its wholesale website.

- 9.9** Following further consultation by ComReg, Eircom shall publish key performance indicators as required by ComReg to demonstrate that a product or service is fit for purpose.
- 9.10** Without prejudice to the generality of the obligation in section 9.1, Eircom shall provide to OAOs information which is required to support existing and future products, services and associated facilities in the Market in an accurate and timely manner, further to a reasonable request for such information from an OAO. For the avoidance of doubt this applies to new products, services or associated facilities in the Market, irrespective of technology.

10 OBLIGATION OF ACCOUNTING SEPARATION

- 10.1** Pursuant to Regulation 12 of the Access Regulations, Eircom shall have an obligation to maintain separated accounts. All of the obligations in relation to accounting separation applying to Eircom and in force immediately prior to the effective date of this Decision Instrument related to the Market shall be maintained in their entirety and Eircom shall comply with all of those obligations, pending a further decision to be made by ComReg following further consultation in relation to the details of and implementation of accounting separation obligations and cost accounting obligations.
- 10.2** Without limiting the generality of the obligation to comply with all accounting separation obligations in force immediately prior to the effective date of this Decision, Eircom shall continue to comply with inter alia, the obligations described in the following Decision Notices previously issued by ComReg which include:
- D5/99 – Accounting Separation and Publication of Financial Information for Telecommunication Operators
 - D8/99 – Costing Methodology for use in Accounting Separation
 - D10/99 – Accounting Separation and Publication of Financial Information for Telecommunications Operators
 - D9/00 – Accounting Separation and Publication of Financial Information for Telecommunications Operators
 - D10/00 – Accounting Separation and Publication of Financial Information for Telecommunications Operators, Supplemental Information referring to Decision Notice D9/00
 - D2/01- Accounting Separation for Internet Service provision and Report on Investigation into Indigo and Eircom.net.
 - D7/01- Eircom’s Reference Interconnection Offer & Accounting Separation and Publication of Financial Information for Telecommunications Operators
 - D12/01- Revision of Timetable for Publication of Separated Accounts and Financial Information by Eircom

11 OBLIGATIONS RELATING TO PRICE CONTROL AND COST ACCOUNTING

- 11.1** Pursuant to Regulation 14(1) of the Access Regulations, Eircom shall continue to comply with all of the obligations in relation to cost accounting in force immediately prior to the effective date of this Decision Instrument, until such time as ComReg makes a decision, following further consultation in relation to accounting separation obligations and cost accounting obligations.
- 11.2** Pursuant to Regulation 14(1) of the Access Regulations, the prices charged by Eircom to any undertaking for those products and services and associated facilities described in section 6 shall be cost oriented.
- 11.3** Notwithstanding the provisions of Section 11.2, until a decision is made by ComReg following further consultation in relation to price control for products, services and associated facilities in the Market, the prices charged by Eircom to any other undertaking for Wholesale Leased Lines of capacities up to and including 2Mb/s shall be no more than the prices in place at the effective date.
- 11.4** Notwithstanding the provisions of Sections 11.2 and 11.2, until a decision is made by ComReg following further consultation in relation to price control for products, services and associated facilities in the Market, including the prices charged by Eircom to any other undertaking Wholesale Leased Lines of capacities above 2Mb/s shall be offered to other operators on terms and conditions equivalent to those offered to Eircom's retail arm.
- 11.5** Notwithstanding the provisions of section 11.1 and 11.2, pursuant to Regulation 14(1) of the Access Regulations, the prices charged by Eircom to any undertaking for PPCs shall be cost oriented and such costs shall be calculated using a pricing model based on forward looking long run incremental costs ("FL- LRIC") or an alternative pricing model, if ComReg decides, following consultation, to adopt such an alternative pricing model.
- 11.6** Notwithstanding the provisions of section 11.3, Eircom shall have an obligation not to cause a margin squeeze.
- 11.7** Eircom shall not make available any new product, service or associated facility in the Market without ComReg's prior approval of the price for that product, service or associated facility. Eircom shall not change any price for an existing product, service or associated facility in the Market without ComReg's prior approval.

12 STATUTORY POWERS NOT AFFECTED

- 12.1** Nothing in this Decision Instrument shall operate to limit ComReg in the exercise and performance of its statutory powers or duties conferred on it under any primary or secondary legislation (in force prior to or after the effective date of this Decision Instrument) from time to time as the occasion requires.

13 MAINTENANCE OF OBLIGATIONS

- 13.1** Unless expressly stated otherwise in this Decision, all obligations and requirements contained in Decision Notices and Directions made by ComReg applying to Eircom and in force immediately prior to the effective date of this Decision, are continued in force by this Decision and Eircom shall comply with same.

- 13.2** If any section, clause or provision or portion thereof contained in this Decision is found to be invalid or prohibited by the Constitution, by any other law or judged by a court to be unlawful, void or unenforceable, that section, clause or provision or portion thereof shall, to the extent required, be severed from this Decision and rendered ineffective as far as possible without modifying the remaining section(s), clause(s) or provision(s) or portion thereof of this Decision, and shall not in any way affect the validity or enforcement of this Decision.

14 WITHDRAWAL OF SMP OBLIGATIONS

- 14.1** It is hereby decided that the market for the minimum set of leased lines and the market for the wholesale trunk segments of leased lines as defined in Annex A and Annex D to the Decision Notice – Designation of SMP and Related remedies Market Analysis Retail Leased Lines and Wholesale Terminating and Trunk Segments of Leased Lines (National) D7/05 Document No. 05/29 of 30 March 2005 are not susceptible to *ex ante* regulation. These markets respectively do not fulfil the three cumulative criteria for *ex ante* regulation, namely:

- the existence of high and non-transitory entry barriers;
- barriers to entry indicate that the market will not tend towards competition over time; and
- competition law alone is not sufficient to redress market failures.

- 14.2** Pursuant to Regulations 8 and 9 of the Access Regulations, all existing SMP obligations imposed on the market for a minimum set of leased lines contained in Annex A Decision to the Decision Notice – Designation of SMP and Related remedies Market Analysis Retail Leased Lines and Wholesale Terminating and Trunk Segments of Leased Lines (National) D7/05 Document No. 05/29 of 30 March 2005 are hereby withdrawn. The finding of SMP contained in the Annex A decision in relation to the market for a minimum set of leased lines is also hereby withdrawn.

- 14.3** Pursuant to Regulations 8 and 9 of the Access Regulations, all existing SMP obligations, imposed on the market for wholesale trunk segments of leased lines contained in Annex D Decision to the Decision Notice – Designation of SMP and Related remedies Market Analysis Retail Leased Lines and Wholesale Terminating and Trunk Segments of Leased Lines (National) D7/05 Document No. 05/29 of 30 March 2005, are hereby withdrawn. The finding of SMP contained in the Annex D decision in relation to the market for wholesale trunk segments of leased lines is also hereby withdrawn.

- 14.4** Sections 14.2 and 14.3 of this Decision Instrument will take effect 28 days from the effective date or on the date on which all of sections 5, 6, 7, 8, 9, 10 and 11 take effect, whichever is the later. All SMP obligations, on Eircom in force immediately prior to the effective date of this Decision Instrument to which Eircom was subject to by virtue of its having had SMP on the minimum set of retail leased lines and the wholesale trunk segment of leased lines market, are withdrawn with effect from 28 days from the effective date or on the date on which all of sections 5, 6, 7, 8, 9, 10 and 11 take effect, whichever is the later.

15 REVOCATION OF DECISIONS

15.1 The following Decisions are revoked:

- Annex A of decision Notice – designation of SMP and Related remedies Market Analysis Retail Leased Lines and Wholesale Terminating and Trunk Segments of Leased Lines (National) D7/05 Document No 05/29 of 30 March 2005;
- Annex C of decision Notice – designation of SMP and Related remedies Market Analysis Retail Leased Lines and Wholesale Terminating and Trunk Segments of Leased Lines (National) D7/05 Document No 05/29 of 30 March 2005;
- Annex D of decision Notice – designation of SMP and Related remedies Market Analysis Retail Leased Lines and Wholesale Terminating and Trunk Segments of Leased Lines (National) D7/05 Document No 05/29 of 30 March 2005.

15.2 Sections 15.1 of this Decision Instrument will take effect 28 days from the effective date or on the date when all of sections 5, 6, 7, 8, 9, 10 and 11 take effect, whichever is the later. All SMP obligations on Eircom arising out of Decision Notice – Designation of SMP and Related remedies Market Analysis Retail Leased Lines and Wholesale Terminating and Trunk Segments of Leased Lines (National) D7/05 Document No. 05/29 of 30 March 2005 in force immediately prior to the effective date of this Decision Instrument to which Eircom was subject to by virtue of its having had SMP are withdrawn with effect from 28 days from the effective date or on the date on which all of sections 5, 6, 7, 8, 9, 10 and 11 take effect, whichever is the later.

16 EFFECTIVE DATE

16.1 This Decision Instrument is effective from the date hereof until further notice by ComReg. This Decision Instrument shall be effective from the date of its notification to Eircom and shall remain in force until further notice by ComReg.

16.2 Sections 5, 6, 7, 8, 9, 10 and 11 of this Decision Instrument shall apply 28 days from the effective date.

**JOHN DOHERTY
CHAIRPERSON
THE COMMISSION FOR COMMUNICATIONS REGULATION
THE 22ND DAY OF DECEMBER 2008**

Annex A

Arklow
Carrick-on-Shannon
Cork
Drogheda
Dublin
Dundalk
Ennis
Galway
Letterkenny
Limerick
Mullingar
Shannon
Sligo
Waterford
Wexford

Appendix B – Regulatory Impact Assessment

1. Introduction

In the Consultation, ComReg outlined its approach to Regulatory Impact Assessment (RIA) in line with the Guidelines published in August 2007³⁴. This RIA also takes into account the Government's Better Regulation Programme³⁵.

The purpose of the RIA is to assess whether the proposed obligations placed on the operator designated with SMP in the wholesale market for the terminating segments of leased lines are appropriate, proportionate and justified on the basis of the analysis of competition in this market. Ministerial Policy Direction No. 6 of 2003 requires that ComReg complete a RIA where regulatory obligations are imposed. ComReg is obliged to comply with Ministerial Policy Directions pursuant to Section 13 of the Communications Regulation Act.

ComReg updated its approach to this RIA in the Response to Consultation document (ComReg document no. 08/63). The proposed remedies to be imposed on the SMP operator have not changed since the time of the publication of this document. Therefore this RIA is set out for convenience once more.

2. Policy issue and objectives

In this market review, ComReg's conclusion was that the wholesale market for the terminating segments of leased lines is not effectively competitive, and is not likely to become competitive within the lifetime of this review. ComReg's analysis noted that Eircom has a very high and persistent share of the market, and that this is not appreciably qualified by other factors such as countervailing buyer power. Competition in the market is very limited, and barriers to entry associated with sunk costs and economies of scale are high. ComReg's view, as set out in its Response to Consultation, is that Eircom should be designated with SMP in this market, and that appropriate remedies should be applied.

ComReg's principal objectives, therefore, are to ensure that a dominant operator is prevented from the potential exploitation of its market power, and to facilitate the rapid development of effective competition.

ComReg notes that the overall effect of this market review will be to withdraw some regulatory obligations, in that it is proposing that there is no longer SMP in the trunk market, and no longer SMP in the retail market for the minimum set of leased lines. It also notes that, generally, the majority of obligations proposed in the terminating market are already in place. As such, the cost to Eircom of continuing these obligations is likely to be considerably less than if they were being imposed for the first time, thus the overall impact of these obligations is likely to be relatively limited as they should not involve significant set-up costs.

³⁴ "Guidelines on ComReg's Approach to Regulatory Impact Assessment" ComReg doc 07/56a, 10 August 2007

³⁵ www.betterregulation.ie

3. Wholesale obligations

The wholesale obligations are:

1. Access to wholesale terminating segments of leased lines by obliging

- Access to mandated products, currently WLLs and PPCs
- Access to facilities already granted
- Access to specified information which supports existing and future wholesale leased line services
- Eircom is obliged to meet reasonable access requests
- Wholesale products must be delivered on terms and conditions that are fair, reasonable and timely, and negotiation should be carried out in good faith. This should be supported by a Service Level Agreement.
- Compliance with Key Performance Indicators (Regulatory SLA), the content to be developed through further consultation
- Wholesale products must be delivered by Eircom to competitors at an equivalent standard and timescale as to its own retail arm.
- Access to technical interfaces, protocols, key technologies, Open Support Systems and similar software

2. Transparency

- Obligation to publish a Reference Offer for all leased line services
- Obligation to make available Key Performance Indicators, which may be published
- Obligation to publish a standard SLA
- Obligation to publish changes to wholesale prices, and to the application of prices, in advance of their coming into effect, and to notify ComReg in advance of publication.

3. Non-discrimination

- General obligation not to discriminate

4. Price Control

- Maintenance of current cost-based price control on PPCs
- Maintenance of current price control on WLLs
- Consultation on future price control mechanisms
- Obligation to ensure that the relationship between wholesale and retail pricing does not constitute a margin squeeze

- Continuation of cost accounting and accounting separation obligations, pending the outcome of further consultation on accounting systems and methodologies

4. Regulatory options

The approach which ComReg has taken is to assess the implications of, first of all, forbearing from regulation, and then of adding incremental levels of regulatory control. In the Consultation, ComReg considered the following regulatory options:

Option 1: forbear from regulation

Option 2: apply Transparency obligation

Option 3: apply obligation not to discriminate

Option 4: apply Access obligation

Option 5: apply cost accounting and accounting separation

Option 6: apply price controls

Option 1: forbear from regulation

ComReg has considered the Ministerial Policy Direction No. 5 that requires regulation only where necessary. The EU Framework, however, requires ComReg to apply remedies when SMP is found pursuant to Regulation 9(1) of the Access Regulations, so ComReg is obliged to address dominance in the wholesale market for the terminating segments of leased lines. Forbearance from regulation is therefore not an option in this market once SMP has been found.

Option 2: apply transparency obligation

A Transparency obligation ensures that ComReg and OAOs can observe price and non-price terms and conditions for Eircom's wholesale leased line terminating segments products. The transparency is a necessary supporting obligation for obligations concerning access and price controls and is not considered to be sufficient by itself.

Option 3: apply obligation not to discriminate.

ComReg has considered whether it would be sufficient to apply an obligation not to discriminate. This obligation would ensure that Eircom had to supply products and services of an equivalent quality to all operators, including its own retail arm. While ComReg views non-discrimination as a necessary remedy, it is not sufficient as it does not address the range of actual and potential competition problems which have been identified.

Option 4: apply access obligations

The Access obligations which are proposed are a continuation of current obligations. Taken together, the Access obligations would ensure that operators have the right to access wholesale products, and to implement them, and that access would be provided in a manner which was fair, reasonable and timely, and to a standard equivalent to that provided to Eircom's retail arm.

Option 5: apply cost accounting and accounting separation

The cost accounting and accounting separation obligations are necessary to ensure appropriate cost recovery mechanisms, and to monitor price controls. In order to demonstrate the cost orientation of a service or product, it is necessary for Eircom to

Decision Notice: Market for Terminating Segments of Wholesale Leased Lines
establish cost accounting systems that capture, identify, value and attribute relevant costs in accordance with agreed regulatory accounting principles.

Option 6: apply price controls

ComReg proposes to continue to apply the FL-LRIC price control on PPCs in the interim. It is proposed that a cost-based price control should be developed for WLLs. While this would incur additional costs, the objectives in the market would be better addressed by bringing the WLL product into line under a cost-based approach rather than continuing to derive the wholesale price control from the retail market.

5. Impact on stakeholders

ComReg has considered the impact of its regulatory options on stakeholders.

Transparency

ComReg has proposed that the SMP operator should publish a Reference Offer for leased line services, and should comply with a Regulatory Service Level Agreement (Key Performance Indicators). While the Reference Offer is a new obligation, ComReg believes that it mainly involves streamlining and centralising the collection and publication of information which is currently published in a variety of locations. ComReg is aware that there will be an initial extra burden on Eircom, but believes that it is in the interests of all participants in the market to move to a coherent statement of Eircom's offer in the wholesale market for terminating segments of leased lines.

The obligation to comply with Key Performance Indicators is a new obligation, and will constitute an extra burden on Eircom and on ComReg. ComReg proposes to consult further on the product metrics and performance targets which will define a fit-for-purpose product, and which will constitute the Regulatory SLA. However, it is ComReg's view that the principle of implementing a Regulatory SLA is essential for ensuring that a fit-for-purpose product is available, and that the benefits will therefore outweigh the costs.

Non-discrimination

The direct cost of implementing a non-discrimination obligation is very low for the SMP operator, as the obligation essentially addresses behaviour in the market. There are regulatory costs associated with ensuring compliance, but it is ComReg's view that these costs are not likely to be significant, given the measures are already in place to ensure non-discrimination. ComReg would note that there might be indirect costs in that, without such an obligation, Eircom might discriminate towards its own retail arm in a manner that could make that arm more profitable. However, any such behaviour is likely to result in other operators being less profitable. Discriminatory behaviour is likely to have strong negative effects on competition, and ultimately, the welfare of end-consumers.

Access

The proposed Access obligations are a continuation of existing obligations in this market. The impact of any new products being mandated will be duly considered.

Cost accounting and accounting separation

The additional costs of complying with the proposed obligations on cost accounting and accounting separation should be minimal, as Eircom already prepares and publishes regulatory financial statements, and has cost accounting systems in place.

Price controls

ComReg proposes to continue a cost-based price control on PPCs, and to consider the development of a cost-based price control for WLLs.

It is ComReg's view that a wholesale price control remains essential, not only in addressing competition problems in the wholesale market, but also in ensuring that competition can develop in the retail market. It should be noted that ComReg's proposal to withdraw regulation from the retail market is based on the view that compliance with wholesale regulation would be sufficient to ensure the development of competition in the retail market. The withdrawal of regulation from the retail market is therefore contingent on the adequacy of compliance with regulation in the wholesale market. 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.

6. Impact on competition

It is ComReg's view that, in the absence of regulation in the wholesale market for the terminating segments of leased lines, there would be no effective competition. As discussed in the SMP analysis, with the significant entry barriers and Eircom's current dominant position, removal of these remedies would have a drastic effect on competition in this market, and would also involve a "knock-on" negative effect on competition in the market for retail leased lines. The set of remedies chosen are, ComReg feels, the minimum necessary to ensure an opportunity for effective competition to develop in this market.

7. Impact of chosen option

ComReg has suggested that, given the nature of competition problems identified, a range of remedies should be applied in this market.

ComReg recognises that there are direct and indirect costs associated with the proposed remedies. Direct costs are to do with the costs of implementing new or extended obligations, while indirect costs are to do with effects such as opportunity costs.

ComReg recognises that Eircom will bear additional direct costs in implementing some of the remedies. However, these costs are limited, and should involve relatively few new costs, and are thus judged to be appropriate and proportionate. If Eircom feel that the costs are likely to be extremely significant, they should provide substantiated evidence of this in any response they might make.

As for indirect costs, ComReg recognises that several of the proposed obligations restrict the commercial freedom of the SMP operator, and this should be considered as an indirect cost of the proposed measure. However, it is ComReg's view that such restriction is necessary in order to facilitate competition in the market, and that the benefits significantly outweigh the costs.

8. Conclusion

It is ComReg's view that the selected regulatory options are appropriate, proportionate and justifiable as a means of ensuring that Eircom does not exploit its market power in the wholesale market for the terminating segments of leased lines. ComReg has sought the least burdensome means of achieving its aims, and has noted where additional costs may be incurred.

Appendix C: Glossary of Terms

ATM (Asynchronous Transfer Mode) is a technology that enables data transfer asynchronously relative to its input into the communications system. The data is put into cells and transmitted through the network to be re-constructed at the output.

CSH (Customer Sited Handover) allows interconnection to occur at a communications provider's premises.

Double-Tandem Exchange forms part of the hierarchical network topology, an exchange or switch in the layer above the tandem layer.

EUL (End-User Links) is the part of a PPC that connects from the customer's premises to an OAO Transport Link.

FL-LRIC (Forward Looking-Long Run Incremental Cost) is the costs of providing all the services in a particular *increment* in the long run. What the costs would be for a hypothetical *efficient entrant* building a new network using modern equivalent assets to provide the services in the most efficient way.

FR (Frame Relay) is a packet switched data service providing for the interconnection of Local Area Networks and access to host computers at up to 2Mbit/s.

IP (Internet Protocol) is the communications protocol used for transmitting a data packet between a source and a destination on some data networks including the Internet.

MANs (Metropolitan Area Networks) is a telecommunications term used to describe a network serving a business and residences in an urban area. In this context, it refers to the roll-out of publicly-funded telecommunications infrastructure in specific towns around Ireland.

MPLS (Multi-Protocol Label Switching)

NRA (National Regulatory Authority) is the relevant regulatory authority in each country. In Ireland, the NRA is ComReg.

NGN (Next Generation Networks) is commonly defined as a single, IP-centric network which separates the services and service control layers from the network to allow rapid development of new services. An NGN will also generally have the capability of supporting multiple low and high bandwidth services including mobility, rich voice and multi-media services.

Network Topology sets out the mapping of the nodes of a network and the physical and logical connections between them – e.g. the locations of, and interconnections between, nodes. In Ireland network topologies are generally hierarchical and take the form of primary, tandem and double-tandem levels.

PDH (Plesio-synchronous Digital Hierarchy) is an older method of digital transmission used before SDH which requires each stream to be multiplexed or de-multiplexed at each network layer and does not allow for the addition or removal of individual streams from larger assemblies.

PPCs (Partial Private Circuits) is a generic term used to describe a category of private circuits that terminate at a point of connection between two communications providers'

networks. It is therefore the provision of transparent transmission capacity between a customer's premises and a point of connection between the two communications providers' networks. It may also be termed a part leased line.

RIO (Reference Interconnect Offer) is a document that eircom produces, and is presented in the form of a standard contract. It deals with Interconnect Services which Eircom offers to operators authorised under the Authorisation Regulations, operating in the Irish market. It also deals with Interconnect Services, which Eircom offers to Operators Authorised in other EU Member States, for termination of traffic presented at Eircom Interconnect Nodes which originates in other EU Member States.

SMP (Significant Market Power): An entity is designated with SMP when the NRA determines that the market under review is not effectively competitive.

SSNIP (Significant Non-Transitory Increase in Price) is a "Small but Significant Non-transitory Increase in Price", usually considered to be 5 to 10 per cent, which is part of the hypothetical monopolist test used in market definition analysis.

STM (Synchronous Transport Module) is the basic rate of transmission of the SDH fiber optic network transmission standard.

SDH (Synchronous Digital Hierarchy) is a method of digital transmission where transmission streams are packed in such a way to allow simple multiplexing and demultiplexing and the addition or removal of individual streams from larger assemblies.

Tandem Exchange (or Tandem Switch) forms part of the hierarchical network topology, an exchange or switch in the layer above the primary layer which is the lowest level in the hierarchy.

Transport Links is that part of a PPC which connects the eircom network with the OAO network.

VPNs (Virtual Private Networks) consist of private networks that may be based around one or more inter-linked "islands" connected together through secure connections.