



# Business Connectivity Market Review

Review of the retail leased lines, wholesale  
symmetric broadband origination and wholesale trunk  
segments markets

Statement

Publication date: 13 February 2009

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## Section 1

# Summary

- 1.1 On 8 December 2008, Ofcom published the regulatory statement and consultation entitled *Business Connectivity Market Review, Review of the retail leased lines, wholesale symmetric broadband and wholesale trunk segments*<sup>1</sup> (the December 2008 Statement and the December 2008 Consultation).
- 1.2 The December 2008 Statement set out the main conclusions of our review for most of the retail and wholesale markets for leased lines in the UK. The only exception was the wholesale alternative interface<sup>2</sup> symmetric broadband origination (AISBO) at speeds above 1 Gbit/s in the Hull area (the high bandwidth AISBO market in the Hull area).
- 1.3 In the consultation entitled *Business Connectivity Market Review, Review of the retail leased lines, wholesale symmetric broadband and wholesale trunk segments*<sup>3</sup> published on 17 January 2008 (the January 2008 Consultation) we preliminarily proposed to find KCOM to have Significant Market Power (SMP) in this market. This preliminary conclusion was partly based on an understanding that only KCOM was selling a small number of circuits in this market, and, as a result, it had a 100 per cent market share of the existing market. Following the closure of the consultation period, KCOM provided a revised set of data which showed how the circuits previously considered to be sold in the Hull area were indeed provided outside the Hull area. It therefore became apparent that there are no high bandwidth AISBO circuits sold in the Hull area. As a result, we revised our proposal. For this market alone, we consulted in the December 2008 Consultation on a revised proposal that no undertaking has SMP in this market.
- 1.4 The consultation closed on 13 January 2009. We received three responses. One respondent, the Energy Networks Association (ENA), raised more general points on our review's findings and decisions, but did not put forward any point in relation to the issues raised in the consultation. A second respondent, a Communication Provider (CP), made some comments that related more generally to all AISBO services in the Hull area. Finally, the European Commission (the EC) sent a no comments letter.
- 1.5 Now, having considered all the evidence available to us and all the responses to the consultation, we have decided to confirm our proposal and not to find any undertaking, jointly or individually, with SMP in the high bandwidth AISBO market in the Hull area.
- 1.6 This Statement completes the review of retail and wholesale leased lines markets in the UK, and should be considered as complementing the December 2008 Statement. The review has been carried out in accordance with the requirements of the European regulatory framework and the Communications Act 2003 (the Act). Full

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<sup>1</sup> <http://www.ofcom.org.uk/consult/condocs/bcmr08/>

<sup>2</sup> Alternative Interface (AI) circuits are digital circuits which use other forms of transmission, generally Ethernet, than Traditional Interface (TI) circuits, the latter usually provided using a SDH/PDH interface.

<sup>3</sup> <http://www.ofcom.org.uk/consult/condocs/bcmr/>

account has also been taken of the EC's SMP Guidelines and relevant guidelines and common positions produced by the European Regulators' Group<sup>4</sup>.

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<sup>4</sup> We set out in full the guiding regulatory framework for this review at paragraphs 2.24 to 2.30 of the December 2008 Statement.

## Section 2

# SMP assessment

### Introduction

- 2.1 This Section reviews the SMP assessment for the high bandwidth AISBO market in the Hull area.
- 2.2 Firstly, we set out the summary of market definitions, as set out in the December 2008 Statement. We then set out the summary of our proposals in relation to the SMP assessment, as set out in the December 2008 Consultation, before considering the responses to the consultation.
- 2.3 We then conclude by setting out our final decision in relation to the SMP assessment for the high bandwidth AISBO market in the Hull area.

### Summary of market definitions

- 2.4 Section 3 to Section 6 of the December 2008 Statement set out the product market definition and geographic market definition we have adopted for the retail and wholesale leased lines markets in the UK.
- 2.5 One key finding of the review is the fact that separate markets for most leased lines products continue to exist in the Hull area. The table below sets out the market definitions for the Hull area.

**Table 2.1: Summary of market definitions for the Hull area**

<b>Wholesale product market</b>	<b>Geographic market</b>
Low bandwidth TISBO, for circuits at speeds up to and including 2 Mbit/s	The Hull area
High bandwidth TISBO, for circuits at speeds above 2 Mbit/s up to and including 34/45 Mbit/s	The Hull area
Very high bandwidth 155Mbit/s TISBO, for circuits at speeds above 34/45 Mbit/s up to and including 155 Mbit/s	The Hull area
Very high bandwidth 622Mbit/s TISBO, for circuits at speeds above and including 622 Mbit/s	The Hull area
Low bandwidth AISBO, for circuits at speeds up to and including 1 Gbit/s	The Hull area
High bandwidth AISBO, for circuits at speeds above 1 Gbit/s	The Hull area

### Summary of proposed SMP assessment

- 2.6 At paragraphs 7.495 to 7.511 of the January 2008 Consultation Ofcom set out its view that KCOM had SMP in the high bandwidth AISBO market in the Hull area. This

conclusion was partly based on an understanding that only KCOM was selling a small number of circuits in this market, and, as a result, it had a 100 per cent market share of the existing market. Following the closure of the consultation period, KCOM provided a revised set of data which showed how the circuits previously considered to be sold in the Hull area were indeed provided outside the Hull area. It therefore became apparent that there are no high bandwidth AISBO circuits sold in the Hull area.

- 2.7 We therefore reconsidered our preliminary conclusion in the December 2008 Consultation and proposed to find that no undertakings has SMP in the market for high bandwidth AISBO products in the Hull area. Our reasoning and revised proposal were set out at paragraphs 7.218 to 7.224 of the December 2008 Statement. In the following paragraphs, we provide a summary of our arguments in support of the revised proposal.
- 2.8 While there are currently no high bandwidth AISBO circuits in Hull, in the December 2008 Consultation we set out to consider whether any operator would be likely to have SMP should demand for such services materialise in the future.
- 2.9 Firstly, we considered that, as the incumbent fixed line operator in the Hull area, KCOM would be the most likely candidate were any operator to be considered to have SMP. This is because, we argued, KCOM may have advantages, especially in terms of its ability to exploit economies of scale and scope given the ubiquity of its infrastructure in the Hull area and its high market share in other related markets.
- 2.10 However, we argued that, when we reviewed the high bandwidth AISBO market in the UK excluding the Hull area, we concluded that BT does not have SMP, because we considered that the very high revenues that can be earned in the downstream retail markets meant that Other Communication Providers (OCPs) are generally willing to sink the high fixed costs that are necessary to operate in this market. Further, we argued, the very large amount of traffic that can be carried over a single high bandwidth AISBO service likely enables OCPs to attain scale in this market and prevent other factors such as economies of scope from placing BT at a cost advantage. We considered that these conclusions are reflected in the relatively unconcentrated nature of the market in the rest of the UK.
- 2.11 We considered that these factors are also likely to apply in the Hull area. The revenues that can be earned in the downstream retail markets mean that OCPs are likely to be willing to sink the high fixed costs that are necessary to operate in this market. Further, we argued, the very large amount of traffic that can be carried over a single high bandwidth AISBO service enables OCPs to attain scale in this market and prevent other factors, such as economies of scope, from placing KCOM at such a cost advantage that it would necessarily have SMP.
- 2.12 We considered that in the event that demand for high bandwidth AISBO circuits did emerge in the Hull area, it may be appropriate to review this finding. However, in the absence of such demand, and based on the above reasoning, we preliminarily concluded that no operator has SMP in this market.

### **Review of responses to the December 2008 Consultation**

- 2.13 Ofcom received two responses to its consultation, one from the Energy Networks Association (ENA), and one confidential response from a CP. In addition, the EC sent a no comments letter.

- 2.14 In its response, the ENA put forward its concerns and arguments regarding the provision of analogue and digital low bandwidth retail leased lines to its members. These largely echoed those arguments put forward by the ENA in their response to the January 2008 Consultation, and have already been considered and addressed in the review of, among others, the market for retail leased lines as completed by the December 2008 Statement. Ofcom has at this stage no further comments to make on these issues, and refers the ENA to the response to its points we provided at paragraphs 8.393 to 8.398 of the December 2008 Statement. The ENA's current response did not address the issue, relevant to this Statement, of whether any undertaking has SMP in the high bandwidth AISBO market in the Hull area.
- 2.15 In addition to the ENA's response, one CP provided a confidential response covering all AISBO products in the Hull area. In its response, it argued that, in its experience, it had not encountered any demand for end to end Ethernet circuits in Hull, and it sees a very limited market for this. It also argued that, in its experience, it had found the price of Ethernet access in Hull to be greater than in the rest of the UK. Moreover, it did not consider a CP will ever lay its own fibre in Hull as it considered that there would not be enough business opportunity in the Hull area to justify the investment. Based on those arguments, the CP disagreed with Ofcom's proposal.
- 2.16 In response to the point about the extent of demand for end to end Ethernet circuits in the Hull area, we note that in our geographic market definition we did not conclude that the retail market for end to end Ethernet circuits is national or local in scope. As set out at paragraph 4.17 of the December 2008 Statement, we consider that our review is primarily concerned with assessing competition in wholesale markets and as such it is not necessary for Ofcom to reach conclusions on the precise scope of the retail markets (except the low bandwidth retail leased lines markets).
- 2.17 With respect to the issue of whether a CP would invest or not in competing infrastructures, and, therefore, whether we can expect competition to emerge should demand materialise in the future, we consider that the comments made by the CP are more relevant to the low bandwidth AISBO market than the high bandwidth AISBO market. As set out at paragraph 7.211 of the December 2008 Statement, for example, we consider that the factors which are generally accepted to give rise to entry barriers in telecommunications market apply strongly to the low bandwidth AISBO market in the Hull area, and that these are not offset, in our view, by the higher revenues that can be earned in higher bandwidth markets or in markets that provide greater opportunities for traffic aggregation. On that basis, we concluded that KCOM had SMP in the low bandwidth AISBO market.
- 2.18 On the other hand, we do not consider that the same arguments apply to the high bandwidth AISBO market. As set out at paragraph 7.222 of the December 2008 Consultation, we consider that the high revenues that can be earned in the downstream retail markets mean that OCPs are likely to be willing to sink the high fixed costs that are necessary to operate in this market. In addition, we considered that the very large amount of traffic that can be carried over a single high bandwidth AISBO circuit enables OCPs to attain scale in this market and prevent other factors, such as economies of scope, from placing KCOM at such a cost advantage that it would necessarily have SMP. We think our arguments remain valid, particularly in view of the experience in the high bandwidth AISBO market in the rest of the UK, where competitive conditions of supply prevail<sup>5</sup>. Therefore, we disagree with the CP that the considerations that apply to the low bandwidth AISBO market are also relevant to the high bandwidth AISBO market.

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<sup>5</sup> See paragraph 7.161 of the December 2008 Statement.

## Conclusions

- 2.19 Having reviewed all the evidence available to us, also in the light of the responses to the consultation, we consider that our preliminary conclusions that no undertaking has SMP in the market for high bandwidth AISBO in the Hull area remain valid. These were set out in full at paragraphs 7.218 to 7.224 of the December 2008 Consultation and have been summarised at paragraphs 2.6 to 2.12 of this Statement.
- 2.20 In particular, we consider that, in the absence of current demand for high bandwidth AISBO circuit in the Hull area, and given the findings relating to competitive provision of such products in the rest of the UK, it is appropriate to conclude that no undertaking has SMP or is likely to have SMP in the foreseeable future in the high bandwidth AISBO market in the Hull area.

## Annex 1

# List of respondents to the December 2008 consultation

- Energy Networks Association (ENA)
- 1 Communication Provider provided a confidential response
- The European Commission

## Annex 2

# Notification in relation to the market for high bandwidth AISBOs in the Hull area

## **NOTIFICATION UNDER SECTION 79 (4) OF THE COMMUNICATIONS ACT 2003**

### **Determination that no undertaking, individually or jointly with others, has significant market power in relation to the market for the provision of alternative interface symmetric broadband origination with a bandwidth capacity above one gigabit per second within the Hull Area**

1. The Office of Communications (“Ofcom”), in accordance with sections 48 (2) and 80 of the Communications Act 2003 (the “Act”) on 17 January 2008 published a notification stating its proposals for identifying markets, making market power determinations and the setting of SMP services conditions by reference to such determinations (“SMP Conditions”) as well as Directions under certain SMP Conditions, altogether referred to herein as “the January 2008 Notification”.
2. In its Notification under section 48 (1) of the Act dated 2 December 2008 in relation to the “Business Connectivity Market Review” (“the December 2008 BCMR Notification”) Ofcom identified, among others, the following market for the purpose carrying out a market analysis:-
  - the provision of alternative interface symmetric broadband origination with a bandwidth capacity above one gigabit per second within the Hull Area;
 but in accordance with section 79 (5) (a) of the Act did not make a market power determination for this market in the December 2008 BCMR Notification.
3. Further to the January 2008 Notification Ofcom, in accordance with section 80 of the Act, published a notification setting out modified proposals for making market power determinations (“the December 2008 Hull Notification”). These modified proposals complement the January 2008 Notification and are to be read in conjunction with it.
4. In the December 2008 Hull Notification Ofcom in accordance with section 79 of the Act proposed to determine that no undertaking, individually or jointly with others, has significant market power in relation to the market referred to in paragraph 2 above, thereby modifying its proposal set out in paragraph 3 of the January 2008 Notification and, as a result, proposed not to set any SMP services conditions in reference to a market power determination, thereby withdrawing its proposals set out in paragraph 4 on page 476 and Part 1 and 2 on pages 548 – 553 of the January 2008 Notification. The effect of, and Ofcom’s reasons for making these proposals were contained in the explanatory statement accompanying the December 2008 Hull Notification.
5. In the December 2008 Hull Notification and the accompanying explanatory statement Ofcom invited representation about its proposal by 13 January 2009.
6. By virtue of section 80 (6) of the Act, Ofcom may give effect to any proposals for making a market power determination set out in the December 2008 Hull Notification, with or without modification, where:
  - (i) it has considered every representation about the proposals duly made to Ofcom within the time period specified in the notification;

- (ii) it has regard to every international obligation of the United Kingdom (if any) which has been notified to Ofcom for this purpose by the Secretary of State; but
  - (iii) Ofcom's power to give effect to such proposals is subject to sections 82 and 83 of the Act.
7. In considering whether to make the decisions set out in this Notification, Ofcom has considered all representations duly made to it in respect of its proposals set out in the December 2008 Hull Notification and has taken the utmost account of comments made by the European Commission, as required by Article 7 (5) of Directive 2002/21/EC; and the Secretary of State has not notified Ofcom of any international obligation of the United Kingdom for this purpose.
  8. The European Commission has not made a notification for the purpose of Article 7 (4) of the Framework Directive (Directive 2002/21/EC) and the proposals do not relate to a transnational market as referred to in section 83 of the Act.
  9. In analysing the market referred to in paragraph 2 above, and in considering whether to make the decision set out in this Notification, Ofcom has taken due account of all applicable guidelines and recommendations which have been issued or made by the European Commission in pursuance of a Community instrument, and relate to market analysis, as required by section 79 of the Act.
  10. In making the decision referred to in this Notification Ofcom has considered and acted in accordance with the six Community requirements in section 4 of the Act.
  11. Copies of this Notification and the accompanying explanatory statement have been sent to the Secretary of State in accordance with sections 81(1) and to the European Commission in accordance with sections 81(2) of the Act.
  12. Save for the purposes of paragraph 2 of this Notification and except as otherwise defined in this Notification, words or expressions used shall have the same meaning as in the Act.
  13. In this Notification:
    - a. **"Hull area"** means the area defined as the 'Licensed Area' in the licence granted on 30 November 1987 by the Secretary of State under section 7 of the Telecommunications Act 1984 to Kingston upon Hull City Council and KCOM Group plc;
    - b. **"KCOM"** means KCOM Group plc, whose registered company number is 2150618, and any of its subsidiaries or holding companies, or any subsidiary of such holding companies, all as defined by section 736 of the Companies Act 1985, as amended by the Companies Act 1989; and
    - c. **"United Kingdom"** has the meaning given to it in the Interpretation Act 1978 (1978 c 30).



**Gareth Davies**  
Competition Policy Director, Ofcom

**A person duly authorised in accordance with paragraph 18 of the Schedule to the Office of Communications Act 2002**

**13 February 2009**

## Annex 3

# Glossary

### **Alternative interface symmetric broadband origination (AISBO)**

A form of symmetric broadband origination service providing symmetric capacity between two sites, generally using an Ethernet IEEE 802.3 interface

### **Asymmetric Digital Subscriber Line (ADSL)**

A technology that allows the use of a copper line to send a high data rate in one direction and a lower data rate in the other

### **Asynchronous Transfer Mode (ATM)**

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

### **Backhaul Extension Service (BES)**

A wholesale Ethernet product that can be used to link one of BT's exchanges with a CP node in a communications network

### **Bandwidth**

The physical characteristic of a telecommunications system that indicates the speed at which information can be transferred. In analogue systems, it is measured in cycles per second (Hertz) and in digital systems in bits per second (Bit/s)

### **Base-station Controller (BSC)**

An element of a Mobile Telephone Network that controls a number of radio base-stations

### **Coarse Wave Division Multiplex (CWDM)**

A transmission technology that enables up to 18 wavelengths of light to share the same fibre optic pair

### **Current Cost Accounting (CCA)**

An accounting convention, where assets are valued and depreciated according to their current replacement cost whilst maintaining the operating or financial capital of the business entity.

### **Customer Sited Handover (CSH)**

Interconnection occurs at a communications provider's premises.

### **Customer Premises Equipment (CPE)**

Sometimes referred to as customer apparatus or consumer equipment, being equipment on consumers' premises which is not part of the public telecommunications network and which is directly or indirectly attached to it.

### **Dense Wave Division Multiplex (DWDM)**

A transmission technology that enables up to 80 wavelengths of light to share the same fibre optic pair

### **Digital Local Exchange (DLE)**

The telephone exchange to which customers are connected, usually via a concentrator

**Digital Main Switching Unit (DMSU)**

The main type of tandem switch, primarily used for conveying long distance calls. DMSUs form the backbone of the trunk network

**Digital Subscriber Line (DSL)**

A technology for bringing high-bandwidth information to homes and small businesses over ordinary copper telephone lines

**Electronic Communications Network (ECN)**

A network that enables intercommunication between users of that network

**Excess Construction Charge (ECC)**

A charge levied where additional construction of duct and fibre or copper is required to provide service to a customer premise

**Frame Relay**

A packet switched data service providing for the interconnection of Local Area Networks and access to host computers at up to 2Mbit/s

**Fully allocated cost (FAC)**

An accounting approach under which all the costs of the company are distributed between its various products and services. The fully allocated cost of a product or service may therefore include some common costs that are not directly attributable to the service

**Global Positioning System (GPS)**

A system of providing accurate geographic position of a user

**In Span Handover (ISH)**

Interconnection occurring at a point between BT's premises and a communications provider's premises

**kbit/s**

kilobits per second. A measure of speed of transfer of digital information

**LAN Extension Service (LES)**

A communications service that enables the connection of two Local Area Networks together

**Leased line**

A permanently connected communications link between two premises dedicated to the customers' exclusive use

**Local Area Network (LAN)**

A network typically linking a number of computers together within a business premise enabling intercommunication between users and access to email, Internet and Intranet applications

**Local Loop Unbundling (LLU) backhaul circuit**

A circuit provided by BT that enables the connection of a communications provider's DSLAM to a communications provider's point of connection with BT's SDH network

**Long Run Incremental Cost (LRIC)**

The cost caused by the provision of a defined increment of output given that costs can, if necessary, be varied and that some level of output is already produced

**Mobile switching Centre (MSC)**

A component of a Mobile Telephone Network that switches voice calls between mobile users

**Multi Protocol Label Switching (MPLS)**

A technology that enables efficient routing of IP traffic over different systems

**Multiple service Access Node (MSAN)**

A device typically installed in a telephone exchange (although sometimes in a roadside cabinet) which connects customers' telephone lines to the core network, to provide telephony, ISDN and broadband all from a single platform

**Mbit/s**

Megabits per second, a measure of speed of transfer of digital information

**Next Generation Network (NGN)**

A Network utilising new technology such as Ethernet and IP to provide an array of services to end-users

**Partial Private Circuit (PPC)**

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.

**Passive Optical Network (PON)**

A particular configuration of fibre-optic network that brings optical fibre cabling and signals all or most of the way to the end user

**Plesiochronous Digital Hierarchy (PDH)**

An older method of digital transmission used before SDH which requires each stream to be multiplexed or demultiplexed at each network layer and does not allow for the addition or removal of individual streams from larger assemblies.

**Points of Connection (POC)**

A point where one communications provider interconnects with another communications provider for the purposes of connecting their networks to 3<sup>rd</sup> party customers in order to provide services to those end customers

**Public Switched Telephone Network (PSTN)**

A telecommunications network providing voice telephony for the general public

**Radio Base Station (RBS) backhaul circuit**

A circuit provided by BT that connects a mobile communications provider's base-station to the mobile communications provider's mobile switching centre.

**Service Level Agreement (SLA)**

A contract between a network service provider and a customer that specifies, usually in measurable terms, what services the network service provider will furnish

**Service Level Guarantee (SLG)**

A statement of measurable aspects of a service connected with the Service Level Agreement

### **SSNIP**

Small but Significant Non-transitory Increase in Price, usually considered to be 5 to 10 per cent, that is part of the hypothetical monopolist test used in market definition analysis

### **Stand Alone Cost (SAC)**

An accounting approach under which the total cost incurred in providing a product is allocated to that product

### **Storage Area Network (SAN)**

A high-speed special-purpose network that connects different kinds of data storage devices with associated data servers on behalf of a larger network of users

### **Synchronous Digital Hierarchy (SDH)**

A method of digital transmission where transmission streams are packed in such a way to allow simple multiplexing and de-multiplexing and the addition or removal of individual streams from larger assemblies

### **Symmetric broadband origination (SBO)**

A symmetric broadband origination service provides symmetric capacity from a customer's premises to an appropriate point of aggregation, generally referred to as a node, in the network hierarchy. In this context, a "customer" refers to any public electronic communications network provider or end user

### **Symmetric Digital Subscriber Line (SDSL)**

A technology that allows the use of a copper line to send an equal quantity of data (e.g. a television picture) in both directions

### **Tier 1**

A tier in BT's SDH network that denotes a network of nodes covering areas of high population. These nodes are connected by very high capacity line systems and denote the BT trunk network

### **Time Division Multiplex (TDM)**

A method of putting multiple data streams in a single signal by separating the signal into many segments, each having a very short duration. Each individual data stream is reassembled at the receiving end based on the timing

### **TI symmetric broadband origination (TISBO)**

A form of symmetric broadband origination service providing symmetric capacity from a customer's premises to an appropriate point of aggregation in the network hierarchy, using a CCITT G703 interface

### **Ultra Dense Wave Division Multiplex (UDWDM)**

A transmission technology that enables up to 320 or more wavelengths of light to share the same fibre optic pair

### **Voice over IP (VoIP)**

A generic term used to describe telephony services provided over IP networks

### **Virtual Private Network (VPN)**

A network that uses a public telecommunication infrastructure, such as the Internet, to provide remote offices or individual users with secure access to their organisation's network

**Wave Division Multiplex (WDM)**

A transmission technology that enables multiple wavelengths of light to share the same fibre optic pair

**Wholesale Extension Service (WES)**

A wholesale Ethernet product that can be used to link a customer premise to a node in a communications network

**Wide Area Network (WAN)**

A geographically dispersed telecommunications network