



End-to-end connectivity

Statement

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Section 1

Executive summary

- 1.1 "End-to-end connectivity" describes the process of enabling retail customers to make calls to other customers or services on the same network or other providers' networks¹. This is important for both competition generally and end-users individually. Competing communications providers need to be able to interconnect with other networks in order to provide a full service to their customers. Customers expect to be able to call every other retail customer irrespective of the network to which the called party is connected.
- 1.2 In November and December 2005, the Competition Appeal Tribunal's (CAT) gave judgment² and made an order³ on the appeal by H3G against Ofcom's decision that H3G had significant market power in the market for mobile voice call termination on H3G's network (case number 1047/3/04). The CAT remitted to Ofcom for reconsideration whether H3G has significant market power in the market for mobile wholesale voice call termination on its network taking into account the extent to which countervailing buyer power exists in BT and any other matters as are relevant at the time of Ofcom's reconsideration.
- 1.3 In the context of reconsidering this issue, but also more generally, Ofcom considered the measures necessary to ensure end-to-end connectivity. In particular, Ofcom considered that the guidance published by Oftel on 27 May 2003 – *End-to-end connectivity – Guidance issued by the Director General of Telecommunications*⁴ ("the Oftel guidelines") – were not sufficient to ensure end-to-end connectivity and that to ensure end-to-end connectivity, it would be necessary to propose an obligation to that effect.
- 1.4 In order to address these issues on 14 July 2006, Ofcom published a consultation document – *End-to-End Connectivity*⁵ (the "July consultation").
- 1.5 In that document Ofcom proposed to introduce an access-related condition under Sections 73 and 74 of the Act. The proposed access-related condition applied to BT only, and would require BT:
- to purchase wholesale narrowband (fixed and mobile voice and narrowband data) call termination services from any Public Electronic Communications Network (PECN) provider that reasonably requests in writing that BT purchases such services (proposed condition 1.1);
 - to ensure that the purchase of the wholesale narrowband (fixed and mobile voice and narrowband data) call termination services shall occur as soon as reasonably practicable and shall be on reasonable terms and conditions (including charges),

¹ "End-to-end connectivity means the facility – (a) for different users of the same public electronic communications service to be able to communicate with each other; and (b) for the end-users of different such services to be able, each using the service of which he is the end-user, to communicate with each other", Section 74(3) Communications Act

² 29 November 2005, <http://www.catribunal.org.uk/documents/Jdg1047H3G281105.pdf>

³ 16 December 2005, <http://www.catribunal.org.uk/documents/Order1047H3G161205.pdf>

⁴ http://www.ofcom.org.uk/static/archive/oftel/publications/eu_directives/2003/endcon0503.htm

⁵ http://www.ofcom.org.uk/consult/condocs/end_to_end/

and on such terms and conditions (including charges) as Ofcom may from time to time direct (proposed condition 1.2);

- to ensure that after purchasing wholesale narrowband (fixed and mobile voice and narrowband data) call termination services, BT will not be able to unreasonably change, withdraw or restrict access to an applicable Normal Telephone Number (proposed condition 1.3); and
- to comply with any direction Ofcom may make from time to time under this Condition (proposed condition 1.4).

Consideration of responses

1.6 Ofcom received 12 responses to the consultation, of which two were confidential. Section 3 of this document sets out in detail Ofcom's consideration of the responses received. In summary five broad issues were raised in the consultation responses:

- Whether there was a need for an end-to-end connectivity obligation;
- Whether the access-related condition included "new voice services", such as Voice Over IP (VOIP) or Voice over Broadband (VOB);
- Whether the access-related condition should apply solely to BT or to all PECNs;
- How the various requirements in the access-related condition related to the concept of "reasonableness" would be interpreted by Ofcom; and
- The relationship of end-to-end connectivity obligation for countervailing buyer power (CBP) analysis.

1.7 Having considered the issues raised by the responses to the July consultation, Ofcom has decided that there is a need for an end-to-end connectivity obligation; that the access-related condition does not cover VOIP and VOB where not provided over narrowband; and that the access-related condition should apply solely to BT. Ofcom has also clarified how it might consider the concept of "reasonableness" in this context.

Conclusion

1.8 For the reasons set out in detail in Section 4, Ofcom considers among other things that it is objectively justifiable, proportionate, non-discriminatory and transparent to impose the access-related condition on BT.

1.9 Therefore, Ofcom revokes the Oftel guidelines and at Annex 1 there is a notification setting an access-related condition on BT.

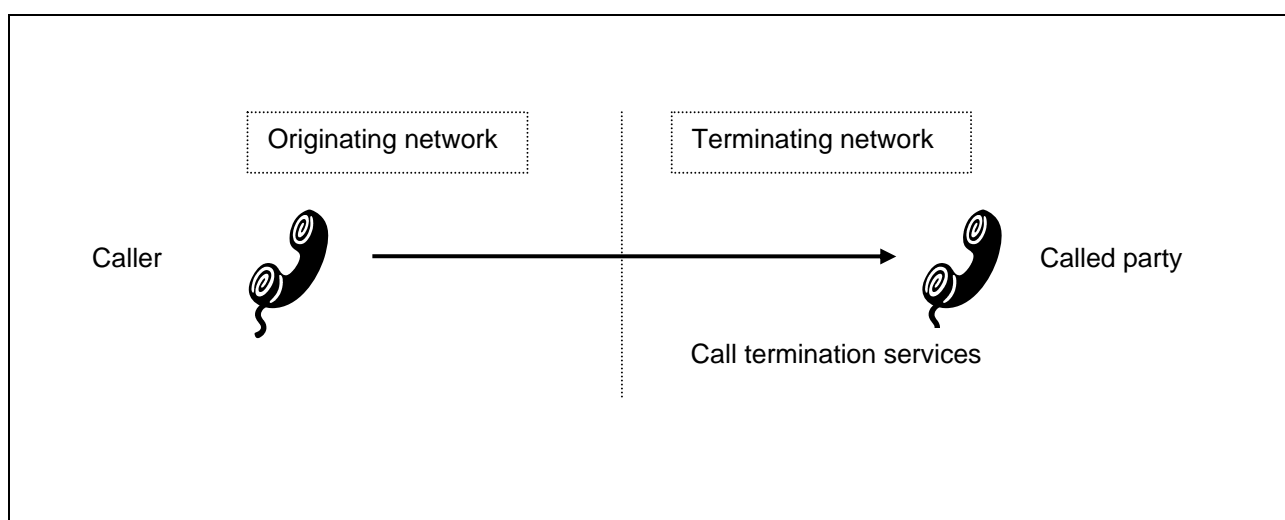
Section 2

Background and Ofcom's Impact Assessment consideration

Background

- 2.1 “End-to-end connectivity” describes the process of enabling retail customers to make calls to other customers or services on the same network or other providers’ networks⁶. This is important for both competition generally and end-users individually. Competing communications providers need to be able to interconnect with other networks in order to provide a full service to their customers. Customers expect to be able to call every other retail customer irrespective of the network to which the called party is connected.

Figure 1 – A straightforward call across networks



- 2.2 On 27 May 2003 Oftel published guidance on the provision of end-to-end connectivity. This document – *End-to-end connectivity – Guidance issued by the Director General of Telecommunications*⁷ (“the Oftel guidelines”) – set out Oftel’s approach to the provision of end-to-end connectivity.
- 2.3 In November and December 2005, the Competition Appeal Tribunal’s (CAT) gave judgment⁸ and made an order⁹ on the appeal by H3G against Ofcom’s decision that H3G had significant market power in the market for mobile voice call termination on H3G’s network (case number 1047/3/3/04). The CAT remitted to Ofcom for reconsideration whether H3G has significant market power in the market for mobile wholesale voice call termination on its network taking into account the extent to which

⁶ “End-to-end connectivity means the facility – (a) for different users of the same public electronic communications service to be able to communicate with each other; and (b) for the end-users of different such services to be able, each using the service of which he is the end-user, to communicate with each other”, Section 74(3) Communications Act

⁷ http://www.ofcom.org.uk/static/archive/oftel/publications/eu_directives/2003/endcon0503.htm

⁸ 29 November 2005, <http://www.catribunal.org.uk/documents/Jdg1047H3G281105.pdf>

⁹ 16 December 2005, <http://www.catribunal.org.uk/documents/Order1047H3G161205.pdf>

countervailing buyer power exists in BT and any other matters as are relevant at the time of Ofcom's reconsideration.

Issues identified by Ofcom as part of its reconsideration

- 2.4 In the context of reconsidering this issue, but also more generally, Ofcom considered the measures necessary to ensure end-to-end connectivity. As described in the July consultation, in particular, Ofcom considered that the Oftel guidelines were not sufficient to ensure end-to-end connectivity and that to ensure end-to-end connectivity, it would be necessary to propose an obligation to that effect.
- 2.5 In order to address the issues described in 2.4, Ofcom published the July consultation. This summarised the history of the Oftel guidelines. Under the previous telecommunications regulatory framework, BT was obliged under its licence conditions to allow interconnection so as to provide end-to-end connectivity. In anticipation of the current legislative framework for electronic communications, Oftel issued the Oftel guidelines. Oftel considered that the issuing of the Oftel guidelines would be sufficient to provide for end-to-end connectivity on the premise that BT as a universal service provider would in any event be required to meet all reasonable requests from their customers to provide access to publicly available telephone services; and that in meeting this requirement BT would be expected to ensure end-to-end connectivity. On which basis Oftel considered that to impose a further obligation to ensure end-to-end connectivity would be disproportionate and it was sufficient to issue guidance, *inter alia*, setting out its expectation as to the effect of the universal service obligation on BT. However, Oftel noted at the time that if the Oftel guidelines were inadequate to ensure end-to-end connectivity it might propose an obligation on BT and / or other providers, recognising the importance of end-to-end connectivity for competition generally and end-users.
- 2.6 However, as discussed in detail at paragraphs 2.12-2.15 of the July consultation, Ofcom considered that the existing Oftel guidelines were not sufficient to ensure end-to-end connectivity since they relied on the universal service obligations which do not extend to a requirement to connect end-users to every network.

Options and impact assessment

- 2.7 On this basis, Ofcom identified in Section 3 of the July consultation four options for ensuring end-to-end connectivity:
- Option 1 – Do nothing;
 - Option 2 – To publish new guidelines;
 - Option 3 – To require all providers of a public electronic communications network ('PECN') to purchase wholesale narrowband (fixed and mobile voice and narrowband data) call termination services on reasonable terms and conditions from any other PECN who wishes to supply termination to it (and its customers);
 - Option 4 – To require BT to purchase wholesale narrowband (fixed and mobile voice and narrowband data) call termination services on reasonable terms and conditions from any PECN who wishes to supply termination to BT (and its customers) on the basis that end-to-end connectivity will be ensured through an obligation on BT without the need to impose such an obligation on all PECNs.

Proposals

- 2.8 As a result of the analysis contained in the impact assessment set out in that Section, Ofcom proposed to introduce an access-related condition under Sections 73 and 74 of the Act.
- 2.9 The proposed access-related condition applied to BT only, and would require BT to:
- purchase wholesale narrowband (fixed and mobile voice and narrowband data) call termination services from any PECN that reasonably requests in writing that BT purchases such services (proposed condition 1.1);
 - ensure that the purchase of the wholesale narrowband (fixed and mobile voice and narrowband data) call termination services shall occur as soon as reasonably practicable and shall be on reasonable terms and conditions (including charges), and on such terms and conditions (including charges) as Ofcom may from time to time direct (proposed condition 1.2);
 - ensure that after purchasing wholesale narrowband (fixed and mobile voice and narrowband data) call termination services, BT will not be able to unreasonably change, withdraw or restrict access to an applicable Normal Telephone Number (proposed condition 1.3); and
 - comply with any direction Ofcom may make from time to time under this Condition (proposed condition 1.4).
- 2.10 For the reasons set out in detail in Section 4 of the July consultation, Ofcom considered among other things that this proposal was objectively justifiable, proportionate, non-discriminatory and transparent.

Ofcom's conclusions

- 2.11 Ofcom has now considered the responses to its impact assessment, a discussion of which is set out at Section 3 of this explanatory statement, and sets out below its final conclusions on the four options set out in the July consultation.
- 2.12 **Option 1** considered whether, if there were no guidelines and no obligation, there was a risk that end-to-end connectivity may not be ensured. Ofcom set out in the July consultation that given the asymmetries between PECNs in respect of the number of telecoms connections and in particular the prominent role of BT also as a provider of transit, there was a risk that commercial incentives may be insufficient to ensure end-to-end connectivity and in Ofcom's view this option was not appropriate. Ofcom still considers that such incentives would exist without an end-to-end obligation, and therefore does not consider 'doing nothing' is appropriate. (For further discussion, see paragraphs 3.11-3.13 of the July consultation.)
- 2.13 **Option 2** considered whether revised guidelines would be sufficient to ensure end-to-end connectivity. Ofcom believes that absent an obligation to purchase, there is a risk that end-to-end connectivity may not be ensured, and in Ofcom's view this option is not appropriate. (For further discussion, see paragraphs 3.14-3.15 of the July consultation.)
- 2.14 Ofcom still considers that not to impose such an obligation but rather rely on revised guidelines, could allow one or more providers not to provide end-to-end connectivity for end-users. This in turn could mean certain PECNs (particularly new entrants)

would not be able to sell termination services, a pre-requisite for calls to be made to their customers. However, imposing such an end-to-end connectivity obligation provides among other things certainty to providers from which to plan their business strategies. Therefore, in light of the importance of ensuring end-to-end connectivity for competition and end-users, Ofcom considers that this option is not sufficient.

- 2.15 **Options 3 and 4** considered whether the imposition of an obligation to ensure end-to-end connectivity should be on all PECNs or on BT only. However, Ofcom noted that among other things once a PECN had secured an agreement to send calls to BT's network, they would be in a position to send calls to all other networks (thereby securing end-to-end connectivity for their customers). This was due to BT's position in the provision of transit whereby BT buys termination on behalf of a large part of the industry in addition to buying termination for itself.¹⁰ Therefore, Ofcom proposed to impose the end-to-end obligation only on BT. (For further discussion, see paragraphs 3.16-3.32 of the July consultation.)
- 2.16 Ofcom still considers that such an obligation on all PECNs would not be appropriate and proportionate. This is particularly the case because of the interrelationship with the transit market as mentioned above.
- 2.17 Further, and as explained in the July consultation at paragraphs 3.20 *et seq.*, BT is the single largest provider of transit and the single largest buyer of voice call termination. BT's prominent role in transiting calls also means that direct interconnection between all PECNs may not be essential to secure end-to-end connectivity for other PECNs. Rather, once a PECN has bought transit services from BT the users of that PECN are already able to contact customers on any other network provided that BT itself does buy termination from that network.
- 2.18 Thus, while there is a risk that BT may have, under some circumstances, incentives to refuse to buy termination and not to provide end-to-end connectivity, it is unlikely that any other PECN will have the incentive of doing so under current market conditions. Therefore, Ofcom considers it disproportionate to set an end-to-end connectivity obligation on all PECNs.
- 2.19 Further, Ofcom considers that not imposing a similar obligation on Kingston is proportionate. As set out in the consultation document at paragraph 3.29, Kingston is a small network. According to the data contained in Kingston's Regulatory Financial Statements, Kingston has 229,637 exchange lines (including both digital and analogue) in the Hull area as of 31 March 2005. This includes 162,417 residential and 63,126 business users of PSTN services, and 788 residential users of digital ISDN services as well as 3,296 users of business ISDN services (ISDN 2 and ISDN30). Of the calls made to these exchange lines, Ofcom estimates that approximately one third of outgoing call minutes are on-net, and two-thirds of call minutes are off-net.¹¹ This means that for the largest part of its traffic, Kingston has to buy termination in order to provide a satisfactory service to its own customers. On this basis, Ofcom considers it unlikely that Kingston would have an incentive to refuse to buy termination from another PECN. Furthermore, BT's role as a provider of

¹⁰ For a definition and consideration of inter-tandem and single transit, please see consultation document at para 3.18.

¹¹ Source: Kingston Regulatory Financial Statements, March 2005, http://www.kcom.com/regulatory/_docs/Ofcom_Statements_FINAL_12.pdf. This analysis is based on the volumes of call origination and termination on Kingston's SMP network and the revenues of internal and external sales for these services, and assumes that all call revenues are split evenly across minutes.

transit means that Kingston is not able to refuse interconnection (it cannot tell where calls it transits via BT are terminated). The fact that Kingston has SMP in a number of markets in the Hull area, including call origination, calls termination, and exchange lines, does not alter that analysis.

2.20 Therefore, Ofcom considers that a formal end-to-end connectivity obligation is necessary to ensure end-to-end connectivity, and that in order to achieve this, setting an access-related condition on BT is appropriate and proportionate.

2.21 Ofcom also considered it appropriate in the July consultation, in order to ensure the **effectiveness of the end-to-end connectivity obligation**, to propose that when purchasing such wholesale narrowband call termination services, BT cannot unreasonably change, withdraw or restrict access to an applicable normal telephone number. As mentioned at paragraph 3.33 of the July consultation, this is specifically envisaged in Recital 6 of the Access Directive which states that:

“National regulatory authorities [...] may ensure end-to-end connectivity by imposing proportionate obligations on undertakings that control access to end-users. Control of means of access may entail ownership or control of the physical link to the end-user (either fixed or mobile), and/or the ability to change or withdraw the national number or numbers needed to access an end-user's network termination point.”

2.22 Ofcom still considers that for the end-to-end connectivity obligation to be effective, not only must wholesale narrowband (fixed and mobile voice and narrowband data) call termination services be purchased, but end-users also need to be able to access those numbers. Potentially it would be possible to circumvent the obligation to provide end-to-end connectivity if a provider purchases termination but then does not allow its customer's access to the number ranges of the PECN supplying such termination services.

2.23 Therefore, for the reasons set out above, and as set out in the July consultation, Ofcom considers it appropriate and proportionate to set an access-related condition on BT, as further defined and explained in Section 4 of this explanatory statement.

Section 3

Responses to the consultation

Introduction

3.1 Ofcom received 12 responses to the consultation in total. Of these, two responses were submitted on a confidential basis. Non-confidential responses were received from:

- BT;
- Cable & Wireless (C&W);
- European Commission;
- Hutchison 3G UK (H3G);
- nPlusOne;
- O2;
- Scottish and Southern Energy (SSE);
- T-Mobile;
- Vodafone; and
- Welsh Assembly Government (WAG).

3.2 These non-confidential responses can be found at http://www.ofcom.org.uk/consult/condocs/end_to_end/responses/.

3.3 As mentioned at 1.6 the responses to the consultation document raised five broad issues:

- Whether there was a need for an end-to-end connectivity obligation;
- Whether the access-related condition included “new voice services”, such as VOIP or Voice over Broadband;
- Whether the access-related condition should apply solely to BT or to all PECNs;
- How the various requirements in the access-related condition related to the concept of “reasonableness” would be interpreted by Ofcom; and
- The relationship of end-to-end connectivity obligation for countervailing buyer power analysis.

3.4 These issues are dealt with in detail below.

Need for an end-to-end connectivity obligation

Responses

- 3.5 The majority of the respondents accepted the need for an end-to-end connectivity obligation. However, a few of the respondents raised the issue of whether it was necessary to impose an access-related condition under Article 5(1)(a) of the Access Directive to ensure end-to-end connectivity.
- 3.6 BT, whilst noting that in the past Ofcom had not imposed a formal obligation, acknowledged that it was important for Ofcom to ensure end-to-end connectivity and considered that an obligation should not be imposed solely on BT and suggested that Ofcom should consider a general end-to-end connectivity obligation on all PECNs.
- 3.7 O2 was concerned that there was insufficient evidence to suggest that the market would fail to deliver end-to-end connectivity and that in the absence of such evidence O2 did not consider that the regulation proposed by Ofcom was objectively justified.
- 3.8 In its response Vodafone stated that Ofcom seemed to suggest that it is under a legal duty to ensure end-to-end connectivity, whereas Vodafone stated that the relevant duty under Article 8 of the Framework Directive is not expressed in such absolute terms. Vodafone also was concerned that there was a lack of evidence to suggest that there was a real problem warranting pre-emptive intervention of the kind proposed.
- 3.9 Vodafone submitted that given the exceptional nature of Article 5, Ofcom must consider explicitly whether an Article 5 obligation is necessary, objective and proportionate given:
- The commercial incentives of BT and other operators to purchase and sell call termination respectively;
 - BT's obligations under competition law as a potentially dominant purchaser of call termination;
 - The possibility of achieving the same result by placing an SMP obligation on BT;
 - The failure of Ofcom to present a real and concrete risk that absent such an obligation, end-to-end connectivity will not be achieved; and
 - The possibility that Ofcom could intervene on an "as and when" basis if required.
- 3.10 In addition to making points similar to those raised by O2 and Vodafone about the necessity for an end-to-end connectivity obligation, H3G's response raised the issue of whether Ofcom's dispute resolution powers were sufficient to ensure end-to-end connectivity, without the need for a specific access-related condition.
- 3.11 Further Vodafone stated that Ofcom did not sufficiently explain its view that the concept of end-to-end connectivity was incapable of being addressed under the Universal Service Directive (USD) and noted that Ofcom's current view is at odds with Oftel and Ofcom's previous views. Vodafone stated that Ofcom's view has potentially widespread repercussions for market reviews across Europe and that Ofcom has a duty under the framework to liaise and co-ordinate its position on such matters with other NRAs.

3.12 Ofcom notes that some other member states, including Italy¹², the Netherlands¹³, Poland¹⁴ and Spain¹⁵ have – or are in the process of establishing – end-to-end connectivity obligations similar to the access-related condition being set by Ofcom. Also, it should be noted that Ofcom has in accordance with the procedures established by the European Commission notified both the Commission and the NRAs of other member states.

3.13 In its response to Ofcom’s notification, the European Commission stated:

Article 5(1)(a) of the Access Directive must be used with caution, taking into account the general principle of the electronic communications regulatory framework that regulation should only be imposed when necessary and must in any case be proportionate to the risk identified.

On the basis of the notification and the additional information provided, and in the light of the limited scope of the proposed obligation, i.e. limited to BT only and to providing Ofcom with sufficient flexibility to ensure the proper working of the proposing access-related condition, the Commission considers that the arguments of Ofcom with regard to the justification and proportionality of the notified draft measure are sufficient.

Ofcom’s view

3.14 Ofcom considers that end-to-end connectivity is important for both competition generally and end-users individually. Competing communications providers need to be able to interconnect with other networks in order to provide a full service to their customers. Customers expect to be able to call every other retail customer irrespective of the network to which the called party is connected.

3.15 The Access Directive provides at Article 5(1)(a) that “national regulatory authorities shall be able to impose to the extent that is necessary to ensure end-to-end connectivity, obligations on undertakings that control access to end-users, including in justified cases the obligation to interconnect their networks where this is not already the case”.

3.16 BT has provided end-to-end connectivity in the past, pursuant to its licence under the previous national telecommunications licensing regime and subsequently having regard to the Oftel guidelines. Whilst we consider that it has generally been accepted that BT should provide end-to-end connectivity in light of the Oftel guidelines, Ofcom considers for the reasons set out below that going forward, in order to ensure end-to-end connectivity, it is necessary and appropriate to impose the access-related condition proposed in the July consultation.

3.17 Following a review of the Oftel guidelines and other Oftel measures which involve the implementation of Universal Service obligations, in the context of the Oftel guidelines, Ofcom was not satisfied going forward that it could effectively enforce Universal Service Condition 1 against BT as a means to ensure end-to-end connectivity if BT

¹² http://www.agcom.it/provv/d_11_06_CIR/d_11_06_CIR.htm

¹³ http://forum.europa.eu.int/irc/Download/kgeFAQJEmkGMcw6SFTB5HdAiPvLHj2p04YSaSsJ3gcmr63TIZ3kfle2zyKmcUJdFv47_XHqpbpAqUf3ffUi-iFUEplboAO/nl%202002%200017%20GR%20en.pdf

¹⁴ http://www.uke.gov.pl/_gALLERY/30/03/3003.pdf

¹⁵ <http://www.cmt.es/cmt/document/decisiones/2006/RE-06-03-02-01.pdf>

decided not to purchase wholesale narrowband (whether fixed, mobile, voice or data) call termination services from any operator that wished to sell such service to BT in accordance with the guidelines.

- 3.18 Oftel's position would require interpreting Article 4(1) of the Universal Service Directive (USC 1) as imposing not only a retail obligation – the provision of “Telephony Services” to all end-users – but also an implied wholesale obligation on BT to purchase termination services. In Ofcom's view, Article 4(1) does not contemplate that the obligations placed on designated undertakings might require them to supply or purchase services at a “wholesale” level, that is to say to or from other communications providers.
- 3.19 Secondly, the term “Telephony Services” does no more, by definition (as seen above), than require BT to provide access to a Publicly Available Telephone Service (PATs). If that definition is properly construed together with the text of USC 1 itself, it is plain that this requirement simply concerns a particular end-user's ability to make and receive calls of a particular kind, i.e. PATs. BT could potentially satisfy this obligation simply by allowing an end-user access to a basic telephony service. But USC 1 does not then proceed to require BT to ensure that such an end-user can make calls to every, or a particular, network.
- 3.20 In light of this position and the consequent need to withdraw the Oftel guidelines, Ofcom has had to consider whether it would be sufficient to ensure end-to-end connectivity to publish new guidelines or whether it was necessary to introduce an obligation. Whilst Ofcom could publish new guidelines setting out as a matter of policy that it would expect end-to-end connectivity to be provided if end-to-end connectivity was not so provided Ofcom would then need at that point to seek to impose an obligation under the Access Directive. This contrasts with the position where guidelines are premised on an underlying legal obligation which could be enforced.
- 3.21 Ofcom notes that BT has not refused to provide end-to-end connectivity to its customers in line with the Oftel guidelines (which were premised on an underlying Universal Service obligation). However, as explained in paragraph 3.12 of the July consultation Ofcom considers there is a risk that in some circumstances providers of communications services may not be sufficiently incentivised to purchase termination, particularly from new market entrants or they may delay negotiations unreasonably.
- 3.22 In light of the importance of ensuring end-to-end connectivity and that there may be a lack of incentive on providers in some circumstances to voluntarily provide end-to-end connectivity, Ofcom considers it is not sufficient to rely on compliance with new policy guidelines together with the ability to subsequently, if such guidelines prove inadequate, seek to introduce an obligation.
- 3.23 As previously mentioned above, in the July consultation, Ofcom set out two options for imposing an access-related condition to ensure end-to-end connectivity. Options 3 and 4 considered whether the imposition of an obligation to ensure end-to-end connectivity should be on all PECNs or on BT only, respectively.
- 3.24 Ofcom's view as set out in the July consultation was that once a PECN had secured an agreement to send calls to BT's network, they would be in a position to send calls to all other networks (thereby securing end-to-end connectivity for their customers). This was due to BT's position in the provision of transit whereby BT buys termination on behalf of a large part of the industry in addition to buying termination for itself. BT

is the largest provider of telecoms connections (taking both fixed and mobile together). In addition to being the largest provider of transit, BT is also by far the largest buyer of call termination in the UK. (See paragraphs 3.16-3.32 of the July consultation.) Ofcom therefore considered that the imposition of an obligation on all PECNs was disproportionate.

- 3.25 BT suggested in its consultation response that Ofcom should impose an obligation on all PECNs. The other respondents who commented on whether or not it would be proportionate to include an obligation on all PECNs at this time agreed with Ofcom's view. Having considered the responses on this issue Ofcom is maintaining its view that, for the reasons set out above, to include an obligation on all PECNs at this time would be disproportionate. As Ofcom made clear in paragraph 4.4 of the July consultation, if end-to-end connectivity is not ensured by an access-related condition on BT, then Ofcom will consider using its powers to impose such an obligation on all PECNs.
- 3.26 Ofcom has considered Vodafone's suggestion that Ofcom should: "exhaust the possibility of appropriate SMP remedies" to address end-to-end connectivity before using an access-related condition based on Article 5(1) of the Access Directive. Ofcom notes that Article 5(1) is expressly intended to provide for NRAs imposing obligations to ensure end-to-end connectivity. Further, Ofcom notes that ensuring different end-users of the same or different public electronic communications services are able to communicate with each other must be ensured across multiple markets.
- 3.27 On the issue of why Ofcom does not solely rely on its dispute resolution powers to ensure the provision of end-to-end connectivity (as opposed to any dispute as to the terms on which end-to-end connectivity is provided), Ofcom considers that reliance on dispute resolution powers (as with any other *ex post* measure) would be insufficient to ensure certainty of provision. In the impact assessment contained in the July consultation, Ofcom considered the option of doing nothing, i.e. on an *ex ante* basis, thereby in effect relying on *ex post* measures. Ofcom's view was that doing nothing was not appropriate, as it would not be sufficient to ensure end-to-end connectivity as there would be a risk that end-to-end connectivity may not be provided under all appropriate circumstances.

Scope of the proposed access-related condition

Responses

- 3.28 In its response to the consultation BT made a number of comments regarding the scope of the proposed access-related condition.
- 3.29 BT interpreted the proposed access-related condition as not including VOIP services offered over broadband; VOIP services based on 2G or 3G data; or voice services offered over unlicensed mobile wireless access and WiMax-based or WiFi services.
- 3.30 BT stated that it believed that the wording in the draft clause 1.3 does not extend the initial obligation that is set out in the draft clause 1.1. It stated that this is made clear by the words "after purchase", i.e. it is only once the obligation is triggered by 1.1 that the 1.3 obligation comes into play. BT gave, as an example, services offered over broadband on 056 numbers. BT stated that while 056 numbers are numbers in the numbering plan, the services offered over broadband would not fall within the obligation set out in Condition 1.1.

- 3.31 BT suggested that if it was Ofcom's intention that the words fixed and mobile voice in the condition have a broader meaning and that all VOIP services are to be covered then this should be made clear in both the Final Statement and the text of the condition itself.
- 3.32 BT also stated that the proposed access-related condition was limited to the purchase of termination only, and does not mean that BT would have an obligation to buy transit from other communications providers.
- 3.33 An anonymous respondent stated in its response that it was concerned that in the discussion around end-to-end connectivity Ofcom had not considered the immediate impact on "new voice services". This respondent stated that it was not clear from the proposals in the July consultation whether the proposed access-related condition would require BT to terminate calls to "new voice services" that are not PATS or whether the number ranges used have any bearing on the condition.
- 3.34 Another anonymous respondent stated that it was unclear whether the proposed access-related condition would require BT to terminate calls to VOIP users with numbers, whether geographic or otherwise.
- 3.35 nPlusOne stated in their response that in order to "have a comprehensive solution to the end-to-end connectivity issues" the proposals should also cover situations where the originating operator does not allow certain number ranges to be recognised within their network.

Ofcom's view

- 3.36 The proposed and adopted access-related condition referred to "wholesale narrowband call termination services (fixed and mobile voice, and Narrowband Data)" (emphasis added). Therefore, as "new voice services" are typically provided over broadband connections, in such cases these services are not caught by the access-related condition. Therefore, the access-related condition does not cover "new voice services", such as VOIP and VOB not delivered over narrowband.
- 3.37 However, Ofcom notes the concerns of the respondents. Ofcom will keep the need for an extension of the end-to-end connectivity obligation under review and would examine the case for proposing *ex ante* conditions on other services, such as VOIP and VOB, should end-to-end connectivity not be provided in respect of them.
- 3.38 With regard to nPlusOne's comment that Ofcom's proposals should have addressed situations where an originating operator does not allow certain number ranges to be recognised with its network, Ofcom considers that setting an access-related condition on BT as proposed is the most appropriate and proportionate approach to ensuring end-to-end connectivity. As Ofcom noted in paragraph 1.11 of the July consultation "A PECN cannot effectively refuse to terminate calls originated by another PECN where that PECN buys transit and termination services via BT." However, as noted in paragraph 3.25 above "if end-to-end connectivity is not ensured by this access-related condition on BT, then Ofcom will consider using its powers to impose such an obligation on all PECNs".
- 3.39 In relation to BT's response that it considers it would not have an obligation to buy transit from other communications providers under this obligation, Ofcom notes in this context what it set out in its July consultation at paragraph 3.21: namely, that the end-to-end connectivity obligation does not imply that BT has any obligations in relation to transit.

How would the concept of “reasonableness” be interpreted?

Responses

- 3.40 In its response, BT asked what is a “reasonable request” in the context of the proposed access-related condition and requested some level of guidance by Ofcom in this issue. In summary, BT’s broad concern was to clarify that the access-related condition did not remove its ability to negotiate the “reasonable terms and conditions (including charges)”.
- 3.41 BT suggested that there are a number of circumstances where a request to purchase termination would not be reasonable. As an example, BT stated that if a company approached BT with a request to purchase termination where this company had extensive existing debts with other operators or previous outstanding debts with BT, that such a request would not be reasonable in the absence of payment of the outstanding debts.
- 3.42 Additionally BT noted that, although it does not do so currently, there may be commercial reasons why it would wish to transit traffic through a third party. However, BT stated that it would not wish to be under any obligation to purchase transit from a third party. BT stated it considered that a request to purchase termination and transit together would not be reasonable.
- 3.43 With regard to the requirement for “reasonable terms and conditions (including charges)”, BT stated that it considers that there are less likely to be issues about non-price terms and conditions on the basis that where BT purchases on the terms and conditions contained in its Standard Interconnect Agreement (SIA) these have already been the subject of regulatory scrutiny and therefore it would be difficult to argue that these terms were not reasonable. BT also noted that in relation to new services which it might wish to purchase on commercial terms, the issue of whether a particular term was reasonable or not would need to be judged having regard to the surrounding commercial context.
- 3.44 With regard to what might constitute a reasonable charge, BT states that in the case of PECNs who are deemed to have SMP it seems clear that a reasonable charge must be a charge that complied with their existing SMP obligations. However, BT expressed concern that where the PECN was not subject to a finding of SMP the concept of what constitutes a reasonable charge is likely to be contentious and may result in an increased number of disputes being referred to Ofcom. BT noted that the type of principles it currently applies when assessing proposed prices from non-SMP operators include reciprocity (i.e. basing the charge on BT’s charge for same service) and benchmarking of the proposed new services and price against those of other comparable services. BT requested that Ofcom provided greater clarity on this issue.
- 3.45 In its response H3G stated that it presumed “that Ofcom would expect to set a cost related charge (based on this LRIC model) for call termination whether or not it has found SMP”. H3G also noted that there was “no guidance as to how ‘reasonable’ will be interpreted in relation to other terms and conditions, nor in relation to appropriate timescales”.
- 3.46 C&W expressed a concern in its response with regard to how BT might interpret reasonable terms and conditions. C&W stated that it was possible BT could use its

position as main call originator and transitor or calls to negotiate a rate with another operator that would not be reasonable.

- 3.47 In its response BT stated that it agreed that it was better to have a requirement for the purchase of termination services to take place as soon as reasonably practicable, rather than proposing definitive timescales. BT noted that what is reasonably practicable will vary according to the complexity and nature of the request to purchase.
- 3.48 In its response BT stated that the requirement in clause 1.3 of the proposed access-related condition (i.e. that BT “not unreasonably change, withdraw or restrict access to an applicable Normal Telephone Number”) should not hamper BT’s ability to act in a reasonable commercial manner to prevent fraud or bad debt both at the retail level and the wholesale level.
- 3.49 For example, BT stated that at the retail level it uses outgoing call barring in order to manage debt and particular number ranges may be barred from payphones to prevent fraud. BT also stated that at the wholesale level it sometimes needs to act quickly to counter fraud and to prevent it – and its transit customers – from suffering large losses.
- 3.50 BT suggested amendments to the condition to confirm that actions which BT is entitled to take under the SIA are reasonable within the context of condition 1.3. In addition BT stated that actions taken in circumstances to prevent fraud and or bad debt should not be regarded as unreasonable.

Ofcom’s view

- 3.51 Ofcom cannot fetter its discretion as to how it might deal with a dispute or complaint referred to it under the set access-related condition. Ofcom would treat the issues BT has raised on a case-by-case basis on their own merits.
- 3.52 However, in the interest of providing greater clarity and guidance, Ofcom notes that it is clear from the access-related condition, that it is not an obligation to buy termination at any price or on any terms. Therefore, it is not an obligation that removes the necessity of negotiation between BT and the party. In line with Ofcom’s *Guidelines for the handling of competition complaints, and complaints and disputes about breaches of conditions imposed under the EU Directives* (published July 2004)¹⁶, any party that wanted to refer a dispute to Ofcom would have to provide documentary evidence of commercial negotiations.
- 3.53 Furthermore, on the issue of what would constitute a reasonable charge, Ofcom stated at 3.32 in the July consultation:

Ofcom is also proposing that BT is not obliged to purchase wholesale narrowband call termination services at any price, but to do so where requested by a PECN and where the terms and conditions offered by that PECN are reasonable. Whether a particular term or condition (including charge) is reasonable will

¹⁶ http://www.ofcom.org.uk/bulletins/eu_directives/guidelines.pdf. Ofcom is currently consulting on new guidelines – *Ofcom’s draft guidelines for the handling of competition complaints, and complaints and disputes concerning regulatory rules* (published 6 July 2006, which can be found at <http://www.ofcom.org.uk/consult/condocs/enforcement/enforcement.pdf>). Ofcom notes that the draft guidelines do not alter the need for parties wanting to refer disputes to Ofcom to provide evidence of commercial negotiations.

depend on the particular circumstances relating to any decision not to purchase in the context of the need to ensure end-to-end connectivity and may lie within a broader range of outcomes than that which might be considered in the circumstances of SMP. In particular, as Ofcom has to ensure that any charges it imposes are proportionate, it is unlikely to set charges at a level set in the context of addressing a finding of SMP.

- 3.54 With regard to the view asserted by one respondent “that Ofcom would expect to set a cost related charge (based on this LRIC model) for call termination whether or not it has found SMP”, Ofcom considers that it has to ensure that any remedies or charges it ultimately may impose have to be proportionate to the matter at hand. While this does not mean that BT’s obligation is unbounded, the aim is to ensure end-to-end connectivity, rather than address any SMP in the relevant market. Therefore, as set out at paragraph 3.32 of the July consultation, absent a prior SMP finding, any decision not to purchase in the context of the need to ensure end-to-end connectivity and may lie within a broader range of outcomes than that which might be considered in the circumstances of SMP.
- 3.55 BT stated in its response that in negotiating and agreeing charges for services it applies principles such as reciprocity (i.e. based on BT’s charge for the same service) and benchmarking (i.e. based on the charges for other comparable services). Ofcom considers that as a starting point for negotiating and agreeing terms and conditions it would not appear unreasonable to consider reasonableness in the context of market participants’ existing practices, charges, terms and conditions, behaviour, etc.
- 3.56 For example, in determining whether the timescales of negotiations and purchase have met the requirement to be “as soon as reasonably practicable”, it could potentially seem a reasonable approach to compare the case in question with the length of time taken for the negotiations of a similar complexity.
- 3.57 Ofcom considers that the access-related condition that states that BT shall “not unreasonably change, withdraw or restrict access to an applicable Normal Telephone Number” is required to prevent the frustration of the condition at a retail level. However, the access-related condition was not intended to remove BT’s legitimate ability to manage debt and fraud through reasonable terms and conditions at both the retail and wholesale level.
- 3.58 It is the view of Ofcom that reasonable terms and conditions would likely include clauses covering the issues raised by BT above, e.g. suspension or termination of service for non-payment, fraud, etc. Therefore, to rely on these clauses could not normally be regarded as unreasonable.
- 3.59 In summary, Ofcom’s considers that its access-related condition allows BT to take legitimate action to address debt and fraud at the wholesale level and the retail level. Therefore, Ofcom considers that it is not necessary to amend the access-related condition as suggested by BT.

Relationship of end-to-end connectivity obligation for countervailing buyer power analysis

Responses

- 3.60 In its response T-Mobile noted that it would not wish the imposition of the proposed condition to imply that BT cannot have countervailing buyer power (CBP) and that a full assessment of the extent to which BT has CBP must be carried out on a case-by-case basis by Ofcom. T-Mobile also noted that the requirement to offer connectivity does not alter the issue of the relative position of other operators and BT in any negotiation over wholesale termination rates.
- 3.61 Vodafone noted that in considering CBP Ofcom should not ignore the way in which end-to-end connectivity obligations are necessarily qualified by reasonableness.
- 3.62 In its response, H3G also addressed the issue of CBP among other things making similar points to those raised by T-Mobile and Vodafone.

Ofcom's view

- 3.63 The access-related condition will ensure certainty of the provision of end-to-end connectivity. As is clear from the condition, end-to-end connectivity does not have to be provided on any terms but rather on terms and conditions (including charges) that are reasonable. An analysis of the level of any CBP that may exist in the context of an SMP assessment must be, as stated in the responses, carried out on a case-by-case basis, including by reference to the terms (or likely terms) of provision of end-to-end connectivity.

Conclusion

- 3.64 Having considered the responses to the consultation, Ofcom considers for the reasons set out above that to ensure end-to-end connectivity, which is important for competition in general and end-users individually, it is necessary to set an access-related condition as set out in Annex 1 of this document. Further, Ofcom considers that it is proportionate to impose such an obligation on BT solely at this time. Ofcom notes that Ofcom's reasoning for this position has been considered by the European Commission and the European Commission has confirmed that it considers the justification and the proportionality of the proposed obligation to be sufficient.

Section 4

Ofcom's conclusions

- 4.1 As a result of the analysis contained July consultation, Ofcom is setting an access-related condition under Sections 73 and 74 of the Act.
- 4.2 The access-related condition applies to BT only, and requires BT to:
- purchase wholesale narrowband (fixed and mobile voice and narrowband data) call termination services from any PECN that reasonably requests in writing that BT purchases such services (condition 1.1);
 - ensure that the purchase of the wholesale narrowband (fixed and mobile voice and narrowband data) call termination services shall occur as soon as reasonably practicable and shall be on reasonable terms and conditions (including charges), and on such terms and conditions (including charges) as Ofcom may from time to time direct (condition 1.2);
 - ensure that after purchasing wholesale narrowband (fixed and mobile voice and narrowband data) call termination services, BT will not be able to unreasonably change, withdraw or restrict access to an applicable Normal Telephone Number (condition 1.3); and
 - comply with any direction Ofcom may make from time to time under this Condition (condition 1.4).
- 4.3 In setting this condition, Ofcom considers it is necessary to ensure end-to-end connectivity is available in the UK. As set out in the July consultation, in Ofcom's view it is sufficient and proportionate to do so by imposing an obligation on BT only. Ofcom believes that other PECNs will have a commercial incentive to provide end-to-end connectivity to their customers that should be sufficiently strong to ensure that they seek to purchase call termination and that no additional *ex ante* regulation is required. However, Ofcom would examine the case for proposing *ex ante* conditions on other PECNs should they not provide end-to-end connectivity.

Legal tests – Ofcom's powers to impose such access-related conditions

Ofcom's duties under the Communications Act 2003

Section 3 – Ofcom's general duties

- 4.4 Section 3(1) of the Act sets out the principal duty of Ofcom, in carrying out its functions under the Act to further the interests of citizens in relation to communications matters; and, to further the interests of consumers in relevant markets, where appropriate by promoting competition. Ofcom considers that setting the access-condition set out in the Schedule falls within the scope of Section 3 of the Act because among other things, and as previously discussed in Sections 2 and 3 above, Ofcom considers that it is necessary to set such a condition to ensure the end-users of the same or different providers are able to call each other.

Section 4 – European Community requirements for regulation

4.5 Section 4 of the Act requires Ofcom to act in accordance with the six European Community requirements for regulation. In summary these requirements are to:

- Promote competition in the provision of electronic communications networks and services, associated facilities and the supply of directories;
- Contribute to the development of the European internal market;
- Promote the interests of all persons who are citizens of the European Union;
- Not favour one form of or means of providing electronic communications networks or services, i.e. to be technologically neutral;
- Encourage the provision of network access and service interoperability for the purpose of securing;
 - Efficient and sustainable competition; and
 - The maximum benefit for customers of communications providers; and
- Encourage compliance with certain standards in order to facilitate service interoperability and secure freedom of choice for the customers of communications providers.

4.6 As set out in the July consultation, Ofcom considers that once a PECN has secured an agreement to send calls to BT's network, they will be in a position to send calls to all other networks (thereby securing end-to-end connectivity for their customers), and that this is due to BT's position in the provision of transit whereby BT buys termination on behalf of a large part of the industry in addition to buying termination for itself. BT is the largest provider of telecoms connections (taking both fixed and mobile together). In addition to being the largest provider of transit, BT is also by far the largest buyer of call termination in the UK. Therefore, Ofcom considers that an access-related condition on BT alone is necessary to ensure end-to-end connectivity. A PECN cannot effectively refuse to terminate calls originated by another PECN where that PECN buys transit and termination services via BT. For these reasons, and in particular, that it would encourage the provision of network access and service interoperability by ensuring that BT has to purchase wholesale narrowband (fixed and mobile voice and narrowband data) call termination services from PECN providers who wish it to do so, Ofcom considers that its decision meets these requirements.

Section 47 – test for setting or modifying conditions

4.7 As set out under Section 47(1) of the act, in setting a condition, Ofcom must be satisfied that the test set out under Section 47(2) has been met. The test is that the condition is:

- Objectively justifiable in relation to the networks, services, facilities, apparatus or directories to which it relates;
- Not unduly discriminatory against particular persons or against a particular description of persons;

- Proportionate to what it is intended to achieve; and
- Transparent in relation to what it is intended to achieve.

Objectively justifiable in relation to the networks, services, facilities, apparatus or directories to which it relates

4.8 The access-related condition is objectively justifiable as without it, there is a risk that BT will not have sufficient incentives to ensure end-to-end connectivity. BT may not, for example, purchase termination from a new entrant. As a consequence end-users would not necessarily have the ability to communicate with each other.

Not unduly discriminatory against particular persons or against a particular description of persons

4.9 Ofcom considers that the cost of imposing an access-related condition on all PECNs would be disproportionate to ensure end-to-end connectivity. Once a PECN has secured an agreement to send calls to BT's network, they will in any event be in a position to send calls to all other networks (thereby securing end-to-end connectivity for their customers). This is due to BT's position in the provision of transit whereby BT buys termination on behalf of a large part of the industry in addition to buying termination for itself. It is unlikely that there are any commercial incentives on PECNs other than BT not to buy termination once BT is terminating calls on a particular network. This is due to among other things the role of BT as a provider of transit and the position that BT holds in the retail markets.

Proportionate to what it is intended to achieve

4.10 The condition only obliges BT to provide the minimum necessary to ensure the end-to-end connectivity. It is proposed to apply only to wholesale narrowband call termination of fixed and mobile voice calls and narrowband data services which are those services covered by the USD. It also sets out that the terms and conditions be reasonable rather than seeking to impose a particular charge.

4.11 Ofcom considers that the term "reasonable terms and conditions (including charges)" should be interpreted in the context of the end-to-end connectivity obligation and the aims of that obligation. Consequently, the determination of whether a particular term or condition (including charges) is reasonable in the context of this obligation may – where it involves non-SMP providers – lie within a broader range than that which might be determined pursuant to an SMP condition. In particular, as Ofcom has to ensure that any charges it imposes are proportionate, it is unlikely to set charges at a competitive price level.

Transparent in relation to what it is intended to achieve

4.12 The access-related conditions are transparent insofar as the nature and obligations are clearly set out in this document.

Section 73(2) of the Act

4.13 As previously set out above, Section 73(2) of the Act states that Ofcom may set access-related conditions as it appears to Ofcom appropriate for the purpose of securing:

- (a) efficiency on the part of communications providers and persons making associated facilities available;
- (b) sustainable competition between them; and
- (c) the greatest possible benefit for the end-users of public electronic communications services.

4.14 Ofcom considers that the above will be secured by the set access-related condition because the provision of end-to-end connectivity provides the greatest possible benefit by allowing all users to be able to call each other regardless of the network to which the called party is connected. This means that consumers can switch or take up new services from other providers with the confidence of knowing that they will still be able to call and be called by any other end-user in the UK. Such confidence should help secure sustainable competition as providers will be able to stay in the market as customers can use their services, and encourage providers to be efficient as possible so that their costs are lower than other providers, and so that they can compete effectively.

Oftel guidelines

4.15 The Oftel guidelines are now withdrawn.

Annex 1

Notification: Access- related Conditions requiring end-to-end connectivity

NOTIFICATION UNDER SECTIONS 48(1) AND 73(2) OF THE COMMUNICATIONS ACT 2003

The setting of access-related conditions, in relation to British Telecommunications plc (BT)

WHEREAS

A. On the 14 July 2006, the Office of Communications (“OFCOM”), in accordance with Sections 48(2) and 73(2) of the Communications Act 2003 (the ‘Act’) issued a notification proposing to set an access-related condition to apply to BT, as set out in the Schedule to that notification (the First Notification).

B. A copy of the First Notification and the accompanying explanatory statement were sent to the Secretary of State for Trade and Industry in accordance with Section 50(1)(a) of the Act, the European Commission, and to the regulatory authorities of every other Member State in accordance with Sections 50(3) of the Act.

C. In the First Notification and accompanying explanatory statement, OFCOM invited representations about any of the proposals set out therein by 15 August 2006.

D. By virtue of section 48(5) of the Act, OFCOM may give effect to any proposals to modify or set an access-related condition as set out in the First Notification, with or without modification, where:

(i) they have considered every representation about the proposals made to them within the period specified in the First Notification; and

(ii) they have had regard to every international obligation of the United Kingdom (if any) which has been notified to them for this purpose by the Secretary of State;

E. OFCOM received responses to the First Notification and have considered every such representation made to them in respect of the proposals set out in the First Notification and the accompanying explanatory statement; and the Secretary of State has not notified OFCOM of any international obligation of the United Kingdom for this purpose;

THEREFORE

1. OFCOM, in accordance with Sections 48(1) and 73(2) of the Act hereby sets the access-related conditions, as set out in the Schedule to this Notification to apply to the Connectivity Provider, BT.

2. The effect of, and OFCOM's reasons for setting the access-related conditions in the Schedule to this Notification are contained in the explanatory statement published with this Notification.

3. OFCOM considers that the access-related conditions referred to in paragraphs 1 and 2 above comply with the requirements of Sections 45 to 50, 73 to 77 of the Act as appropriate and relevant to each of the access-related conditions.

4. In setting the access-related conditions referred to in paragraph 1 and 2 of this Notification above, Ofcom has considered and acted in accordance with its duties under Section 3 of the Act, and the six Community requirements in Section 4 of the Act.

5. A copy of this Notification and the accompanying explanatory statement have been sent to the Secretary of State for Trade and Industry in accordance with Section 50(1)(a) of the Act, and the European Commission and to the regulatory authorities of every other Member State, in accordance with Section 50(6) of the Act.

Steve Unger

Director of Telecoms Technology

A person authorised by Ofcom under paragraph 18 of the Schedule to the Office of Communications Act 2002

13 September 2006

Schedule

Access-related Conditions applicable to British Telecommunications plc as a provider of end-to-end connectivity

Part 1: Application, definitions and interpretation relating to the Conditions in this

Schedule

1. In this Schedule, except in so far as the context otherwise requires:

“**Act**” means the Communications Act 2003.

“**Connectivity Provider**” means British Telecommunications plc (BT), whose registered company number is 1800000, 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;

“**Narrowband Data**” means a service or connection supporting data transmission at speeds of up to 56kbit/s;

“**Normal Telephone Number**” means as defined by s 57(2) of the Act.

2. Except insofar as the context otherwise requires, words or expressions shall have the meaning assigned to them above otherwise any word or expression shall have the same meaning as it has in the Act
3. The Interpretation Act 1978 shall apply as if each of the conditions were an Act of Parliament.
4. For the purpose of interpreting the conditions set out in Part 2, the headings and titles shall be disregarded.

Part 2: The Conditions

Condition 1 – Requirement to secure end-to-end connectivity

1.1 Where a provider of a Public Electronic Communications Network reasonably requests in writing the Connectivity Provider to purchase wholesale narrowband call termination services (fixed and mobile voice, and Narrowband Data) provided by it, the Connectivity Provider shall purchase such services.

1.2 The purchase of such services shall occur as soon as reasonably practicable and shall be on reasonable terms and conditions (including charges) and on such terms and conditions (including charges) as Ofcom may from time to time direct.

1.3 In purchasing such services, the Connectivity Provider cannot after such purchase unreasonably change, withdraw or restrict access to an applicable Normal Telephone Number.

1.4 The Connectivity Provider shall comply with any direction Ofcom may make from time to time under this condition.

Annex 2

Responses received

A2.1 Ofcom received 12 responses to the consultation in total. Of these, two responses were submitted on a confidential basis. Non-confidential responses were received from:

- BT;
- Cable & Wireless (C&W);
- European Commission;
- Hutchison 3G UK (H3G);
- nPlusOne;
- O2;
- Scottish and Southern Energy (SSE);
- T-Mobile;
- Vodafone; and
- Welsh Assembly Government (WAG).

A2.2 These non-confidential responses can be found at http://www.ofcom.org.uk/consult/condocs/end_to_end/responses/.