



Review of the fixed narrowband services wholesale markets

Consultation on the proposed markets, market power
determinations and remedies

Consultation

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Section 1

Summary

Introduction

- 1.1 In this review we assess the state of competition in the wholesale fixed narrowband services markets. Where competition is not effective we assess how best we should regulate the behaviour of any company we find to have Significant Market Power (SMP), which is the power to influence markets in a way that could be detrimental to consumers.
- 1.2 The wholesale fixed narrowband services are the markets that provide wholesale products for access (exchange lines) and calls on fixed networks. These wholesale products are used by retailers to provide products to citizens and consumers.
- 1.3 We explain our proposals and the analysis behind them in this consultation and invite comment on them.

Background

- 1.4 We are reviewing the different wholesale components that are required to provide retail access and calls products. These relate to the supply of wholesale exchange lines, call origination, call termination and various conveyance and transit markets that provide connectivity across narrowband networks.
- 1.5 We last reviewed all these markets in 2003. In 2005, we reviewed a subset of them again (local-tandem conveyance and transit and inter-tandem conveyance and transit) due to significant developments that were occurring in these markets. This led to us deregulating the inter-tandem conveyance and transit market.
- 1.6 The outcome of the 2003 and 2005 reviews was that we found that British Telecommunications plc (BT) had SMP in the UK except the Hull Area in the following markets:
 - exchange lines;
 - call origination;
 - fixed geographic call termination;
 - local-tandem conveyance and transit; and
 - single transit.
- 1.7 We also found that KCOM plc (KCOM) (which previously traded under the name Kingston Communications and retains this name as a brand for narrowband services in the Hull Area) had SMP in the Hull Area in the following markets:
 - exchange lines;
 - call origination; and
 - fixed geographic call termination.

- 1.8 We also found that all providers of fixed geographic call termination had SMP for termination on their own networks.
- 1.9 We are also reviewing several related areas. These are interconnection circuits, BT's product management, policy and planning activities related with providing SMP products.
- 1.10 Since we last reviewed these markets there have been a number of developments. There has been significant growth in the use of wholesale products provided by BT, growth in the use of local loop unbundling (LLU) to provide narrowband services and an increase in the interconnection of communications providers (CPs) to BT's local exchanges. We therefore consider it appropriate to review these markets based on these developments.

Summary of proposals

- 1.11 We are proposing that BT retains SMP in the markets for exchange lines, call origination and call termination in the UK outside Hull. We are also proposing that KCOM retains SMP in the markets for exchange lines, call origination and call termination in Hull. Further, we are proposing that all providers offering fixed geographic call termination retain SMP in call termination on their own network.
- 1.12 Since the last review, several CPs have deployed their own networks to interconnect to BT at the local level in the BT network. This means they are less reliant on BT to provide services that carry traffic from its local exchanges to their own networks. These services constitute the local-tandem conveyance and transit market. We are therefore proposing that BT no longer has SMP in local-tandem conveyance and transit.
- 1.13 We are also proposing that the inter-tandem conveyance, inter-tandem transit and single transit products form a single market and that BT does not have SMP in this market. This is because the increased amount of interconnection between CPs means they have more choice in routing of their traffic.
- 1.14 In the markets where BT retains SMP, we are imposing remedies so that other CPs are able to gain access to services that allow them to provide retail products in competition with BT's own retail operations. The majority of these remedies are unchanged from those currently in place. We are proposing to update some remedies to reflect the developments that have occurred in the market.
- 1.15 The key changes we propose in markets where BT retains SMP are:
- to remove the requirement for BT to provide certain exchange line services (Wholesale Line Rental (WLR)) and call origination services (Carrier Pre-Selection (CPS)) in compliance with functional specifications as directed by Ofcom. These products are now mature. We consider the functional specifications are no longer proportionate and could, potentially, inhibit future development of services;
 - to impose additional obligations in relation to ISDN30 exchange lines, given the high returns BT has reported for this service;
 - to consult on whether it is appropriate to reduce notification periods for price changes; and

- to update reporting obligations to focus on demonstrating BT's compliance with its SMP obligations (whereas it now reports a wider set of data).
- 1.16 In the markets where KCOM retains SMP, we are imposing remedies so that other CPs are able to gain access to services that allow them to provide retail products in competition with KCOM's own retail operations. These remain unchanged.
- 1.17 In the markets where CPs retain SMP for terminating fixed geographic calls on their networks, we are imposing the same remedy as is currently in place. This remedy requires these CPs to provide call termination on fair and reasonable terms.

Section 2

Introduction

Scope of this consultation

- 2.1 This consultation document considers the markets for the wholesale provision of fixed narrowband services. These markets relate to the supply of wholesale exchange lines, call origination, call termination and various conveyance and transit markets that provide connectivity across narrowband networks. We also include an associated technical area – interconnection circuits – and BT’s product management, policy and planning activities (PPP) in this review.
- 2.2 In this consultation we consider the definition of these markets, propose whether any undertakings have Significant Market Power (SMP) in any of these markets and, where SMP exists, propose appropriate remedies. We seek views from stakeholders on these proposals.
- 2.3 In section 3 of this document we provide background to the review. Section 4 of this document explains the market review process that we have followed. Sections 5 to 10 review the markets, the associated technical area of interconnection circuits and PPP. Sections 11 to 18 then discuss the remedies to be applied where we have proposed that an undertaking has SMP.

The Regulatory Framework

- 2.4 The regulatory framework that applies to the issues covered in this document is discussed in detail at Annex 6. The Framework is based upon five EU Communication Directives, four of which were implemented into UK law by the Communications Act 2003 (“the Act”) on 25 July 2003. The fifth directive was implemented by regulation on 11 December 2003.
- 2.5 The Act sets out, at section 3, general duties of Ofcom where we must, in carrying our functions, further the interests of citizens in relation to communications matters and the interests of consumers in relevant markets, where appropriate by promoting competition.
- 2.6 Section 4 of the Act sets out duties of Ofcom for the purpose of fulfilling Community obligations.
- 2.7 The framework, as implemented by the Act, sets out the procedure to be followed when undertaking market reviews.
- 2.8 A market review normally has three stages:
 - Definition of relevant markets (market definition);
 - Assessment of competition in each market; in particular whether any undertakings have SMP in a given market (market analysis); and
 - Assessment of appropriate regulatory obligations where there has been a finding of SMP (remedies).

- 2.9 The regulatory framework requirements relating to the market definition stage are considered in detail at paragraphs A6.13 – A6.19 of Annex 6 of this consultation. In considering market definitions we have had regard to the European Commission's Recommendation on relevant product and services markets.
- 2.10 The regulatory framework requirements relating to the market analysis stage are considered in detail at paragraphs A6.20 – A6.28 of Annex 6. In considering market analysis we have taken into account both the Commission guidelines (Guidelines for market analysis and the assessment of SMP) and guidance produced by OfTel in relation to the criteria to assess effective competition.
- 2.11 The regulatory framework requirements relating to the remedies stage are considered in detail at paragraphs A6.29 – A6.55 of Annex 6. Any remedy applied has to comply with section 47(2) of the Act, in that it has to be objectively justifiable, not unduly discriminatory, proportionate and transparent. Sections 87 and 88 also impose further tests on conditions that relate to network access and network access pricing.
- 2.12 SMP remedies can only be imposed following a finding of SMP in any particular market. However, remedies can apply to "technical areas" which are so closely related to the market in question that the remedy is the most appropriate method for addressing the identified market concern and that it is essential to render SMP obligations imposed on the market effective. Technical areas are specifically discussed in Section 10 of this document and at paragraphs A6.33 – A6.55 of Annex 6.

Markets considered in this review

- 2.13 In this review we consider the markets for the wholesale provision of fixed narrowband services. These services are necessary for the provision of retail narrowband services. We outline these markets below.
- 2.14 Narrowband services include those services that use the public switched telephone network (PSTN). These services include basic telephony, facsimile traffic (fax) data modem traffic such as dial-up Internet access (typically up to a speed of 56kb/s) and services that make use of the Integrated Services Digital Network (ISDN).
- 2.15 In parallel with this consultation, Ofcom is also consulting on a review of the retail narrowband services markets.

Wholesale Exchange Lines

- 2.16 Wholesale exchange lines provide the connection from the customer premises to the Public Switch Telephone Network (PSTN), including connection onto the PSTN equipment.
- 2.17 In our analysis we consider whether there are separate residential and business markets for analogue services. We also discuss why Integrated Services Digital Network (ISDN) exchange lines are business-only markets.
- 2.18 We also discuss further the impact of migration to next generation networks (NGNs).

Wholesale call origination

- 2.19 Call origination provides the conveyance of calls from the point where the customer connects to the network. We also consider the impact of NGNs on call origination.
- 2.20 Our proposal is that the call origination market covers the network from the point of connection of the exchange line to the fixed narrowband network to the first point where access is available to other CPs to pick-up the traffic. We consider the market for wholesale call origination based on this definition.

Wholesale call termination

- 2.21 Call termination provides the conveyance of calls to the point where the customer connects to the PSTN. As for origination, the market definition needs to take into account NGNs.

Local-tandem conveyance and transit

- 2.22 Local-tandem conveyance and transit includes the conveyance of traffic between the local exchanges that provide call origination and termination service and the tandem layer of the network.
- 2.23 We consider whether there is one single or two separate local-tandem markets – local-tandem conveyance (LTC) and local-tandem transit (LTT). LTC occurs where:
- the DLE and tandem exchange are in the same communications provider's network;
 - the DLE and tandem exchange are in different communications provider's networks. The call is handed from the DLE of one CP at which the call originates to the tandem exchange of another CP (near-end handover). The call then routes across and terminates on the network of the second CP; or
 - the call is conveyed across the tandem network of the originating CP, and is handed over from its tandem exchange to the DLE of a second CP to terminate the call (far-end handover). The call terminates on the network of the second CP.
- 2.24 LTT occurs if a third CP is involved in the conveyance of the call between the local and tandem layers, for origination or termination. This third CP provides a transit service, but neither originates or terminates the call.
- 2.25 In the NGN architecture, there is unlikely to be separate local and tandem layers in the narrowband network architecture. Therefore, we are proposing that once migration to NGN is complete, this market is no longer relevant.

Wholesale Transit Services

- 2.26 These services relates to the conveyance of traffic between tandem exchanges. Three possible options exist:
- Inter-tandem conveyance (ITC) – this relates to the routing of traffic between tandem exchanges in a single CP's network, or between tandem exchanges in the originating and terminating CP's networks. The call is conveyed between two (or more) tandem exchanges;

- Inter-tandem transit (ITT) – where traffic needs to route between originating and terminating CPs, tandem exchanges in a transit CP's network may be used. The call is conveyed between two (or more) tandem exchanges in the transit CP's network; and
- Single transit (ST) – similar to the ITT case, a transit CP is used to provide connection between the originating and terminating CPs' networks. However, in this case, the originating and terminating CP both connect to the same tandem exchange in the transit CP's network.

2.27 We discuss whether these are a single market or separate markets along with the impact of NGNs.

Other aspects considered in this review

2.28 In addition to the markets above, we also consider interconnection. As explained above, the ability to connect networks together is vital in ensuring the effective functioning of the markets.

2.29 General Condition 1¹ of the General Authorisation Regime requires all CPs that provide public electronic communications networks (PECNs) to provide interconnection. However, in this market review, we consider whether further, specific interconnection obligations are required to ensure the effective functioning of each of the markets.

2.30 Interconnection is not a market in itself. However, the explanatory memorandum of the European Commission Recommendation on Relevant Products and Service Markets² identifies that, for some markets, obligations may need to be placed on associated services outside the market in order to ensure the effectiveness of competition within the market. We consider that interconnection is an associated service in relation to the markets described above.

2.31 In addition, we also consider BT's product management, policy and planning activities.

Outline of the rest of this document

2.32 The rest of this document is structured as follows:

- Section 3 provides background including the outcome of previous reviews, changes that have occurred since the last set of reviews that may impact the markets under consideration and NGNs;
- Section 4 explains the market review process;
- Sections 5 - 9 consider the first two stages of the market review process for the various markets. These sections first define the relevant wholesale market (market definition) before concluding whether any undertakings have SMP in the market. Remedies are considered separately in sections 11 to 17. The markets, and the section in which they are reviewed, are:
 - Section 5: Wholesale exchange lines;

¹ http://www.ofcom.org.uk/telecoms/ioi/g_a_regime/gce/

² http://ec.europa.eu/information_society/policy/ecomm/doc/library/proposals/sec2007_1483_final.pdf

- Section 6: Wholesale call origination;
- Section 7: Wholesale call termination;
- Section 8: Local-Tandem Conveyance and Transit; and
- Section 9: Wholesale transit services.
- Section 10 reviews interconnection circuits and whether these are required to be provided as a technical area associated with the above markets. It also discusses PPP;
- Section 11 discusses general remedies that we propose to apply in the exchange lines and call origination markets and to interconnection;
- Sections 12 discuss the remedies we propose to apply in the call termination markets;
- Sections 13 to 17 then discuss specific remedies as follows:
 - Section 13: Wholesale Line Rental (WLR);
 - Section 14: Carrier Selection(CS – also called Indirect Access (IA) in the UK) and Carrier Pre-Selection (PS);
 - Section 15: Number Translation Services (NTS) Call Origination;
 - Section 16: Charge controls; and
 - Section 17: Price regulation of wholesale ISDN30 exchange lines
- Finally, Section 18 discusses the revocation of previous regulation.

Section 3

Background

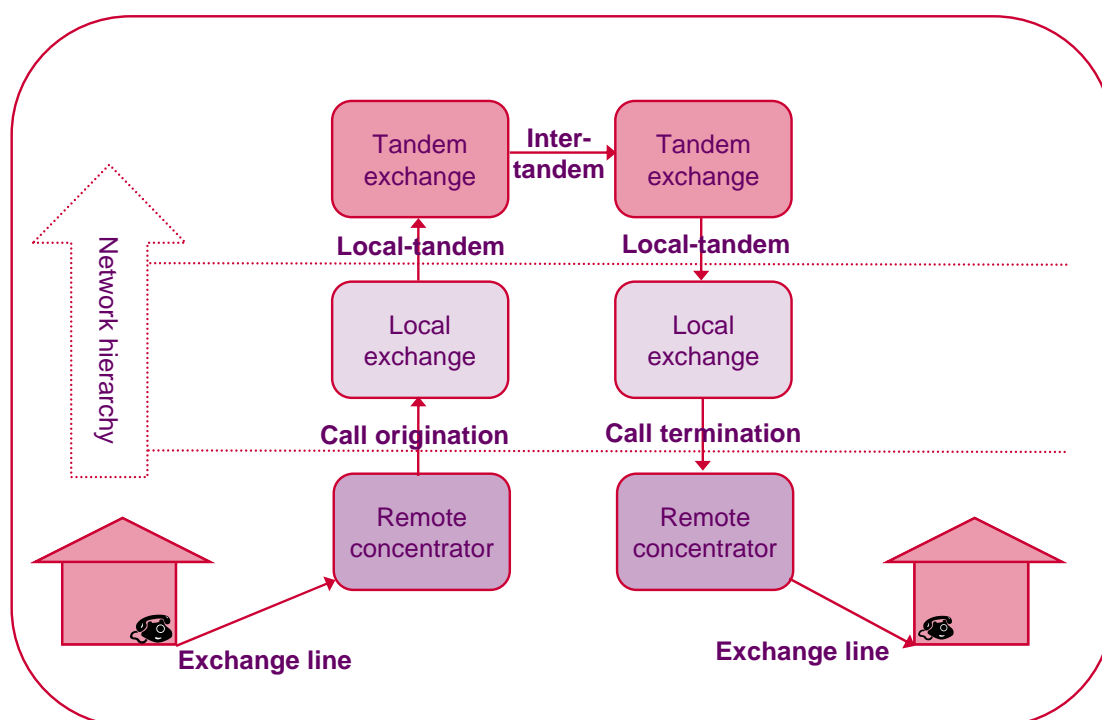
Introduction

3.1 In this section we set out the regulation currently in place in the wholesale markets and the changes that have occurred in the market since the last review. We also discuss next generation networks and, in particular, their possible impact on the narrowband markets.

Previous market reviews

3.2 In the previous round of reviews, the wholesale markets were defined as shown in Figure 3.1 below.

Figure 3.1: Network segments considered in the wholesale fixed narrowband services market review



3.3 Figure 3.1 shows the markets as applied to, in particular, BT's current network. Other communications providers (CPs) may structure their networks differently. In particular, in other networks, the Remote Concentrator Unit (RCU) is less likely to be physically remote from the Digital Local Exchange (DLE). Additionally, there is less likely to be separate local and tandem network layers.

3.4 These markets were last reviewed as follows:

- in 2003, Oftel reviewed the wholesale exchange lines, call origination, local-tandem conveyance and transit, inter-tandem conveyance and transit and single

transit markets. In addition this review considered the requirements for interconnection circuits as a technical area related to these markets³;

- separately in 2003, Oftel reviewed the fixed geographic call termination market⁴; and
- in 2005, Ofcom re-reviewed the local-tandem conveyance and transit and inter-tandem conveyance and transit markets⁵.

3.5 Table 3.2 below shows the regulation that is currently in place in the fixed narrowband services wholesale markets⁶. In Table 3.2 we refer to general remedies. These are remedies that were imposed in multiple markets where SMP was concluded to exist. The general remedies are:

- requirement to provide network access on reasonable request;
- requirement not to unduly discriminate;
- basis of charges;
- requirement to publish a reference offer;
- requirement to notify charges;
- requirement to notify technical information;
- cost accounting; and
- accounting separation.

³ *Review of the fixed narrowband wholesale exchange line, call origination, conveyance and transit markets*, 28 Nov 2003 (http://www.ofcom.org.uk/consult/condocs/narrowband_mkt_rvw/nwe/)

⁴ *Review of fixed geographic call termination markets*, 28 Nov 2003 (http://www.ofcom.org.uk/consult/condocs/narrowband_mkt_rvw/Eureviewfinala1.pdf)

⁵ *Review of BT's Network Charge Controls*, 18 August 2005 (<http://www.ofcom.org.uk/consult/condocs/charge/statement/>)

⁶ KCOM plc ("KCOM") was previously referred to as Kingston Communications (Hull) plc ("Kingston").

Table 3.2: Summary of existing regulation and remedies

Market	SMP?	Obligations
Wholesale business analogue exchange lines	Y	BT: General remedies, WLR, charge control, transparency of quality of service, requests for new network access (SOR process) KCOM: General remedies
Wholesale residential analogue exchange lines	Y	BT: General remedies, WLR, charge control, transparency of quality of service, requests for new network access (SOR process) KCOM: General remedies
Wholesale residential ISDN2 exchange lines	Y	BT: General remedies (excl. basis of charges and cost accounting), requests for new network access (SOR process) KCOM: General remedies (excl. basis of charges and cost accounting)
Wholesale business ISDN2 exchange lines	Y	BT: General remedies, WLR, WLR Functional Specification, transparency of quality of service, requests for new network access (SOR process) KCOM: General remedies
Wholesale ISDN30 exchange lines	Y	BT: General remedies (excl. basis of charges, cost accounting), WLR, WLR Functional Specification, transparency of quality of service, requests for new network access (SOR process) KCOM: General remedies (excl. basis of charges, cost accounting)
Call origination	Y	BT: General remedies, charge control, CPS, CPS Functional Specification, IA, NTS call origination, FRIACO, BT's use of 'Cancel Other', BT's Credit Vetting Supplemental Agreement, transparency of quality of service, requests for new network access (SOR process) KCOM: General remedies, CPS, CPS Functional Specification, IA
Call termination	Y	BT: General remedies (excl. requirement to notify technical information), charge control, BT's Credit Vetting Supplemental Agreement KCOM: General remedies (excl. requirement to notify technical information) All other CPs that provide call termination: requirement to provide call termination on fair and reasonable terms
Local-tandem conveyance and transit	Y (BT only) ⁷	BT: General remedies, requests for new network access (SOR process), charge control, FRIACO, BT's Credit Vetting Supplemental Agreement, LTT and ITT for IA (C&W)
Inter-tandem conveyance and transit	N ⁸	
Single transit	Y (BT only)	BT: General remedies, requests for new network access (SOR process), charge control, BT's Credit Vetting Supplemental Agreement
Interconnection circuits	Y	BT: General remedies, requests for new network access (SOR process), charge control KCOM: General remedies

⁷ In the 2003 review, Ofcom concluded BT had SMP in this market and imposed remedies. In 2005, Ofcom reviewed this market again and found that BT still had SMP but stated the market was prospectively competitive.

⁸ In the 2003 review, Ofcom concluded BT had SMP in this market and imposed remedies. In 2005, Ofcom reviewed this market again and found BT no longer had SMP.

Developments since the last review

- 3.6 Since the last round of market reviews, there have been a number of developments impacting the narrowband markets. We discuss these below in three sections: regulatory developments, market developments and future developments.

Regulatory developments

Same/Adjacent DLEs (SAD)

- 3.7 In 2004, Ofcom published a statement addressing the local call disadvantage related to same/adjacent-DLEs⁹. The disadvantage arises for CPs other than BT for the following call scenarios:
- same DLE calls: for a call on the BT network which is routed within the same DLE, only one switching stage is included in the end-to-end call. However, a CP using the CPS product would pay for two switching stages since the call would be switched on its routing from the customer to the CP at the BT DLE (the call origination market) and would be switched again routing back from the CP to the customer at the BT DLE (the call termination market). In addition, the call would also use additional transmission capacity to route from the DLE to the CPs network in both directions. This is referred to as ‘tromboning’; and
 - adjacent DLE calls: the simplified network architecture shown in Figure 3.1 forms the basis for the market definitions. However, in some cases, BT has implemented direct routes between DLEs (where traffic volumes justify such a route). In these cases, a call on the BT network would use two switching stages (at the originating and terminating DLEs). Again, the CP would face the inefficiency of tromboning the call via its own network.
- 3.8 In its 2004 statement, Ofcom required BT to provide an option within the CPS product. This option allows CPs to choose to have same/adjacent DLE calls routed end-to-end on the BT network in order to avoid the inefficiency of tromboning. This option is available on a DLE by DLE basis, and the option is only available at DLEs to which the CP is directly interconnected.

BT’s Product Management, Policy and Planning charges (PPP)

- 3.9 PPP covers the activities that BT carries out in meeting its regulatory obligations in markets where Ofcom has concluded BT has SMP.
- 3.10 In the 2003 market review Oftel continued regulation of PPP based on existing regulation. In particular, this included PPP in the overall Interconnect Services Basket of BT’s network charge control (NCC). However, Oftel noted concerns that under this regime the price had fluctuated. As there was no specific price cap on PPP, it was not transparent as to what was included in these charges and therefore what drove the price. Therefore, Oftel commenced a review of BT’s PPP.
- 3.11 The outcome of this review was published by Ofcom on 30 July 2004¹⁰. In this review Ofcom concluded that BT should contribute to the recovery of PPP charges in the

⁹ Addressing the local call disadvantage: Final statement on CPS same/adjacent DLE calls, 30 July 2004 (http://www.ofcom.org.uk/consult/condocs/cps_option/cps_statement/)

¹⁰ Review of BT’s product management, policy and planning charge, 30 July 2004 (http://www.ofcom.org.uk/consult/condocs/rev_bt_pm/statement/statement.pdf)

same way as other CPs. It addressed the discrepancy that arose between BT and other CPs that used CPS or IA. These CPs paid PPP twice: once on the originating portion of the call and once on the terminating portion. The review required that only one PPP charge was levied on minutes that originated via IA and CPS and terminated on the BT network. The review set out what we considered should be included in the PPP charge and set a pence-per-minute charge for PPP and a separate per-port charge for FRIACO traffic.

3.12 PPP charges were considered again in the Network Charge Control in 2005.

Network Charge Control (NCC)

3.13 In 2005, Ofcom reviewed the NCC. The NCC sets the charge controls for several of the markets identified in the previous wholesale narrowband market reviews. Within the NCC in 2005 Ofcom re-reviewed the local-tandem conveyance and transit and inter-tandem conveyance and transit markets. BT was found to have retained SMP in the local-tandem conveyance and transit market but to no longer have SMP in the inter-tandem conveyance and transit market. Therefore, the 2005 charge control set charges for:

- call origination;
- call termination;
- local-tandem conveyance and transit;
- single transit;
- PPP; and
- interconnection circuits.

3.14 We said that we expected significant migration to BT's 21CN to occur during the period of the control (2005 to 2009). However, we did not set charges for products on 21CN at the time. Instead, we indicated that we expected the charges set for the existing services to act as a constraint on the prices for the new services, because if the new services were not priced competitively there would not be the right incentives to migrate to the new network.

Strategic Review of Telecommunications (TSR)

3.15 In 2005, Ofcom published the final statement to its Strategic Review of Telecommunications ("the TSR")¹¹. We said that the most effective way to deliver the choice and service innovation that customers wanted was through competition at the deepest level of infrastructure where competition would be effective and sustainable. We identified enduring economic bottlenecks – parts of the network where effective and sustainable competition was unlikely in the short to medium term. We said that BT needed to make access to these parts of the network available on the same terms as it made it available to its downstream divisions: an approach we called equality of access. BT offered, and Ofcom subsequently accepted, a set of undertakings in lieu of Ofcom making a reference to the Competition Commission

¹¹ *Final statement on the strategic review of telecoms, and undertakings in lieu of a reference under the Enterprise Act 2002*, 22 Sept 2005 (http://www.ofcom.org.uk/static/telecoms_review/final_statement.htm)

under the Enterprise Act 2002 (“the Undertakings”). The objective of the Undertakings was the delivery of equality of access.

- 3.16 The Undertakings established a functionally separate organisation (Openreach) within BT to provide products based on the physical and transmission layers of the access and backhaul networks. These products are required to be provided on an Equivalence Of Inputs (EOI) basis, such that CPs have access to exactly the same products and service (including pricing, service levels, etc.) as BT’s downstream divisions. Openreach was also required to provide, on an EOI basis, WLR.
- 3.17 The Undertakings also placed obligations on BT Wholesale regarding the supply of CPS to ensure transparency.
- 3.18 In 2005 Ofcom reviewed the charges that Openreach would be allowed to set for the residential analogue and business analogue WLR products¹² and LLU services^{13,14} it would be providing to other CPs.

Market developments

WLR

- 3.19 In 2002 BT was required to introduce WLR. This was linked to a form of incentive regulation - the retail charge control (‘RCC’) would be relaxed from RPI-RPI to RPI+0% if Ofcom assessed that BT had introduced a fit-for-purpose WLR product which was being actively used by competitors. This commitment gave BT an incentive to introduce WLR fully in a timely manner and also recognised that the market for these services would become more competitive through the introduction of a fit-for-purpose WLR, with competition itself controlling prices.
- 3.20 The first basic WLR product (WLR1) was available from September 2002. WLR1 was not, however, sufficiently developed for it to be an effective mass-market product at that stage and, therefore, further work was required to improve upon its capabilities.
- 3.21 Therefore, in March 2003, (in parallel with the previous review of the fixed narrowband wholesale markets) Ofcom published a further statement setting out what BT needed to do to improve WLR (WLR2). This also stated that ‘Fit-for-purpose’ (‘FFP’) was to be assessed in terms of material compliance with a product specification and process implementation and through an analysis of the market impact of WLR assessed against criteria also set in March 2003.
- 3.22 In November 2003, Ofcom published the conclusions of the previous review of the fixed narrowband wholesale markets which, among other things, restated the requirement on BT to offer analogue WLR services and additionally placed a requirement on BT to offer digital WLR services equivalent to ISDN2 and ISDN30.
- 3.23 BT delivered WLR2 in March 2004 and ISDN2 and ISDN30 WLR products in December 2004. BT triggered the assessment of whether these products met the

¹² *Wholesale Line Rental: Reviewing and setting charge ceilings for WLR services*, 24 January 2006 (<http://www.ofcom.org.uk/consult/condocs/wlrcharge/statement/statement.pdf>)

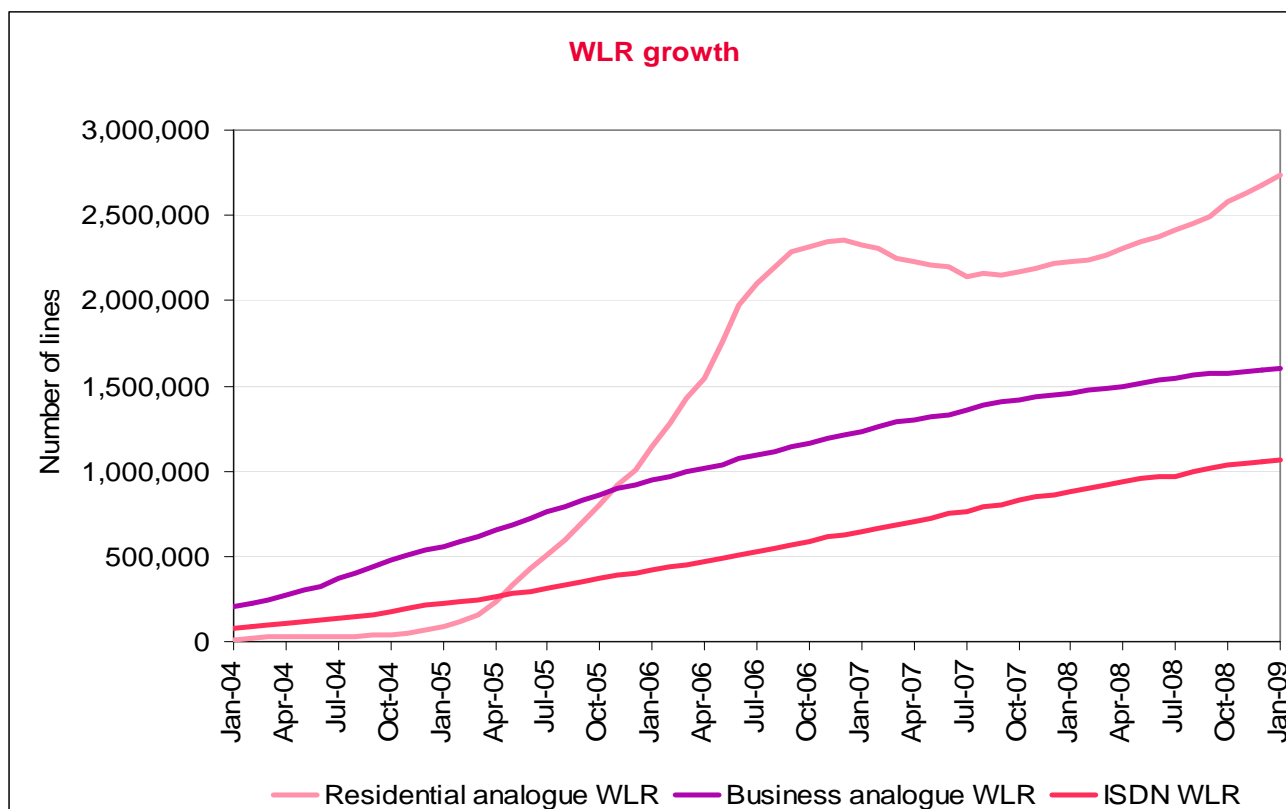
¹³ *Review of the wholesale local access market*, 16 December 2004 (<http://www.ofcom.org.uk/consult/condocs/rwlam/statement/>)

¹⁴ *Local loop unbundling: setting the fully unbundled rental charge ceiling and minor amendment to SMP conditions FA6 and FB6*, 30 November 2005 (http://www.ofcom.org.uk/consult/condocs/llu/statement/llu_statement.pdf)

FFP criteria on 8 July 2005. In December 2005, Ofcom published a statement confirming BT had met the FFP criteria¹⁵.

- 3.24 There are now over 400 CPs able to provide WLR2 services, though not all of these are currently active providers. There are now 5.3 million WLR2 lines in service¹⁶, excluding BT Retail's own use of WLR.

Figure 3.3: Growth in WLR lines



Source: Ofcom data

- 3.25 Following from its Undertakings obligations, Openreach has deployed a new, EOI product (WLR3). BT is migrating its customer base onto using the WLR3 product. Some CPs have also migrated onto using WLR3. However, many CPs remain on WLR2, primarily due to the difference in features on the WLR2 and WLR3 products. Openreach currently plans to deploy additional functionality in July 2009 to deliver parity between the two products¹⁷.

CPS

- 3.26 Oftel considered the impact of CPS the last time the call origination market was reviewed. At the end of 2002, there were 700,000 lines enabled with CPS on the BT network. Traffic volumes were increasing rapidly from a very low base. In the year from April 2001 to March 2002, CPS generated 57.8 million minutes. In contrast, in just the first six months of the year 2002/2003, call minutes totalled 932 million.

¹⁵ Wholesale Line Rental: Fit-for-Purpose Assessment, 15 December 2005

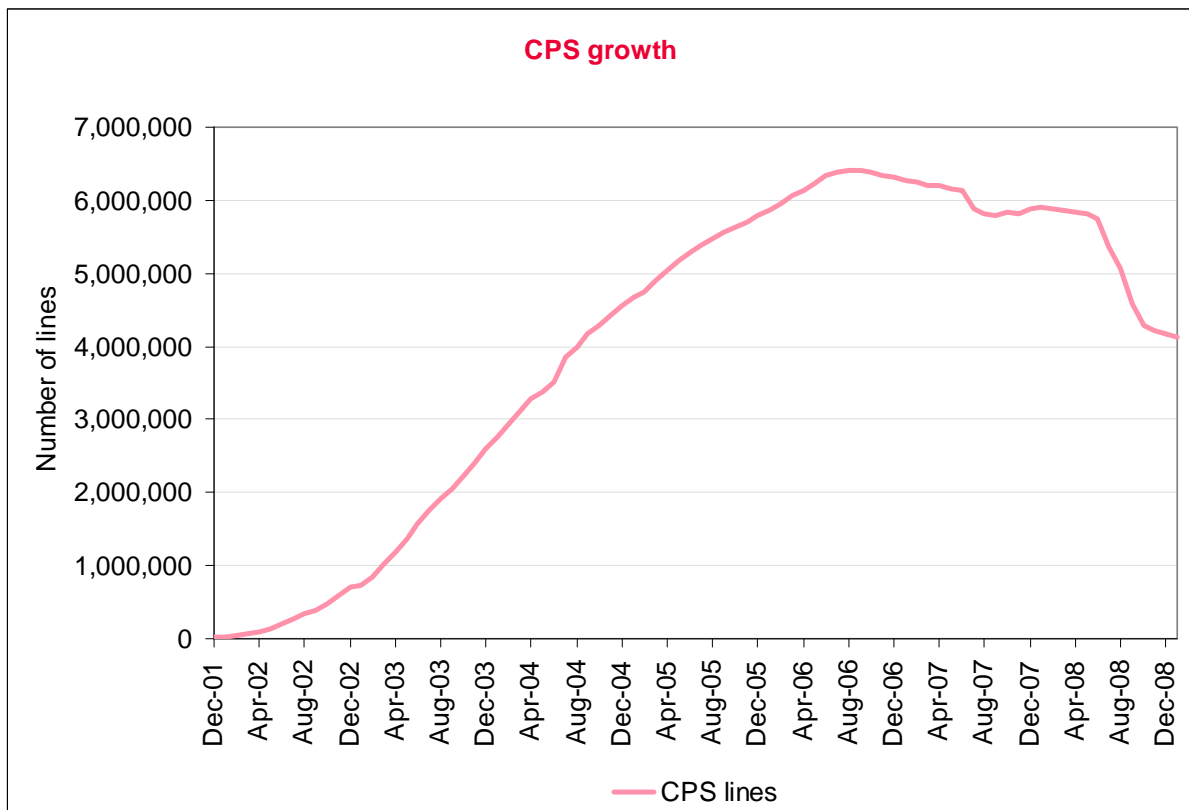
(http://www.ofcom.org.uk/consult/condocs/line_rental/wlrrfp_statement/statement.pdf)

¹⁶ As of 31 December 2008, 2.7 million residential lines, 1.6 million business lines and 1.1 million ISDN channels.

¹⁷ The Office of the Telecommunications Adjudicator (OTA) reports that Release 1100 on the Equivalence Management Platform (EMP) will deliver the additional features on WLR3 to provide parity with WLR2. (<http://www.offta.org.uk/updates/otaupdate20090206.htm>)

- 3.27 This trend has continued. For the year 2007/2008, CPS plus Indirect Access (IA) generated over 35 billion minutes. The majority of this traffic is CPS traffic.
- 3.28 In order to establish a basis for the deployment of CPS, Oftel imposed an obligation on BT to comply with a functional specification for CPS. This sets out the technical principles of the CPS product that must be delivered. The previous market review in 2003 included the functional specification to which BT and KCOM needed to comply.
- 3.29 For a CP to offer CPS, it must be allocated a CPS Operator Identifier by Ofcom before it can establish service with BT. Ofcom has issued over 100 CPS Operator Identifier (CPSO ID) codes. A market in hosting CPS services, with a number of large infrastructure providers providing network capabilities to CPs focused at the retail level has developed.
- 3.30 Figure 3.4 shows the growth in CPS lines since the last review.

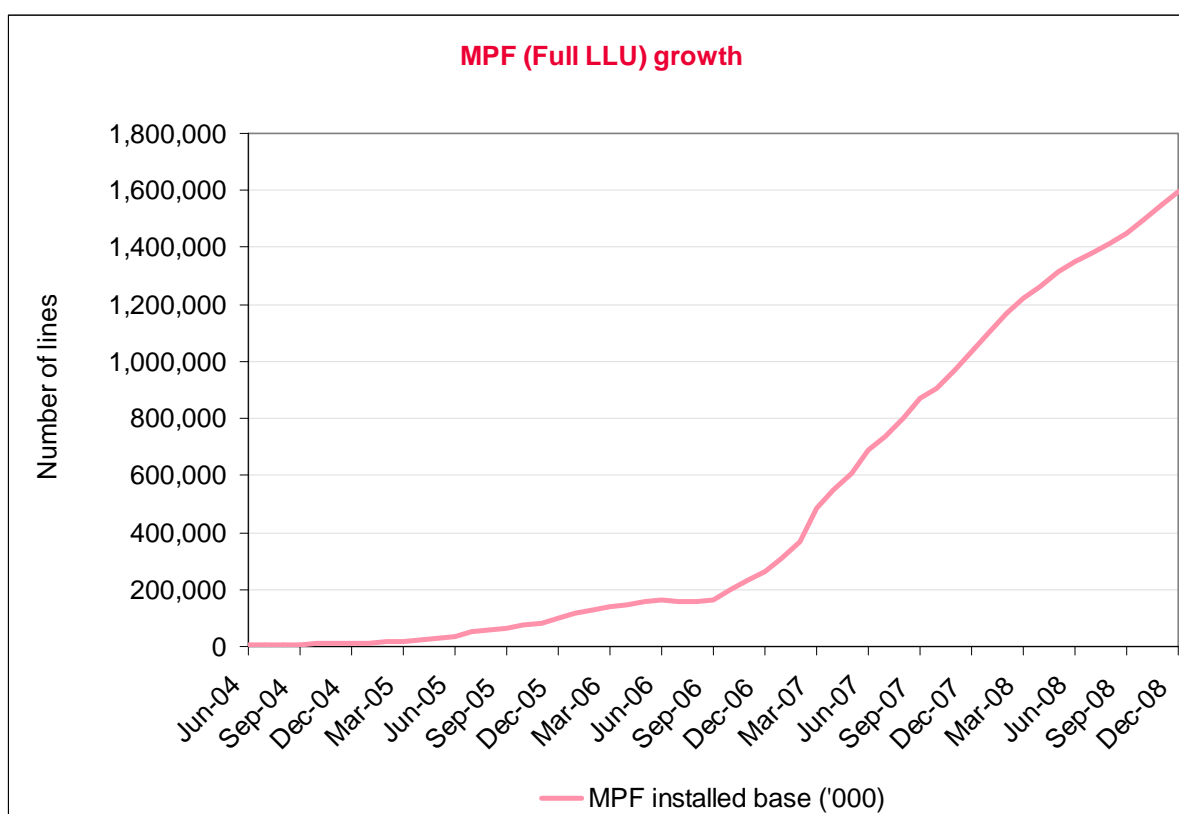
Figure 3.4: CPS lines



Source: Ofcom data

- 3.31 As shown in Figure 3.4 above, the number of CPS lines flattened off towards the end of 2006. This shows both the maturing of the market and the impact of local loop unbundling (LLU), where lines are provided over the LLU operator’s network instead of using CPS on the BT network (this can also be seen in figure 3.3 with a decline in residential lines in late 2006). LLU has begun to introduce competition in the provision of exchange lines and calls. To date, the use of LLU for combined broadband and narrowband services has not been deployed to the same extent as broadband-only LLU products. However, the number of full LLU lines has grown from zero at the time of the last narrowband market review to over 1.5 million as shown in Figure 3.5 below.

Figure 3.5 Growth in full LLU



Source: Openreach

- 3.32 The number of CPS lines shows a reduction in the second half of 2008. This is largely driven by a shift from CPS to BT's own wholesale calls product.
- 3.33 The obligations concerning Same/Adjacent DLE calls encouraged interconnection by CPs at BT's DLEs. This has occurred to a high degree with every DLE except one currently hosting interconnection to at least one CP.
- 3.34 In a significant number of cases, interconnection to BT has been achieved by CPs building out their network to BT. There is also use of BT provided infrastructure to provide the interconnection circuits. Consolidation of CPs has led to a number of infrastructure-based CPs with high levels of interconnection to BT and to other CPs. These network-based CPs provide wholesale services to smaller CPs.

Future Developments

Next Generation Networks (NGNs)

- 3.35 The current Public Switched Telephone Network (PSTN) is based on technology developed and rolled out over the past 20 to 25 years. In the UK, a number of CPs have undertaken investments in NGNs. NGNs are generally based on Internet Protocol (IP) packet technology. NGNs convey multiple services (broadband and media services in addition to telephony) over the same all-IP transport platform. From the CP's perspective, NGNs offer a number of potential benefits including cost savings due to the economies of scale and scope inherent in a single converged network, increased efficiency of network operations and the potential for innovative services.

- 3.36 BT set out proposals for its NGN, which it calls 21st Century Network (21CN), early in 2004. BT envisaged that a substantial volume of PSTN traffic would have migrated onto 21CN by 2009. However deployment of the project in relation to voice services has not occurred (except for a series of customer trials) so that migration has not yet materialised.
- 3.37 Our aim in this review is to evaluate the impact NGNs may have over the forward look period of this review. Although NGNs are not yet widely deployed, the migration from the legacy voice network to the NGN voice architecture may impact the markets we are reviewing.
- 3.38 We will not undertake a complete description of all regulatory issues concerning the development of NGNs. We are separately continuing to develop our view on the regulatory framework required to support NGNs. This is briefly summarised below.

Ofcom approach to NGNs

- 3.39 In March 2006, after a two-stage consultation process, we proposed a number of policies and processes to support the development of NGNs in the UK¹⁸. While recognising the significant benefits to consumers, we identified a number of potential issues. These included maintaining quality of service, provision of information about the migration process and the future of some services.
- 3.40 We adopted a co-regulatory approach to those issues and planned a collaborative process with industry, in the expectation that there was a common interest across the industry in addressing them. One of the main proposals was the development of Next Generation Networks UK ('NGNuk') as an independent NGN industry body, with a view to creating an improved framework for industry engagement.
- 3.41 Since 2006, we have continued to monitor NGN developments. In line with a further consultation process, which will take place in 2009, we have engaged with industry to discuss NGN deployments to date and to consider any possible further issues raised by the latest NGN developments. For the purpose of this market review, we limit our description to the characteristics of NGN voice architecture and products. We will discuss the specific impact of NGNs on each of the markets we define in Sections 5 – 10.

Features of next generation networks and BT's 21CN

- 3.42 In this section, we discuss some of the key features of NGNs. We describe BT's 21CN as a specific example of an NGN as this replaces the current network that is the focus of much of the existing wholesale regulation. However, we are aware that the way NGN voice architectures are designed and rolled out may substantially differ between operators. Whilst industry standards such as IP underpin the NGN, decisions on the specific architectures are driven by CP's individual choices and needs, such as customer base, product portfolio and investment capacity.
- 3.43 Since BT first announced its 21CN project it has engaged in a consultation process with industry to define the wholesale product set. Below we summarise the key elements of 21CN, for discussion purposes only. These are subject to change as

¹⁸ *Next Generation Networks: Developing the Regulatory Framework*, 7 March 2006 (<http://www.ofcom.org.uk/consult/condocs/nxgnfc/statement/>)

development of the network and, in particular, the support of voice products is still ongoing. Definitive information on 21CN is available from BT¹⁹.

3.44 There are three key differences between NGNs (such as 21CN) and current narrowband networks such as BT's:

- ability to converge traffic onto a single IP network;
- the NGN architecture is flatter than the current voice network; and
- call control and routing is significantly different.

Convergence onto a single platform

3.45 RCUs (and Digital Subscriber Loop Access Multiplexers (DSLAMs) which provide broadband services) will be replaced by Multi Service Access Nodes (MSANs). MSANs will be located at the edge of the access network and will be able to receive and combine different types of traffic delivered by all fixed access technologies such as copper and fibre. For the provision of voice services, MSANs operate under the control of a call server and provide features such as tones and announcements as well as converting analogue voice into voice over IP.

3.46 One of the potential benefits of NGNs is the ability to converge different traffic types onto a single network. In the current network, the physical and transmission assets may be shared between services, but above this, the network is managed separately by service and the PSTN is designed and optimised for narrowband services. In contrast, NGNs provide the capability to deliver a single converged platform to convey voice, data and any media traffic. However, to realise this, the IP layer of a NGN must be designed to provide sufficient quality of service (QoS) to meet the demands of voice. Voice is a real time service which does not tolerate significant delay, delay jitter or loss. BT's design of 21CN takes this into account by providing separate IP routing for voice services.

Flatter architecture

3.47 The architecture of 21CN, in relation to voice traffic, is flatter. Whilst there may be multiple layers in the underlying transmission network, at the voice layer there is no longer a local-tandem layer split. This means the local-tandem conveyance and transit market no longer exists.

Changes to call control and routing

3.48 In the PSTN, each switch (the DLEs and the tandem exchanges) analyses the dialled number and decides the next switch to which the call is routed. Each time a call is setup, the network establishes a fixed 64kb/s circuit (or channel) between the two communication points for the duration of the call. The circuit is released when the communication is ended. This call control process uses SS7²⁰ signalling protocols

3.49 In 21CN (and other NGNs), the call routing at the voice level is managed by a call server, which translates the dialled number into the destination IP address. One call

¹⁹ Information regarding the development of 21CN can be found at the Consult21 website:

http://www.btwholesale.com/pages/static/Community/21_Century_Network_Community.html

²⁰ ITU-T Signalling System Number 7: standard for control signalling in PSTN. SS7 signalling is done out-of-band, i.e. SS7 signalling messages are transported over a separate data connection. This guarantees network and voice traffic security

server may be able to determine the end-to-end routing of the call, or multiple call servers may be used. For instance different call servers may need to be involved to control the MSANs at either end of the call. This call control process uses control protocols such as versions of SIP²¹. In contrast to the PSTN, a fixed, guaranteed bandwidth allocation is not made for each call. Voice is converted to IP packets at the MSANs and these packets are then sent through the IP routers. Each packet may be routed differently at each IP router. The call servers are not involved in the routing of the IP packets related to the actual voice conversation (the media stream). The receiver will then reassemble the information after receiving them.

- 3.50 The handling of traffic within the PSTN, with each exchange making a call routing decision, provides a point of access for other CPs to interconnect to BT at each exchange. In 21CN, as call control and routing are handled differently, a different interconnection architecture has been developed. Access to voice traffic is provided to CPs other than BT at Points of Service Interconnection (POSIs). Industry discussion has resulted in agreement on 27 points of voice service interconnection. Each MSAN is parented onto one of these 27 locations. A further two POSIs are provided – Belfast and Aberdeen - mainly for resilience purposes. A sub-set of 20 of these will also be access points for broadband access by service providers.
- 3.51 Since the transmission of the actual voice traffic (the media stream) does not need to follow the same path as the call control (signalling), the call server does not have to be on the network to which the customer is physically connected. Subject to technical, commercial and security considerations, a call server of another CP can control the MSANs in the BT network, instructing them to route traffic across the BT network, through a POSI and onto the CP network.

21CN products

- 3.52 BT has discussed what 21CN voice products should be supported on 21CN via Consult21²². In addition, NGNuk²³ has discussed some elements of interconnection, including possible charging mechanisms.
- 3.53 At the end of 2008, BT announced it was reviewing the 21CN deployment, and, in particular, the strategy for voice products. As a result, the specific voice products to be deployed on 21CN, and the deployment schedule of these products, remain uncertain.
- 3.54 Below we present an overview of the products that have been discussed to date. In Sections 5 – 10 we address, as relevant, these products in the context of the specific markets in which they sit.

Wholesale Line Rental (WLR)

- 3.55 On the current BT network, the WLR product provides a narrowband connection from the customer premises onto the network (connecting at the RCU as discussed above). In addition to providing the access connection, the product also includes features that are associated with the line such as CLI services (e.g. 1471) and call diversion (including call diversion to voicemail services). WLR also includes other capabilities associated with the line such as ring tone, dial tone, announcements, etc.

²¹ IETF Session Initiation Protocol: Internet Engineering Task Force (IETF) standard for signalling over IP networks. First specified in 1999 by RFC2543 and updated in RFC3261.

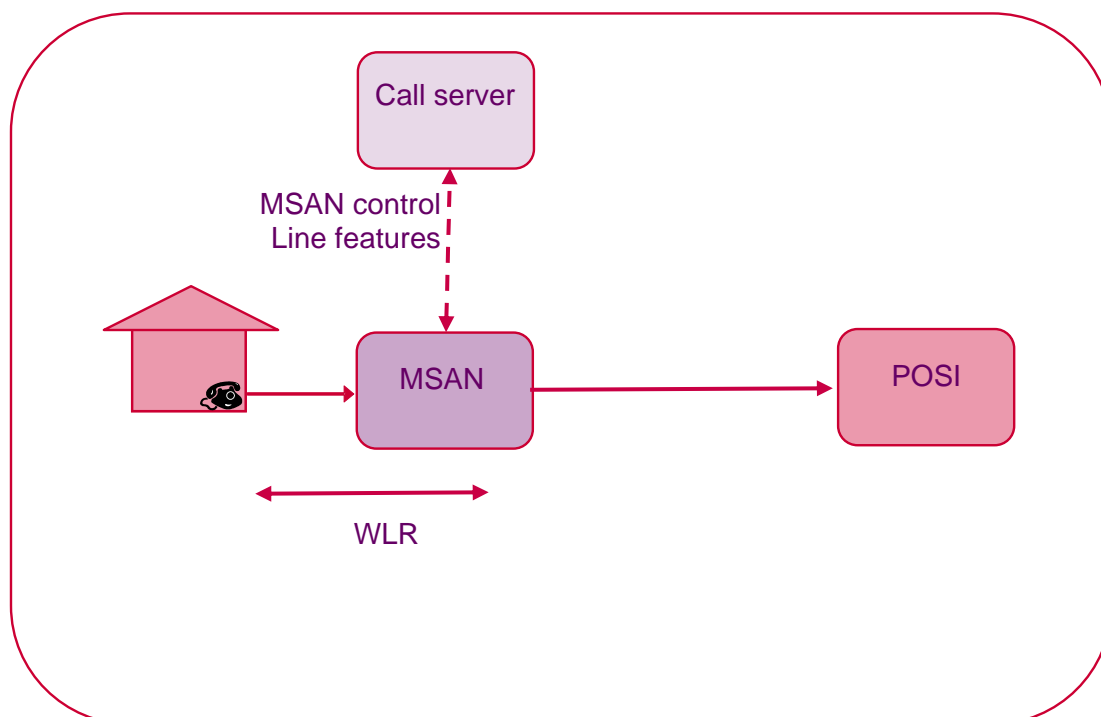
²² Consult21 is the consultation process put in place by BT to engage with industry regarding 21CN deployment.

²³ NGNuk is an independent body set up following Ofcom's NGN consultation in 2005 to allow industry to discuss technical and commercial aspects of the deployment of NGNs.

Different features are supported on ISDN lines, since customer premises equipment may supply different capability.

- 3.56 Openreach plans to replicate the current WLR product on 21CN although some of the features supported on the current network may not be available. In order to provide 21CN WLR, the BT MSAN to which the customer line is connected needs to be controlled by a BT call server in order to provide the product features.

Figure 3.6: WLR on 21CN



- 3.57 The features supported on the call server which are included in 21CN WLR are limited to those related to controlling the access line connected to the MSAN and line associated features. The call server shown will be responsible for call control for calls made by the 21CN WLR customer, but this call control is not part of WLR. However, because the BT call server provides 21CN WLR, this same BT call server also provides call control for call origination and call termination to the customer with their line provided by WLR.

Multi Service Interconnect Link (MSIL)

- 3.58 One of the fundamental changes brought about by the move to NGNs is that separate interconnection links for each service are not required. Instead, multiple services can share common interconnection links. The MSIL provides this capability.
- 3.59 The MSIL provides an Ethernet link between a multi-service access point in the BT network and the Point of Handover (PoH) to the CP.
- 3.60 The different services that run over the MSIL are configured to use separate Service Virtual Local Access Networks (SVLANs). This allows the different services to be treated appropriately and separately in the BT and CP networks.
- 3.61 The MSIL product has already been launched in order to support non-voice services on 21CN such as Wholesale Broadband Connect (WBC). Once launched, voice

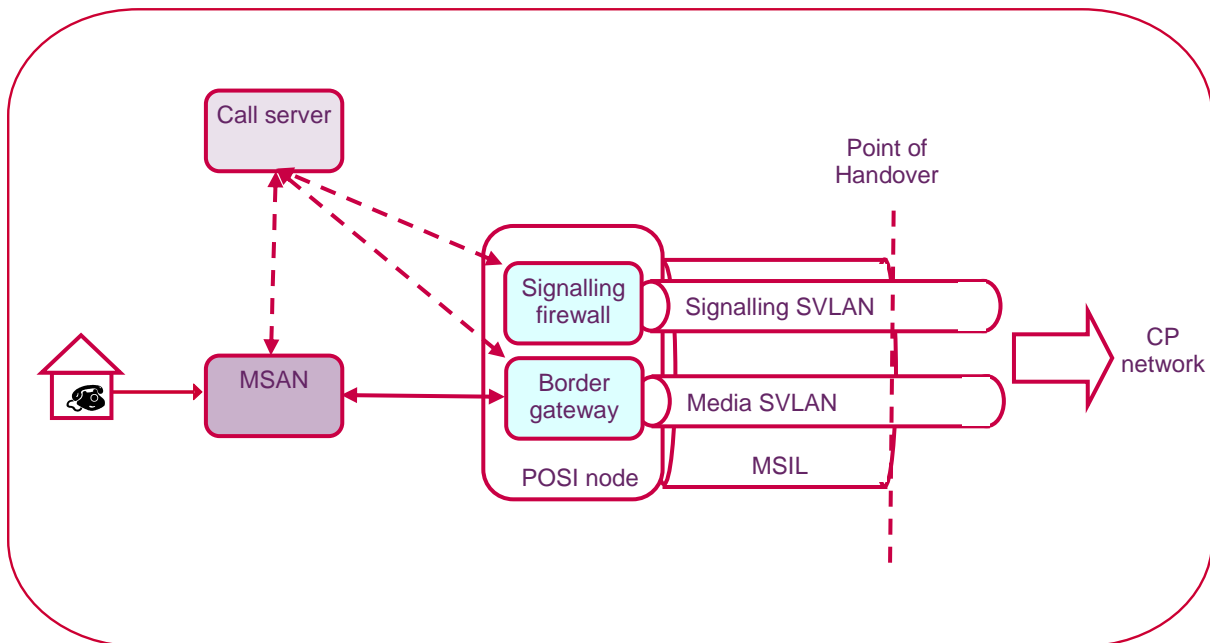
services will also use MSILs. This will mean that voice traffic is handed off as IP traffic rather than having separate TDM links for voice traffic.

NGN Call Conveyance (PSTN Emulation)

3.62 In order to route traffic between the 21CN and other CPs, using IP based interconnection (via MSILs), an NGN call conveyance product has been proposed.

3.63 The NGN call conveyance product provides interconnection between BT and other CPs as shown in Figure 3.7 below:

Figure 3.7: Overview of NGN call conveyance



3.64 Separate SVLANs are provided across the MSIL for signalling and media. The signalling SVLAN connects to a signalling firewall in the BT network, whilst the media SVLAN connects to a border gateway.

3.65 Across the signalling SVLAN there will be a signalling route connecting the BT call server with the equivalent function in the CP's network (e.g. the CP's call server). This signalling route will control the media flow across the media SVLAN. The signalling route will use SIP-I signalling as agreed by NICC.

3.66 The border gateway is controlled by the call server. This creates specific connections through the border gateway (pinholes) for each call established via SIP-I signalling messages passed through the signalling route. That is, the call server controls the border gateway based on the call control messages on the signalling route.

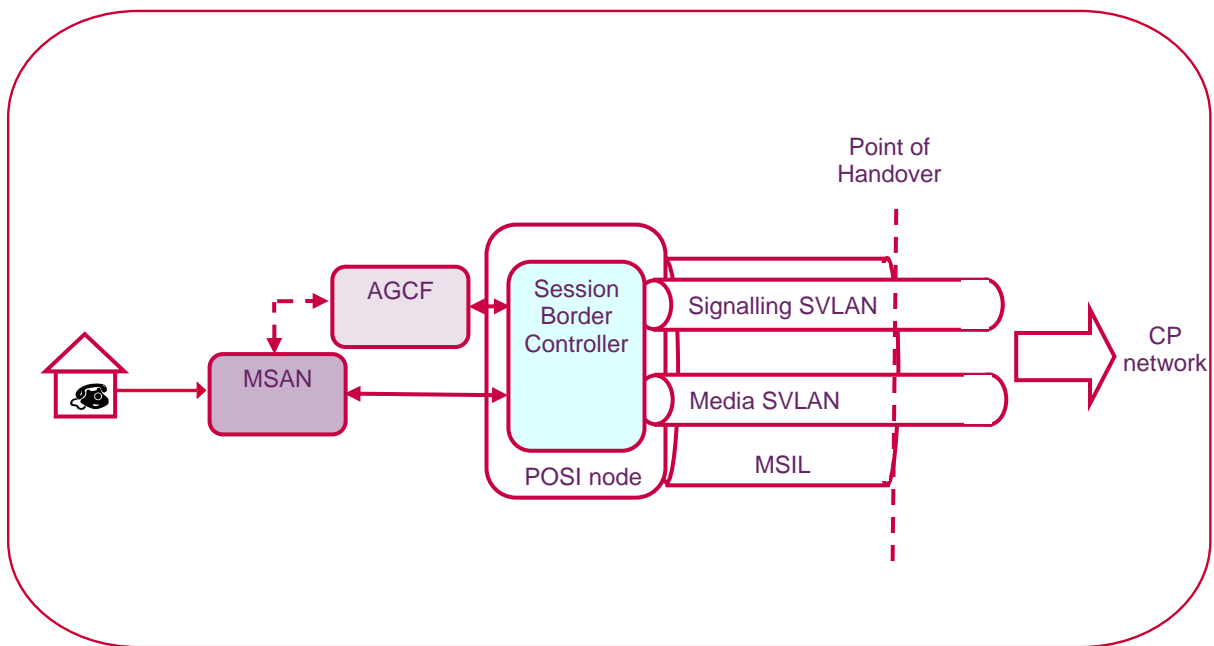
3.67 The NGN call conveyance product provides PSTN emulation. It supports call origination traffic streams such as:

- BT originated traffic from its own retail customers;
- BT originated Indirect Access and CPS traffic;

- BT originated NTS traffic;
 - BT originated 118 traffic; and
 - BT originated dial-up internet access traffic.
- 3.68 In all the above cases, call origination is provided by the BT call server. The customer may be a BT retail customer or may be a retail customer of another CP, using the 21CN WLR product. This means that the BT call server would need to provide the relevant wholesale call origination capabilities to support each of the above traffic streams.
- 3.69 In addition, NGN call conveyance supports BT terminating traffic (call termination). This means the BT call server will host the customer's number.
- 3.70 Charging for each of the traffic types listed above is currently based on per-minute charges which also take into account the resources used on the BT network. This gives rise to DLE interconnection rates (also known as Local Exchange Segment (LES)), single tandem rates and three double tandem plus rates, depending on distance. As the architecture for 21CN is different to that of the current network, LES, single tandem and double tandem plus rates are no longer appropriate.
- 3.71 Discussions around charging for NGN call conveyance resulted in an interim charging mechanism based on blended rates. The blended rates reflect the charges that a CP pays for traffic on the current network (taking into account DLE, single tandem and double tandem rates and the percentage of traffic sent via each of these). During the migration onto 21CN, the blended rates meant CPs did not incur additional charges due to the migration of customers on the BT network. The intention was that a new, replacement charging mechanism would be established once 21CN deployment was better understood.
- 3.72 Interconnection in 20CN for voice services currently includes the interconnection circuit provided via one of three mechanisms (ISI, IEC or CSI) and an Intra-Building Circuit (IBC). In 21CN, interconnection is provided by the MSIL and the SVLANs. In principle, the cost of interconnection for voice traffic carried by the NGN call conveyance product is therefore recovered from the SVLANs. Where an MSIL is provided purely for voice traffic, the charge for the MSIL is reimbursed to the CP. Where the MSIL supports multiple services, the proportion of the cost relating to the use of the MSIL by voice traffic is discounted.

Wholesale Voice Connect (WVC)

- 3.73 The ability to separate call control and conveyance leads to the possibility of launching a new product. Through Consult21, this product has variously been discussed as Voice Line Access (VLA) and Wholesale Voice Connect (WVC).
- 3.74 The WVC product does not use the functionality of the call server located in the BT network. Instead, the call server is located in the CP's network.

Figure 3.8: Overview of WVC

3.75 The differences between WVC and NGN call conveyance, as shown above, are:

- the Access Gateway Control Function (AGCF) provides an inter-working function and allows multiple CPs to control an MSAN;
- the Session Border Controller (SBC) provides functions such as security, connection control and billing;
- the signalling between the CP and BT uses a different signalling standard, SIP-UNI; and
- since there is no BT call server, the WLR product is not an appropriate access mechanism. Therefore, a new access product is required from Openreach. There has been some discussion in industry on this subject. A number of CPs have requested a similar product from Openreach to allow unbundled access to the narrowband portion of the access connection to the customer. To date, there is no confirmed plan for rollout of such a product.

3.76 WVC differs from the NGN CC product described above because it provides transport of signals to and from the customer under the control of the CP's call server. As such, the different traffic types identified for NGN CC, which will each have their own routing plan, cannot be identified by BT.

3.77 BT controls the service in two ways:

- admission control of traffic can be applied at the SBC; and
- the AGCF converts signalling messages, so supported features must be agreed by industry (via NICC).

3.78 The advantage of WVC is that it moves the product features away from the network to which the customer connects and allows the possibility for greater service

innovation for CPs, without the need for them to provide their own access networks in order to connect to customers.

- 3.79 BT proposed that WVC would be charged on a per-line monthly fee for access, plus a capacity charge for conveyance, based on committed traffic volumes, not subscriber volumes.
- 3.80 BT has proposed a converged wholesale offer – Wholesale Broadband Connect Converged (WBCC). WBCC provides both voice and broadband. The voice component is supported in the same way as WVC, although due to the converged nature of the product, the access element is different, using the existing MPF product.
- 3.81 BT also discussed with industry the possibility that it may re-configure the way it provides some services to use an architecture more in common with the WVC approach. In particular, BT discussed deploying a second call server which used the AGCF to control the MSAN in the same way as WVC. BT would then provide WLR, call origination and call termination products on this call server.
- 3.82 However, as stated previously, BT's voice strategy for 21CN is currently under review. At the time of publication of this consultation we did not know whether BT would provide WVC.

Summary of 21CN voice products

- 3.83 The voice products to be supported on 21CN are currently under review. A number of products have been discussed between BT and industry.
- 3.84 The proposed 21CN WLR is basically the same as the current WLR product and requires the customer line to be controlled by a BT call server in order to provide the same (or similar) set of features as currently available. Two possible architectures to realise this have been discussed.
- 3.85 The NGN call conveyance product provides for the routing of the following traffic types between BT and CPs:
- Carrier Pre-Selection and Indirect Access;
 - NTS call origination;
 - Call termination to BT numbers; and
 - Call termination to numbers hosted on the CP's network.
- 3.86 WVC allows a new approach, where the CP controls the service. BT provides conveyance of media and signalling messages between the CP call server and the BT MSAN, but the CP has greater control on the features offered to the end-user.
- 3.87 However, the products to be supported and the timeframes for launch will not be confirmed until the conclusion of BT's 21CN voice strategy review.

Section 4

Approach to the market review process

Introduction

- 4.1 In this section we set out the process that we have followed in defining the markets within this review.
- 4.2 Section 79(1) of the Act provides that before a market power determination may be considered, Ofcom must identify the markets which are, in his opinion, the ones which, in the circumstances of the United Kingdom, are the markets in relation to which it is appropriate to consider such a determination and to analyse that market. Ofcom is, as noted above, required to take due account of all applicable guidelines and recommendations issued by the European Commission. We are required to issue a notification of his proposals. We are entitled, by virtue of section 80(2) of the Act, to issue this notification with its proposal as to a market determination and with his proposals for setting SMP services conditions. The notification at Annex 7 is a single notification containing all such proposals.
- 4.3 We set out further detail on the legal framework pertaining to the market review process is set out in Annex 6.

Key features of the Commission's approach to market definition

- 4.4 In formulating its approach to market definition, Ofcom has taken due account of the Commission's approach, which is primarily set out in the Recommendation and the accompanying explanatory memorandum (the "EM")²⁴.
- 4.5 Recital (4) of the Recommendation clearly states that the starting point for market definition is a characterisation of the retail market over a given time horizon taking into account the possibilities for demand and supply side substitution. The wholesale market is identified based on this retail market. This approach is repeated in section 3.1 of the EM.
- 4.6 Section 3.1 of the EM also states that, because any market analysis is forward-looking, markets are to be defined prospectively taking account of expected or foreseeable technological or economic developments over a reasonable horizon linked to the timing of the next market review.
- 4.7 Furthermore, section 3.1 of the EM states that market definition is not an end in itself, but a means to assessing effective competition for the purposes of ex-ante regulation. Ofcom has adopted an approach by which this consideration is at the centre of its analysis. The purpose of market definition is to illuminate the situation with regard to competitive pressures. For example, Ofcom's approach to supply side substitution explicitly identifies as the key issue the question of whether additional competitive constraints on pricing are brought to bear by additional suppliers entering the market. Thus, the key issue is not the market definition for its own sake, but an identification of the extent and strength of competitive pressures.

²⁴ Commission Staff Working Document, Explanatory Note to the Commission Recommendation on Relevant Product and Service Markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communication networks and services (Second edition) (http://ec.europa.eu/information_society/policy/ecomms/doc/library/proposals/sec2007_1483_final.pdf)

- 4.8 Section 4 of the EM states that retail markets should be examined in a way that is independent of the infrastructure being used, as well as in accordance with the principles of competition law. Again this approach is key to Ofcom's analysis. Ofcom's approach is based on a competition law assessment of markets and an assessment of the extent to which switching among services by consumers constrains prices, irrespective of the infrastructure used by the providers of those services.

General approach to market definition

- 4.9 There are two dimensions to the definition of a relevant market: the relevant products to be included in the same market and the geographic extent of the market. Ofcom's approach to market definition follows that used by UK competition authorities²⁵ and is in line with those used by European and US competition authorities.
- 4.10 Market boundaries are determined by identifying constraints on the price-setting behaviour of firms. There are two main competitive constraints to consider: how far it is possible for customers to substitute other services for those in question (demand side substitution); and how far suppliers could switch, or increase, production to supply the relevant products or services (supply-side substitution) following a price increase. In this assessment, supply side substitution will be considered as a low cost form of entry, which could take place within a relatively short period of time. The OFT Guidelines on Market Definition, OFT 403, December 2004, consider the relatively short period to be within a year. That is, for supply side substitution to be relevant, there would need to be additional competitive constraints arising from entry into the supply of the service in question, from suppliers who are able to enter quickly and at low cost, by virtue of their existing position in the supply of other services. As discussed below, only those supply side substitution possibilities that are viable in the absence of unregulated wholesale inputs will be considered as relevant to the analysis.
- 4.11 The 'hypothetical monopolist test' is a useful tool to identify close demand side and supply side substitutes. A product is considered to constitute a separate market if a hypothetical monopoly supplier could impose a small but significant, non-transitory price increase ("SSNIP") above the competitive level without losing sales to such a degree as to make this unprofitable. If such a price rise would be unprofitable, because consumers would switch to other products, or because suppliers of other products would begin to compete with the monopolist, then the market definition should be expanded to include the substitute products.
- 4.12 There might be suppliers who provide other retail and wholesale services but who might also be materially present in the provision of demand side substitutes to the service for which the hypothetical monopolist has raised its price. However, such suppliers are not relevant to supply side substitution, as they supply services already identified as demand side substitutes. As such, their entry has already been taken into account and so supply side substitution cannot provide an additional competitive constraint on the hypothetical monopolist. However, the impact of expansion by such suppliers can be taken into account in the assessment of market power.
- 4.13 Sometimes an additional consideration is whether there are common pricing constraints across customers, services or areas such that they should be included

²⁵ Office of Fair Trading Market Definition Guideline ("Understanding Competition Law"), OFT 403, December 2004 (http://www.of.gov.uk/advice_and_resources/resource_base/legal/competition-act-1998/publications)

within the same relevant market even if demand and supply side substitution are not present.

Relationship between retail and wholesale markets

- 4.14 This market review is focused on the fixed narrowband services markets at the wholesale level. However, consideration of competitive conditions in the retail markets logically precedes the analysis of the wholesale markets, since the demand for wholesale services is derived from the demand for retail services – the wholesale markets provide the relevant components in order to deliver the retail services.
- 4.15 Because of this, competitive conditions in both the wholesale and the retail markets need to be considered. Competitive constraints at the retail level can impact the definition of wholesale markets through the mechanism of indirect substitution. In defining markets at the wholesale level, indirect competitive constraints can sometimes be more important than direct competitive constraints. For example, there might be no direct alternative substitute to BT's call origination and/or conveyance services in some geographic areas. Nevertheless, BT may not be able to raise its prices for these wholesale services in these areas if such a move would cause consumers to substitute fixed calls for mobile calls²⁶.
- 4.16 For the purpose of defining wholesale markets, retail competition should be considered absent regulation (and any remedies) in the *only* wholesale market under consideration. Whilst this counterfactual might not be significantly different to the situation where wholesale regulation exists, it may be problematic to establish. We have taken the utmost care to consider the retail market absent regulation.

Geographic market

- 4.17 In addition to the products to be included within a market, market definition also requires the geographic extent of the market to be specified. The geographic market is the area within which demand side and/or supply side substitution can take place and is defined using a similar approach to that used to define the product market. Ofcom has considered the geographic extent of each relevant market covered in this market review.
- 4.18 There are a number of possible approaches to geographic market definition. One approach would be to begin with a narrowly-defined area and then consider whether a price increase by a hypothetical monopolist in that narrowly defined area would encourage customers to switch to suppliers located outside the area (demand-side substitution) or operators outside the area to begin to offer services in the area (supply-side substitution). If supply and/or demand side substitution is sufficient to constrain prices then it is appropriate to expand the geographic market boundary.
- 4.19 Ofcom recognises that in certain telecommunications (product) markets in the UK, there could be different competitive pressures in different geographic areas. For example BT competes in the provision of local access with Virgin Media where it has cable access network infrastructure. We have to consider whether, in this case, it would be appropriate to identify separate geographic markets for some services. We have, for example, defined separate geographic markets in our Wholesale

²⁶ One necessary condition for indirect substitution to occur is that wholesale price increases translate into higher retail prices so that mobile call prices become sufficiently close to fixed calls prices.

Broadband Access Market Review²⁷. However, defining such geographic markets may be problematic because, due to the dynamic nature of telecommunications markets, the boundary between areas where there are different competitive pressures may be unstable and change over time, rendering the market definition obsolete.

- 4.20 Therefore, defining separate geographic markets is only likely to be a worthwhile exercise where the market conditions are considered to be sufficiently different on an ongoing basis.
- 4.21 An alternative approach is to define geographic markets in a broader sense. This involves defining a single geographic market but recognising that this single market has local geographical characteristics. That is to say, recognising that within the single market there are areas where competition is more developed than in other areas. This avoids the difficulties of proliferation and instability.
- 4.22 In carrying out this particular market review, Ofcom has taken into account the guidance on geographic markets produced by the European Regulators Group (ERG), *ERG Common position on Geographic Aspects of Market Analysis*, published in October 2008.

Commission's Recommendation on Markets

- 4.23 In 2003, the Commission produced *The Recommendation on relevant product and services markets* identifying product and service markets within the electronic communication sector, in which *ex ante* regulation may be warranted.
- 4.24 The Commission reviewed its recommendation in 2007 and removed some markets from its list. In particular, the following market (formerly market 10 in the 2003 Recommendation) relevant to this review has now been removed:

Transit services in the fixed public telephone network.

- 4.25 The Commission sets out the basis upon which it has identified markets at paragraph 2.2 of the EM. They identify three specific cumulative criteria (*'the three criteria test'*) that should be considered when identifying which markets are susceptible to *ex ante* regulation, where the relevant market(s) differ from those defined in the Recommendation. Those criteria are:
- Barriers to entry and to the development of competition;
 - Dynamic Aspects – no tendency to competition; and
 - Relative efficiency of competition law and complementary *ex ante* regulation.

Barriers to entry and to the development of competition

- 4.26 The presence of high and non-transitory entry barriers is a necessary condition for a market to be susceptible to *ex ante* regulation. The Commission identify two types of barrier to entry, structural barriers and legal/regulatory barriers.

²⁷ *Review of the wholesale broadband access markets*, 21 May 2008
(<http://www.ofcom.org.uk/consult/condocs/wbamr07/statement/>)

Dynamic Aspects – no tendency to competition.

- 4.27 The market must demonstrate characteristics such that it will not tend towards effective competition without *ex ante* regulatory intervention. The application of this criteria involves examining the state of competition behind the barrier to entry, taking account of the fact that even when a market is characterised by high barriers to entry, other structural factors or market characteristics and developments may mean that the market tends towards effective competition.

Relative efficiency of competition law and complementary ex ante regulation

- 4.28 *Ex ante* regulation would be considered to constitute an appropriate complement to competition law in circumstances where the application of competition law would not adequately address the market failures concerned.
- 4.29 In particular where we propose to identify a market that differs from a market set out in the Commission’s list, or that does not appear in the current list, we will have utmost regard to the 3 criteria test set out in the EM.

Market power assessment

Definition of SMP

- 4.30 Sections 45, 46 and 78 *et seq.* of the Communications Act (‘the Act’) grant Ofcom the power under certain circumstances to set conditions binding Communication Providers, namely persons who provide an electronic communications network and/or an electronic communications service. Specifically, Section 46(7) states that SMP services conditions may be imposed on a particular person who is either a Communications Provider or a person who makes associated facilities available, and who has been determined to have SMP in a “services market” (i.e. a specific market for electronic communications networks, electronic communications services or associated facilities).
- 4.31 Accordingly, having identified the relevant product and geographic markets, Ofcom is required to analyse each market in order to assess whether any person or persons have SMP as defined in Section 78 of the Act (Article 14 of the Framework Directive²⁸).
- 4.32 Under the Directives and Section 78 of the Act, SMP has been newly defined so that it is equivalent to the competition law concept of dominance. Article 14(2) of the Framework Directive provides:
- “An undertaking shall be deemed to have significant market power if, either individually or jointly with others, it enjoys a position equivalent to dominance, that is to say a position of economic strength affording it the power to behave to an appreciable extent independently of competitors, customers and ultimately consumers.”

- 4.33 Further, Article 14(3) of the Framework Directive states that:

²⁸ Directive 2002/21/EC on a common regulatory framework for electronic communications networks and services (the “Framework Directive”) (http://ec.europa.eu/information_society/policy/ecomm/current/index_en.htm)

“Where an undertaking has significant market power on a specific market, it may also be deemed to have significant market power on a closely related market, where the links between the two markets are such as to allow the market power held in one market to be leveraged into the other market, thereby strengthening the market power of the undertaking”.

- 4.34 Therefore, in the relevant market, one or more undertakings may be designated as having SMP where that undertaking, or undertakings, enjoy a position of dominance. Also, an undertaking may be designated as having SMP where it could lever its market power from a closely related market into the relevant market, thereby strengthening its market power in the relevant market.

The Criteria for assessing SMP

- 4.35 In assessing whether an undertaking has SMP, Ofcom has taken the utmost account of the EC’s “Guidelines on market analysis and the assessment of SMP” (‘SMP Guidelines’) as it is required to do under Section 79 of the Act. Ofcom has also considered the application of the equivalent Oftel Guidelines²⁹.
- 4.36 The SMP guidelines require NRAs to assess whether the competition in a market is effective (ie no operator is found individually or jointly dominant). This is undertaken through a forward looking evaluation of the market, determining whether the market is prospectively competitive, taking account of foreseeable developments.
- 4.37 Market share is an indicator of market power and the SMP Guidelines state that, in the Commission’s practice, single dominance normally arises where market shares are over 40%, and very large market shares of over 50% are evidence of the existence of a dominant position. This presumption is rebuttable and it is stressed in the guidelines that the existence of a dominant position cannot be established on the sole basis of large market shares, and that a thorough and overall analysis is required before coming to a conclusion on the existence of SMP. Non-exhaustive criteria are suggested to measure the power of a market undertaking. The relevant section from the Guidelines is set out in Annex 6.
- 4.38 Where a market is found to be competitive then no SMP conditions can be imposed. Section 84(4) requires that any SMP condition in that market, applying to a person by reference to a market power determination made of the basis of an earlier analysis, must be revoked.

The need for ex ante regulation

- 4.39 Before turning to the last market review stage concerning remedies, it is necessary to consider whether competition law remedies are sufficient to address the problem. This consideration is necessary to establish, in line with the 27th recital to the Framework Directive, whether or not a market is effectively competitive. (In this context it is to be noted that the importance of identifying the problem reappears under Article 8(4) of the Access and Interconnection Directive. This is because obligations imposed in accordance with Article 8 shall be based on the nature of the problem identified, proportionate and justified in light of the objectives laid down in

²⁹ *Oftel’s market review guidelines*

(www.ofcom.org.uk/static/archive/oftel/publications/about_oftel/2002/smpg0802.htm)

Article 8 of the Framework Directive.) In assessing the sufficiency of Competition Law, a number of considerations are taken into account.

Appropriate to promote the development of competition

- 4.40 As a competitive market will produce a more efficient outcome than a regulated market, the promotion of competition is central to securing the best deal for the consumer in terms of quality, choice and value for money.
- 4.41 Where markets are effectively competitive, *ex post* competition law is sufficient to deal with any competition abuses that may arise. However, without the imposition of *ex ante* regulations to promote actively the development of competition in a non-effectively competitive market, it is unlikely that *ex post* general competition law powers will be sufficient to ensure that effective competition becomes established. For example, this is because *ex post* powers prohibit abuse of dominance rather than the holding of a dominant position. *Ex ante* powers can be utilised to reduce the level of market power in a market and thereby encourage effective competition to become established.
- 4.42 The risk is not all one way as use of some *ex ante* measures can themselves limit or add nothing to the development of competition. Ofcom has recognised this in removing some regulation where markets are not effectively competitive.
- 4.43 Ofcom are proposing that *ex ante* regulation is necessary in most, but not all, of the markets covered by this document and Notification. The proposed remedies considered in Sections 11 to 17 are appropriate to promote the development of competition in downstream narrowband markets. A failure to regulate the legacy operator (BT or KCOM) in these markets is likely to affect the development of competition in that competing providers would be unlikely to provide intermediate or retail services without wholesale services provided by the legacy operator. In the absence of regulation, the legacy operator would have little incentive to provide such wholesale services.
- 4.44 It is preferable to apply regulation at the wholesale level as this both addresses SMP issues in the wholesale markets and promotes competition in downstream markets that rely on wholesale inputs. This fits with the requirement that NRAs take measures which meet the objective of encouraging efficient investment in infrastructure and promoting innovation (see Article 8(2) of the Framework Directive and section 4 of the 2003 Act). The regulation of wholesale markets encourages competing providers to purchase wholesale products and combine them with their own networks to create products in competition with the legacy operator.

Market dominance

- 4.45 Although communications markets have in general become increasingly competitive over time, this is from a position in which most were controlled by a legacy monopoly operator. The increase in competition that has occurred inevitably reflects the imposition of *ex ante* regulation to counter the market power of the legacy operator. Moreover, despite this, the legacy operator remains, in Ofcom's preliminary view, dominant in the majority of the markets in this review. Therefore, it would be appropriate to continue to impose *ex ante* regulations in these markets in order to ensure that effective competition can become established.

Network externality effects

- 4.46 Externality effects are present in the markets in this review. In particular, the network externality effect, which means that the value of a network to its users increases more than proportionately with the number of subscribers, gives the large incumbent network a great advantage over potential competitors. For example, the value of a large network might be little affected if it refused to deliver calls to or accept calls from a much smaller entrant, but the latter might find it impossible to attract subscribers as a result. As a consequence, this would enable the incumbent to exclude rivals from the market by refusing to interconnect with them or doing so only on onerous terms.
- 4.47 General *ex post* competition law powers may not be sufficient to address the effects of the network externality. This is because the network externality effect generally reinforces a dominant position and under general competition law there is no prohibition on holding a position of dominance in itself. Therefore, it may be more appropriate to address the impact of network externality through *ex ante* obligations, for example by requiring interconnection with the incumbent's network.

Entry barriers

- 4.48 The communications networks in this review are characterised by economies of scale, that is, average costs fall as output increases. Economies of scale result from the fact that a high proportion of the costs of a communications network are fixed while marginal costs (the costs of an extra unit of output) are relatively low.
- 4.49 While the extent of economies of scale varies in different parts of the network, their existence means that a large network will tend to have lower average costs than a smaller one. Successful entry by new network operators will therefore require significant investment and most of this will be sunk costs, in the sense that the costs will not be recoverable if the entrant decides to exit the market. Significant sunk costs create an asymmetry in the market between incumbents and potential entrants that the former could exploit to deter entry, if allowed to. Incumbents could exploit this asymmetry by signalling to a potential entrant that, if it were to enter the market, prices would be too low to cover sunk costs. Entry might therefore be deterred.
- 4.50 Also, although entry at the retail level by operators without their own networks is likely to require relatively smaller sunk investments, it is also likely to require regulated supply of wholesale inputs if retail competition is to become established where there is market power at the network level.
- 4.51 Therefore, in the communications markets covered by this document, especially where there is a requirement for larger sunk investments, *ex ante* regulation is appropriate to address the effect of this barrier to entry.
- 4.52 Ofcom does recognise, however, that inappropriate *ex ante* regulation can have the effect of limiting competition. In formulating remedies to overcome SMP, it is important to consider the extent to which the proposed remedies will address the specific problem identified.

Section 5

Wholesale fixed narrowband exchange line services

Summary

- 5.1 This section focuses on fixed narrowband exchange lines markets that provide customers with switched telephony services with a bandwidth of 64kb/s and narrowband data services with a bandwidth up to 128 kb/s.
- 5.2 With regard to market definition, we propose the following wholesale fixed narrowband exchange line markets:
- wholesale analogue exchange line services;
 - wholesale ISDN2 exchange line services; and
 - wholesale ISDN30 exchange line services.
- 5.3 We also propose two separate geographical areas:
- The UK excluding the Hull Area; and
 - The Hull Area.
- 5.4 With regard to SMP assessments, we propose that:
- BT has SMP in all three markets identified above in the UK excluding the Hull Area; and
 - KCOM has SMP in all three markets identified above in the Hull Area.
- 5.5 We propose the following remedies as shown in Table 5.1:

Figure 5.1: Summary of proposed remedies in exchange lines market

	BT obligations	KCOM obligations
Wholesale analogue exchange lines	Requirement to provide network access on reasonable request Requests for new network access Requirement not to unduly discriminate Basis of charges Requirement to publish a reference offer Requirement to notify charges, terms and conditions Requirement to notify technical information Cost accounting Accounting separation Transparency as to quality of service Obligation to provide WLR Charge control	Requirement to provide network access on reasonable request Requirement not to unduly discriminate Basis of charges Requirement to publish a reference offer Requirement to notify charges, terms and conditions Requirement to notify technical information Cost accounting Accounting separation
Wholesale ISDN2 exchange lines	Requirement to provide network access on reasonable request Requests for new network access Requirement not to unduly discriminate Basis of charges Requirement to publish a reference offer Requirement to notify charges, terms and conditions Requirement to notify technical information Cost accounting Accounting separation Transparency as to quality of service Obligation to provide WLR	Requirement to provide network access on reasonable request Requirement not to unduly discriminate Basis of charges Requirement to publish a reference offer Requirement to notify charges, terms and conditions Requirement to notify technical information Cost accounting Accounting separation
Wholesale ISDN30 exchange lines	Requirement to provide network access on reasonable request Requests for new network access Requirement not to unduly discriminate Requirement to publish a reference offer Requirement to notify charges, terms and conditions Requirement to notify technical information Cost accounting Accounting separation Transparency as to quality of service Obligation to provide WLR	Requirement to provide network access on reasonable request Requirement not to unduly discriminate Requirement to publish a reference offer Requirement to notify charges, terms and conditions Requirement to notify technical information Cost accounting Accounting separation

5.6 We are also consulting in this document on whether it is appropriate to impose cost orientation or charge control obligations on BT in relation to WLR ISDN30.

Market Definition

Description of the relevant retail products

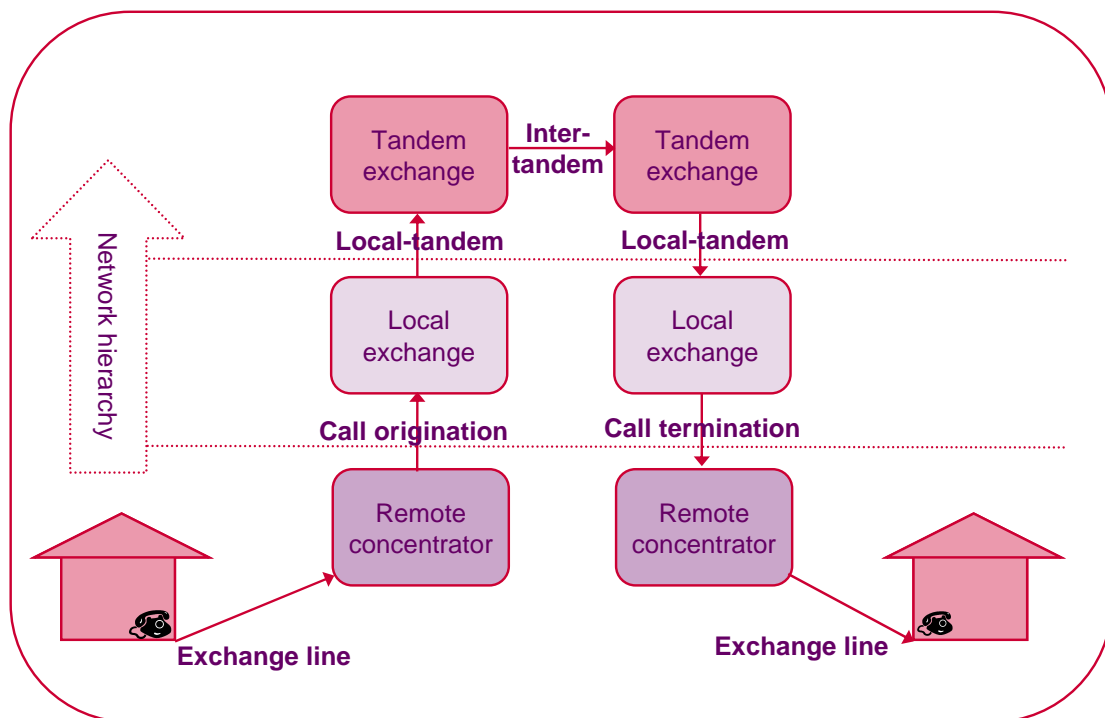
5.7 In this section we consider the markets that provide customers with access to:

- switched telephony services, based on either analogue or digital channels, each channel having a bandwidth of 64kb/s; and
- narrowband data services (including internet access) with a bandwidth of up to 128kb/s.

5.8 The market definitions will be based on these services, not the underlying technology. This means that, for a given service, the market is defined independently of whether the service is delivered over cable, the access networks of BT or KCOM (in Hull) including LLU, or any other fibre or wireless technology. For example, we consider ISDN30 to be a narrowband service since it provides (up to 30) channels having each a bandwidth of 64kb/s, even though the service may be delivered over fibre or other technology with much higher bandwidth.

5.9 The access service provides connection from the customer premises onto the narrowband switched network. In Figure 5.2 this connection is shown to occur at the Remote Concentrator Unit (RCU). In large networks such as BT's, the majority of RCUs are likely to be physically remote from the Digital Local Exchange (DLE). In smaller networks it is more likely that the RCUs will be co-located with the DLEs. In addition, the DLEs may also provide tandem functionality. Nonetheless, the capabilities in relation to exchange lines are the same.

Figure 5.2: Exchange lines



5.10 Next generation network technology differs from the current technology in respect to the equipment used to provide a connection. With NGNs, the access service continues to provide the connection from the customer premises onto the

narrowband switched network; however, a single piece of network equipment, the Multi Service Access Node (MSAN) now terminates both the narrowband and broadband services. In other words, in terms of narrowband services, the MSAN replaces the RCU.

5.11 Next generation access (NGA) is also an important development that may impact the exchange lines market. Two main models for NGA exist:

- Fibre To The Premises (FTTP): FTTP deploys fibre all the way to the customer's premises. A traditional copper connection is not required. This approach is most likely to be used, at least in the short term, to meet demand in new build developments. There is no connection onto the RCU to provide narrowband services in this architecture; and
- Fibre To The Cabinet (FTTC): current proposals by BT include the deployment of FTTC to provide broadband speeds above those available over current broadband technology. In this approach the current copper connection from the appropriate street cabinet back to the network is replaced with fibre for the provision of broadband. The connection to the customer premises remains via copper. In addition, the narrowband (telephony) services continue to be provided as shown above – with a connection back to the RCU.

5.12 The access services we are considering as fixed narrowband services in this review are delivered by one of three types of exchange lines: analogue, ISDN2 or ISDN30.

Analogue exchange lines

5.13 An analogue exchange line provides a single 64kb/s channel that can support traditional telephony, facsimile and modem data traffic. Analogue lines are the most common types of exchange lines installed in most residential and small business premises.

5.14 Analogue exchange lines are delivered as follows:

- in the UK outside of Hull, BT provides analogue exchange lines via its copper access network. This network is also used to deliver broadband services;
- within the Hull Area, KCOM provides analogue exchange lines via its copper access network. As for BT, the KCOM network is also used deliver broadband services;
- Virgin Media delivers analogue exchange lines using its cable network. This service is delivered using a copper access network (as for BT and KCOM) but which shares the same duct as the hybrid fibre/coaxial network used to deliver Virgin Media's cable TV and broadband services. Virgin Media's cable network is available to approximately 50% of the population;
- Local loop unbundling (LLU) provides access to the BT copper access network (KCOM is also required to provide LLU although no demand has yet arisen from other CPs looking to enter the market in the Hull Area). Whilst the majority of LLU providers have used this type of access to provide broadband services only, some providers (such as Carphone Warehouse (CPW)) have used LLU to provide combined narrowband and broadband offers. Providers offering both narrowband and broadband service via LLU cover approximately 80% of the population.

ISDN2 exchange lines

- 5.15 ISDN2 (Basic Rate ISDN) provides two digital channels with a bandwidth of 64kb/s each and a control channel of 16kb/s on a single exchange line. These lines allow a wide range of services including basic telephony with additional features to those available on analogue lines and data services that are not limited to 56kb/s by the capabilities of analogue line modems.
- 5.16 ISDN2 lines are provided using the copper infrastructure. It is unlikely to be economic for providers that do not have a copper access network to deploy their own access infrastructure to support ISDN2 services. The main providers of ISDN2 exchange lines are BT, KCOM in Hull and Virgin Media (using its ntl:telewest business brand) where it has its cable network footprint.
- 5.17 Since the last review, the growth in the use of broadband for internet access by residential users has led to a decline in the use of ISDN2. BT has withdrawn its residential ISDN2 products. Whilst we cannot rule out that some residential users may use a business ISDN2 product, in this review we consider that ISDN2 is a business user product.

ISDN30 exchange lines

- 5.18 ISDN30 (Primary Rate ISDN) provides up to 30 digital channels with a bandwidth of 64kb/s each and a control channel of 64kb/s.
- 5.19 ISDN30 is used exclusively by businesses to support a wide range of digital services. It is most commonly used to support connection of private branch exchanges (PBXs) for the supply of telephony services to larger business premises.
- 5.20 A number of CPs provide ISDN30 services using their own infrastructure. The larger bandwidth required to provide these services and the higher concentration of premises likely to use ISDN30 services in city centres makes the deployment of alternative infrastructure economic in some cases.

Exchange line services used by residential customers

- 5.21 As said earlier, most residential consumers use analogue exchange lines for the services they need. Analogue lines allow basic telephony including the transmission of fax traffic. Also, some consumers still use narrowband to access the internet and this is provided over an analogue exchange line. Furthermore, an analogue exchange line is also generally required in order for broadband to be provided.
- 5.22 Residential consumers use a number of telephony features. These include CLI based services (such as caller display), call waiting and voicemail.

Exchange line services used by business customers

- 5.23 Businesses use a wider set of exchange line services. One of the key considerations for choosing a given type of exchange line is the size of the business.
- 5.24 Very small businesses (Small Office Home Office – SoHo) users will share many of the characteristics of residential users. Small and medium sized enterprises (SMEs) will often have a requirement for multiple lines. This may be delivered via multiple analogue exchange lines, via several ISDN2 lines or a mix of the two.

- 5.25 Larger business will require more lines. They could meet this requirement by using multiple analogue or multiple ISDN2 lines, but if they require more than around eight lines, an ISDN30 connection is likely to be more economical.
- 5.26 In addition, many businesses use a PBX. This provides additional features (for example calling between extensions within the office, voicemail services, directory services). Whilst some PBXs may support analogue lines, the majority of PBXs require connection via ISDN30. These larger businesses are more likely to use the ISDN30 connection for telephony traffic only. They are likely to have a separate connection for other services such as internet access.
- 5.27 Businesses with multiple sites may require Virtual Private Network (VPN) functionality. A VPN provides a common set of service features across all the sites. The sites may have their own PBX, or the network may provide a Centrex service. Centrex services are used in particular for smaller sites to provide PBX-like functionality without the expense of physically deploying a PBX in every location.
- 5.28 The features required from exchange lines are likely to be influenced by the capabilities of customer premises equipment (CPE). In general, smaller businesses that rely on analogue exchange lines have similar uses as residential consumers. Businesses that use ISDN may require additional features that support advanced routing features (such as Call Forwarding). They may also require solutions that allow integration across multiple locations.

Retail market competition

Separate choice of access and calls

Residential users

- 5.29 Our market research found that the vast majority of customers (88%) purchase their access and calls from the same provider³⁰. Over 80% of BT customers purchased both access and calls from BT, while all non-BT access customers in our study purchased calls from their access provider.
- 5.30 However, while consumers generally buy access and calls from the same provider, our consumer research found that a sizeable minority of consumers consider access and calls to be separate purchase decisions. For instance, 38% of customers who buy access or calls from BT consider access and calls to be separate purchase decisions, while 24% of consumers who buy access and calls from rival suppliers regard access and calls as independent purchase decisions despite taking access and calls from the same supplier.
- 5.31 Further evidence on the extent to which consumers regard access and calls as separate purchase decisions can be seen in the way that consumers respond to hypothetical increases in the price of access and calls posed in our market research study. For example, when asked how they would respond to a 10% increase in the price of BT access, 74% of respondents indicated that they would switch both access and calls. Again this is consistent with the majority of consumers regarding access and calls together, but a significant majority considering them to be separate purchase decisions.

³⁰ Illuminas study for Ofcom, 2009

- 5.32 The SSNIP test does not provide sufficient guidance as to what proportion of customers would be needed to view access and calls as the same product in order for them to be regarded as being part of the same market. For that reason the choice as to whether to view access and calls in the same or in different markets is largely a pragmatic one. In the light of the fact that a material number of consumers still purchase fixed line access and calls separately and that an even higher proportion regards the two services as separate purchase decisions we believe that it is more appropriate to regard fixed line access and calls as separate markets.

Business users

- 5.33 The arguments for a separate access and calls market are broadly the same as they are in the residential market. In particular, while many businesses do make decisions based on the overall cost of access and calls, most businesses regard access and calls as separate products and are prepared to switch either access or calls products or both in response to changes in relative prices.
- 5.34 Our survey found that 95% of businesses were able to distinguish between whether the price of access or calls had increased. Businesses were also more likely to respond to an increase in the price of calls by reducing their call volumes compared to residential consumers.
- 5.35 Additionally, many businesses have multiple suppliers for access, providing greater security should a fault develop on a particular line. This suggests that the decision to purchase access is based primarily on the price and quality of the access product, with the price of calls playing a much more limited role (in particular when compared to residential markets).
- 5.36 Bundling of access and calls is also much less prevalent in business than in residential markets. Our survey also found that a higher proportion of businesses (17%) took access and calls from different suppliers compared to residential markets (14%).
- 5.37 Finally, a significant minority of businesses now purchase landline access but do not buy a fixed calls product. For example, in our consumer survey, 25% of respondents agreed with the statement that they only used a landline for broadband services, while 14% agreed with the statement that they used landline for essential services such as an alarm, but used mobile for calls.
- 5.38 While clearly business access and call prices are linked we believe that these products are sufficiently separate for them to be considered as separate product markets.

Mobile and fixed access

Residential users

- 5.39 Our research shows that consumers overwhelmingly consider mobile and fixed line access to be complements rather than substitutes. Notably, 79% of the UK adult population now choose to have both fixed and mobile access, compared to only 70% in 2003. While 91% of consumers now have a mobile phone, the number choosing

mobile access only is growing at a rate of only 1% per annum and currently stands at 12%³¹.

- 5.40 Mobile only access is most prevalent in low income households. For example, 24% of UK adults with an income of less than £11.5k are mobile only, compared to only 5% for those with an income in excess of £30k³².
- 5.41 Our consumer survey also found that demand for landlines was primarily driven by non-price factors. When respondents were asked about their attitudes to having a landline, they claimed they³³:
- would never give up their landline as it makes them feel secure (62%);
 - believe that there is too much upheaval from getting rid of a landline (44%); and/or
 - believe that mobile is not reliable enough for them to stop having a landline (43%).
- 5.42 Further evidence that fixed and mobile access are complementary can be seen from the fact that the proportion of mobile only users has experienced a relatively slow rate of growth over the last five years despite a very large fall in the price of mobile services. Between 2002 and 2007 the real price of mobile services declined by an estimated 45%³⁴ while the price of equivalent fixed line services fell by only 18%. In the same period, mobile only households grew from 7% to 10%, while the proportion of consumers having fixed and mobile access increased from 73% to 82%. This is consistent with consumers taking advantage of the falling absolute and relative price of mobile phones by increasingly purchasing both mobile as well as fixed access rather than substituting away from fixed lines.
- 5.43 However, whilst most consumers do appear to view mobile and fixed access as complements, there is also an important minority who regard them increasingly as substitutes. For example, 33% of respondents said they strongly agree that they would stop having a landline if mobile phone usage was cheaper. This suggests that a proportion of consumers do regard their mobile phone and their landline as substitutes and would be prepared not to keep a landline if the price differential decreased. The research also shows that mobile phone users on pre-pay contracts are much more willing to regard their mobile phone as a substitute for their landlines than pay-as-you-go users. This is likely to be because pre-pay contract customers are less sensitive to per-call charges. The majority of mobile phones are on pay-as-you-go contracts.
- 5.44 For the above reasons we believe that although there is some substitutability between fixed and mobile access, they are predominantly viewed by consumers as complements and therefore more appropriately considered to be in a separate market.

³¹ *Fixed Narrowband Retail Services Markets - Consultation on the identification of markets, determination of market power*, 19 Mar 2009 (http://www.ofcom.org.uk/consult/condocs/retail_markets/)

³² *Ibid.*

³³ The answers listed were prompted.

³⁴ *Ofcom Communications Report*, August 2008 (<http://www.ofcom.org.uk/research/cm/cmr08/>)

Business users

- 5.45 Businesses appear to attach a similar or greater importance to retaining a landline than residential customers. For example, 100% of businesses questioned in our consumer survey had a landline, with 68% also using mobile phones. In contrast, 16% of residential customers in our sample were mobile only consumers.
- 5.46 In addition, businesses are very reluctant to consider giving up a landline. For example, 82% of businesses agreed with the statement that “landline services are essential for the needs of our business and we would never consider getting rid of them.” This compares with 62% of residential consumers who indicated that they would never consider giving up a landline.
- 5.47 The reliability of mobile service/coverage is the main reason given by respondents (62%) as to why mobiles are not appropriate substitutes to landlines. Most businesses questioned considered mobile and fixed line services to be largely complementary in use with 65% agreeing with the statement, “we use a mix of landline and mobile services according to the situation”.
- 5.48 Business’s preference to retain their landline appears to be primarily driven by non-price factors with only 24% of respondents indicating that they would be prepared to substitute mobile for fixed access should the current price differential be eliminated.
- 5.49 The continuing preference by businesses to retain fixed access can also be seen in the number of business analogue exchange lines demanded. Between 2002 and 2007, business fixed lines declined from 5.5 million in 2002 to 5.3 million, a fall of only 3%.
- 5.50 As businesses appear to be very reluctant to switch from fixed to mobile access even in response to very large changes in relative prices we believe that that business fixed line access is likely to be a relevant economic market.

Narrowband and broadband access

- 5.51 Whilst there are broadband only offers available from some suppliers (such as Virgin Media) that don’t require the customer to take narrowband service from the same supplier, customers currently view narrowband and broadband as complements.

Limited customer substitutability between analogue, ISDN2 and ISDN30 lines

- 5.52 Analogue, ISDN2 and ISDN30 provide different capabilities to end users. An analogue line provides a single line that can be used for voice, facsimile and narrowband data traffic (using a modem running up to 56kb/s). Only one service can be used at a time.
- 5.53 ISDN2 provides two digital 64kb/s channels and a 16kb/s data channel. ISDN2 can be used for voice communications, at locations where a voice and a data channel is required, for some specific low bandwidth data applications where availability and reliability is essential and for providing management capabilities in higher bandwidth networks. The use of ISDN2 to provide access to the Internet has largely been replaced by broadband.
- 5.54 ISDN30 is generally used by large office locations to provide voice connectivity from a Private Branch Exchange (PBX) to the public network. Each ISDN30 connection provides up to 30 voice channels.

- 5.55 Because of the different uses to which analogue, ISDN2 and ISDN30 are put, it is very unlikely that consumers will, in general, consider them to be substitutes for price and functionality reasons.

Limited competition between residential and business markets for exchange lines (and calls)

- 5.56 An SME is free to choose between a business and a residential tariff. However, CPs are able to discriminate between business and residential customers to a considerable extent through offering packages which separately target business and residential customers.
- 5.57 The differences between business and residential packages are also reflected in fixed line access prices. For example, BT's minimum price of access is £10.27 for a residential customer and £16.21 for a business customer.
- 5.58 The boundary between business and residential tariffs is however becoming less clear cut with higher end residential tariffs, such as BT Anytime, becoming increasingly similar in structure to lower-end business tariffs. This reflects the increasing trend of CPs to offer a greater range of residential tariffs to appeal to different customer types (low v high volume, peak v off-peak users). Similarly, BT and others, further expand the choice of tariffs by offering residential customers the opportunity to purchase some of the value-added services usually included in business packages, such as call-waiting, for an additional monthly fee.
- 5.59 Despite this there remain significant differences between business and residential tariffs, particularly for high volume users. For example, if BT were to increase the price of its business packages by 10%, the lowest price business call package, BT Business Plan, would be £1.73 more than BT Anytime with International saver, the nearest equivalent residential tariff. Any business making even an occasional long duration call to a UK mobile or to an international landline would remain better off using the business tariff. A single 30 minute call to a UK mobile each month would cost £2.20 on BT Anytime compared to 25p on BT Business Plan.
- 5.60 There are also potentially important quality differences, notably, the higher level of customer services offered, and entry into the business section of the yellow pages directory.
- 5.61 Supply-side substitution between the residential and business sectors is also likely to be limited. While it is easy for a residential supplier to design a package that is attractive to business customers, it is considerably more difficult and costly to market such a package to business customers. The retailers who are currently active in the retail sector such as Sky, Tesco and Post Office, have used their established residential customer base to sell on communication products. However, such firms have limited experience in marketing to business customers who are much more diverse and difficult to reach. It therefore seems unlikely that such retailers would choose to enter the business market should tariffs in the business market increase by 5-10%.
- 5.62 More generally, the market evidence suggests that the residential and business markets are separate as the competitive dynamics in the two markets differ. In particular:
- the structure of competition is different in the two markets. In the residential market competition is provided by a number of large retailers such as Sky and

the Post Office based on wholesale products purchased from BT in addition to CPW, via the Talk Talk brand, and Virgin Media that use their own infrastructure (LLU and cable respectively). In the business market, BT faces competition from a larger number of retailers, many of which are relatively small and are focused at specific market segments;

- the competitors are different in the residential and business sectors. In the residential market, many of the competitors are predominantly specialist retailers whereas in the business market, more of the competition is provided by CPs with their own networks;
- the nature of competition is different in the two markets. In the residential sector, bundling access and calls with pay-TV, broadband, and other communication products is the predominant commercial strategy. In the business market, bundling is less prevalent, and prices are often bespoke.
- The attributes of access and calls that are valued by businesses differ in important ways to the demands of residential customers. For example, businesses are by and large more interested in access for security and in having a land-line number, whereas for residential customers, access is increasingly valued for delivering high quality broadband;
- CPs can, and do, price discriminate between business and residential customers; and
- Prices in the business market continue to be significantly higher than in the residential market.

5.63 In applying the SSNIP test, we believe that it is likely that a hypothetical monopoly supplier of residential fixed access and calls could raise prices by 5-10%. Since there is no effective demand-side substitutability between the business and residential market CPs can price discriminate between the two markets. Moreover supply-side substitution is unlikely to be effective as the suppliers in the business market do not typically have the established customer base necessary to market access and calls products on a large scale and suppliers in the residential market need to incur significant costs to operate effectively in the business market.

Retail geographic market

- 5.64 At the geographic level there is a single UK market excluding Hull and a separate Hull market.
- 5.65 All operators have national uniform pricing policies and national marketing campaigns so competition on the supply-side of the market has a clear national dimension. In Hull, the main UK based retailers, including BT, currently do not offer a competing residential retail service. There is no alternative access infrastructure (cable or LLU) deployed in Hull and retailers have not requested KCOM to provide a wholesale product. There is limited competition in the business market based on leased lines or radio access. However, for the residents of Hull there is no effective demand-side substitution, while supply-side substitution is limited by the absence of alternative access infrastructure and wholesale products from KCOM. The overall size of the market in Hull has so far appeared to mean it is not economic for other CPs to undertake the network, process and systems developments needed to enter this market.

Impact of wholesale regulation of exchange lines on the retail market

- 5.66 For the purposes of defining the wholesale markets it is necessary to consider the retail markets absent wholesale regulation. Given that the current retail exchange lines markets rely on wholesale regulation, it is important to analyse how Ofcom's market research may be impacted by the absence of such regulation.
- 5.67 In the absence of wholesale regulation, it is unlikely that a hypothetical monopolist would provide a wholesale line rental product as this allows other retailers to effectively compete with its own retail operations. WLR has contributed significantly to the development of retail competition. Therefore, we consider the implications on the above retail market discussion of the absence of such a product.
- 5.68 Aspects of the retail markets that depend on common characteristics of the wholesale markets are unlikely to be affected in the absence of wholesale regulation. For example, whether business or residential analogue exchange lines are in the same market is unlikely to be affected since the prices and availability of both business and residential wholesale lines would be impacted in the same way by the absence of regulation. Retailers are also likely to continue to price discriminate between residential and business customers.
- 5.69 Technical features that differentiate products would be unaffected. Therefore, even though in the absence of regulation competition may be different in analogue, ISDN2 and ISDN30 markets, it is unlikely that consumers will consider substituting between these products.
- 5.70 The absence of regulation is also unlikely to affect the fact that access and calls are separate markets. An increase in the price of access is likely to increase the differential between line rental and calls expenditure for consumers. Consumers may therefore be more prone to switching to better line rental deals should prices increase.
- 5.71 The absence of wholesale regulation in the market for exchange lines is likely to lead to higher retail rental prices for exchange lines, and hence a lower price differential between costs of fixed access and mobile phones. This may increase the percentage of consumers who perceive mobile phones and landlines as substitutes and therefore mobile may become an increasing constraint. However, given the currently low percentage of consumers that see mobile as a substitute (currently 12% and growing at 1% per annum, as stated above) and the non-price reasons for keeping a landline outlined above, it is unlikely that prices would increase sufficiently to lead us to conclude that they are in the same market.
- 5.72 The prices set by a hypothetical monopoly provider in the absence of regulation may be constrained in areas where alternative solutions (cable, LLU and self-provided business connections) exist. The absence of a wholesale product from the monopolist, or high wholesale or retail prices for its products, may stimulate greater deployment of these solutions.
- 5.73 Therefore, while the absence of regulation would likely impact the retail markets in terms of price and competition levels, we believe that it would not substantially affect the current product market definitions.
- 5.74 Regarding the impact on retail geographic definition, there is a possibility that it would be affected by the absence of wholesale regulation. In the absence of obligations on BT not to unduly discriminate, BT may decide to price discriminate at the wholesale

level on the basis of geographic locations. However, when defining geographic wholesale markets, this possibility is explicitly considered and we do not rely on retail geographic definition.

Summary of retail markets

5.75 Our market research therefore indicates that

- fixed access and calls are separate markets;
- mobile and fixed access are separate markets;
- residential and business access are separate markets; and
- There is a single UK geographic market excluding Hull and a separate Hull geographic market.

Wholesale market definitions

5.76 To define the relevant economic wholesale market we start by considering whether it would be profitable for a hypothetical monopolist supplier of the service to impose a 5-10% increase in price. The result of this standard SSNIP test will depend on the extent of substitution possibilities for both immediate customers (direct competitive constraints) and final customers (indirect competitive constraints).

5.77 In defining markets at the wholesale level, indirect competitive constraints (e.g. constraints at the retail level) can sometimes be more important than direct competitive constraints. For example, even if there are limited direct substitution possibilities, it may not be profitable for a monopoly provider to raise the price of wholesale exchange lines if, in doing so, this led to a large loss of retail end users who would switch to purchasing their exchange lines from Virgin Media or providers using LLU in those areas where these CPs operate.

5.78 We first consider constraints at the retail level (indirect constraints) before discussing direct constraints at the wholesale level.

5.79 For the purposes of this analysis we take the hypothetical monopolist supplier's network to be a fixed narrowband network with full geographic coverage based on providing access to customers via copper access (except large businesses where fibre will be used). This is akin to the BT network in the UK excluding Hull and the KCOM network in the Hull Area. We assess whether alternate solutions based on self-supply (for example via cable, LLU or mobile networks) may result in direct or indirect constraints.

Indirect Constraints

5.80 The demand for fixed wholesale exchange lines is ultimately derived from the demand for retail exchange lines. Even if a CP has no realistic alternative but to purchase exchange lines from a hypothetical monopoly provider, it may not necessarily be profitable for the hypothetical monopolist to raise prices above the competitive level if in doing so this led to higher retail prices and a significant drop in the retail demand for exchange lines. This can potentially be caused by the fact that, as a result of the price increase at wholesale level translating into higher retail prices, some retail consumers either:

- switch to other CPs who either self-supply exchange lines or purchase it from CPs other than the monopolist (currently CPW, Virgin Media, CPs purchasing exchange lines from C&W and CPs that provide business services over their own networks); or
- switch to mobile.

5.81 The proportion of any wholesale price increase that is passed on to retail consumers will be a key factor in the profitability of any SSNIP. The SSNIP is more likely to be profitable where:

- the proportion of the retail price of an exchange line that is accounted for by the wholesale input is low; and
- retail competition is low, allowing higher retail margins.

5.82 In order to understand the impact of a SSNIP at the wholesale level on retail prices, we have gathered wholesale and retail analogue prices³⁵ as presented below in Table 5.3:

Table 5.3: Wholesale and retail prices for residential analogue exchange lines

	Wholesale	Retail			
	Openreach	BT Retail	CPW	Sky	Tiscali
Line rental (£/year including VAT)	116	123.24	126	120	131.88

Source: Ofcom (retail prices from CPs' websites as at 23 February 2009)

5.83 However, to assess the impact of a wholesale SSNIP, we need to consider the impact of raising the price of such a wholesale product. In Table 5.3, the analogue WLR price provided by Openreach is subject to a charge control. Therefore, the wholesale price is close to cost. In a competitive wholesale market it would be expected that prices would be reflective of cost. Given that the retail prices are based on a competitive market with many suppliers relying on the regulated wholesale products, we believe that the retail prices are at the competitive level.

5.84 Table 5.3 above also shows the retail prices of BT, CPW, Sky and Tiscali. All CPs competing with BT are dependent on the availability of the WLR product from BT to some extent to provide services to customers. CPW and Tiscali have deployed some exchange lines using their own LLU footprint. However, this does not provide full geographic coverage.

5.85 Retail prices include both the wholesale exchange line cost and retail costs. This implies that, everything else being equal, a percentage increase in the wholesale input is unlikely to cause an equal percentage increase at the retail level unless retail costs are zero. As shown in Table 5.3, the wholesale exchange line cost represent between 88% and 97% of the retail price. This implies that a 5-10% increase in the wholesale input will lead to a similar increase at retail level.

5.86 We therefore consider whether a 5-10% increase in the retail price would lead to substitution at the retail level.

³⁵ Openreach price is £25.17 per quarter for a basic line excluding VAT. The BT price is valid only with Direct Debit and paper-free billing. Sky's line is available to Sky's TV customers only.

5.87 We believe, for the reasons explained below, that:

- indirect constraints arising from the existence of wholesale exchange lines on alternative fixed networks (i.e., Cable and LLU) may be effective in rendering a 5-10% SSNIP by a hypothetical monopolist unprofitable depending on the assumptions made about the price increase; and
- indirect constraints arising from mobile calls would not be effective in rendering a 5-10% SSNIP by a hypothetical monopolist unprofitable.

Competition between fixed and mobile access

5.88 First we address whether the wholesale fixed line access market (exchange lines) should also include wholesale mobile access because of demand or supply side substitution (or both).

5.89 Mobile and fixed line access are not direct substitutes at the wholesale level. Substitution, if any, occurs indirectly in the retail market. If at the retail level, mobile and fixed line accesses were in the same market because of demand-side substitution, there would be a possibility that these services are in the same market at the wholesale level given that wholesale demand is derived from retail demand.

5.90 We have however found that at the retail level, mobile and fixed access are not in the same market when they are priced at the competitive level as very few consumers at the moment regard the two as substitutes. This means that if a hypothetical monopoly supplier of exchange lines at the wholesale level raised prices by 5-10%, the providers of fixed line access at the retail level would be able to increase prices to recover the price increase at the wholesale level without losing many customers to mobile phone access only (essentially consumers who would stop having a landline at home). This means that the price increase at the wholesale level would be profitable for the hypothetical monopolist. Therefore, mobile phone access at the wholesale level is not part of the fixed line access market.

5.91 There is limited indirect substitution on the supply side from mobile. Mobile access does not support the features that consumers value in fixed access. Retail providers of fixed access are therefore not able to replace provision of fixed access services with a mobile access network.

Competition based on other fixed networks

5.92 A SSNIP by a hypothetical monopolist supplier may be rendered unprofitable if consumers are able to move to providers supplying exchange lines over LLU or cable.

5.93 We have seen above that a 5-10% increase in the price of wholesale exchange lines would be almost fully passed on to retail prices.

5.94 For consumers of residential analogue exchange lines, our market research indicates that a 10% retail price increase for line rental would result in 28% of consumers switching their landline provider. Of those saying they would switch:

- most of them would switch both lines and calls (so that the monopolist would also lose call revenue);

- the majority would switch to Virgin Media (on its own cable network) or Sky (which currently uses a wholesale input from BT): 27% said they would switch to Virgin Media and 38% to Sky. These figures, however, assume that Sky's prices would remain the same. But since a 10% SSNIP in wholesale exchange lines would also imply a near 10% increase in Sky's line rental, the proportion of respondents that would then switch to Sky is likely to be much lower than the reported 38%.

5.95 In reaction to the increase in the retail prices of retailers that use wholesale inputs from the monopolist, more customers may choose to switch to providers using their own supply, such as cable and LLU. In addition, without wholesale regulation, retailers using wholesale inputs from the monopolist (such as Sky) may have chosen to deploy LLU (we discuss this option below). Therefore, the 28% of consumers that stated an intention to switch may have the same intention even if all the retailers that rely on wholesale inputs from the monopolist increase their prices. However, the reduction in BT's demand for wholesale exchange lines is likely to fall by much less than 28% given that:

- cable and LLU have limited geographic footprint;
- cable and LLU do not currently provide narrowband only services, since there is no narrowband only LLU product available from Openreach; and
- whilst 28% of consumers identified an intention to switch, actual switching tends to be lower than stated intentions to switch.

5.96 The above suggests that consumers that would switch to CPs using non-BT input is likely to be much lower than the stated 28%³⁶.

5.97 For business consumers, CPs using cable and LLU offer business analogue exchange line services. However, they are mainly focused on residential markets.

5.98 We therefore believe that a 5-10% SSNIP by the hypothetical monopolist may be profitable in the analogue exchange lines market.

5.99 There are fewer alternatives for ISDN2 consumers. Suppliers of LLU do not generally provide ISDN2 services. Cable and LLU providers are largely focused on residential users. There are therefore very few alternatives for users of ISDN2. We believe that a SSNIP is likely to be profitable in the business analogue and ISDN2 markets.

5.100 In the ISDN30 market there are more options that may provide substitutes if the hypothetical monopolist were to increase its prices. Self-provide by CPs physically building out their networks, or provision using leased lines, are more prevalent. However, these alternatives are likely to be less effective for consumers further away from alternative providers' networks, or users with lower levels of utilisation.

5.101 The ability of consumers to switch supply will also depend on how the cost of purchasing new equipment compares with the forward-looking cost of operating the existing customer premises equipment.

³⁶ Even assuming that Sky could serve all its customers using LLU, there would be 65% (27%+38%) among intended switchers that would switch to CPs using non-BT input (assuming others are switching to suppliers using BT input). This implies that BT would lose 18% (28% x 65%) of its wholesale demand. This figure would still need to be substantially discounted to account for the geographic coverage of LLU and the fact that it is stated consumers intentions.

5.102 We therefore believe that a 5-10% SSNIP by the hypothetical monopolist may be profitable in the ISDN30 lines market.

Direct Constraints

5.103 The main providers of exchange lines on the fixed network in the UK are BT, KCOM, Virgin Media, CPW, Cable & Wireless and providers focused on supplying business consumers that also provide exchange lines via self-supply.

5.104 Below we consider whether these providers can act as effective direct constraints in the provision of wholesale exchange lines.

Fixed versus mobile

5.105 There is limited direct substitution on the supply side from mobile. Again, as for the indirect constraints discussed above, this is because mobile access does not support the features that consumers value in fixed access.

Alternate fixed networks

5.106 BT is currently the main provider of wholesale exchange lines, although in the absence of wholesale regulation it is not clear that BT would have the incentive to provide such a product. Other CPs that provide exchange lines tend to provide it for the exclusive use of their retail arm. C&W provides wholesale exchange lines via its LLU deployment. Of these providers, only BT has a network capable of providing wholesale exchange lines nationally.

5.107 Again, for the purposes of this analysis, we take the hypothetical monopolist supplier's network to be a traditional PSTN with full national coverage.

5.108 If this hypothetical monopolist were to attempt to increase the price of wholesale exchange lines by 5-10% above the competitive price the only direct substitution possibility available to a CP requiring wholesale exchange lines would be either through direct access or by using LLU. This LLU may either be their own or that provided by another CP. However such investments would represent a major strategic decision for a firm involving substantial sunk costs and time.

5.109 Both LLU and direct access will have limited geographic reach and LLU may not be suitable for customers with narrowband only lines or who take narrowband and broadband from different CPs. Currently, only C&W offers wholesale exchange lines over LLU (with small volumes in comparison to the whole market). CPW and recently, Tiscali, offer retail narrowband services over LLU. Sky has announced its intention to move to a fully unbundled model³⁷. Other retail providers of exchange lines and or calls may also move to LLU as competition in the retail market for calls intensifies.

5.110 Currently, provision of wholesale exchange lines by other CPs is limited. If a hypothetical monopolist of wholesale exchange lines increased its prices by 5-10%, LLU providers (other than C&W which already has a wholesale offer) could provide wholesale exchange lines in the areas they are active in. Since the infrastructure to

³⁷ *BRITISH SKY BROADCASTING GROUP PLC: Results for the half year ended 31 December 2008*
<http://corporate.sky.com/documents/0b404e8a89164db186e8b847ced3a11c/221aa60ce8cc4089a7eb126b6c09c7e1>

support exchange lines is in place to support their retail businesses, significant additional investment is unlikely to be needed to develop a wholesale product.

- 5.111 LLU providers have a limited geographical coverage. However in the event of a uniform nationwide SSNIP by a hypothetical monopolist, retail providers could switch their demand in those areas covered by LLU. This may be sufficient to render the SSNIP unprofitable in those areas but not in the other areas where no competing alternatives exist.
- 5.112 A similar argument exists for alternate provision via cable where Virgin Media has deployed its network.
- 5.113 In conclusion, direct substitution possibilities have been, to date, unlikely to be either sufficiently strong or sufficiently timely to impose anything other than a weak competitive constraint. This, however, does not necessarily imply that an unregulated monopolist would be able to profitably implement a SSNIP everywhere if it increased prices uniformly. In effect, as competition in the retail market for calls intensifies and retail providers seek alternatives to cut their costs, including moving to LLU (as announced by Sky), the profitability of a uniform SSNIP by a monopolist is likely to reduce (even if the hypothetical monopolist would still be able to profitably raise prices in those areas not covered by cable and LLU).
- 5.114 Furthermore, the threat of customers making purchasing decisions (e.g. moving to LLU) that may not be reversed in response to BT reducing its prices may act as a constraint even if these decisions would concern only a limited part of the UK as long as BT adopts a policy of national prices.

Business vs residential

Demand-side substitution

- 5.115 At the retail level, we have concluded that residential and business access are separate markets. This however does not hold true at the wholesale level. The wholesale products for residential and business analogue lines are sufficiently similar to be regarded as belonging to the same product market. In the previous market review, these markets were found to be separate. Since then, the products supplied have become less differentiated, with service levels now the key difference between residential and business users, although residential users can choose to pay to receive higher service levels.
- 5.116 Openreach offers two types of product at the wholesale level: a “Basic” line and a Premium line at prices of £100.68 and £110 respectively per annum³⁸. The main difference is based on service levels. The basic product includes an entry in the residential phonebook only, whereas premium allows the choice between residential and business. However, we do not consider this to be a significant difference, and there is evidence that some businesses (generally small companies) buy the residential product. If a hypothetical monopolist offering two similar products to BT’s would increase the price of the basic product by 5-10%, it is very likely that there would be enough substitution to the premium line so as to make the SSNIP unprofitable. With a 10% increase, the basic product would cost more than the premium product.

³⁸ Prices as at January 2009 from the Openreach website (www.openreach.co.uk)

Supply-side substitution

- 5.117 As discussed previously, there are substantial fixed costs associated with supplying fixed exchange lines. Deploying a network all the way to a customer premises is prohibitively expensive except for large businesses close to the network footprint of the CP. LLU allows CPs to expand their footprint without incurring all the costs of building a direct access network although the costs of deploying LLU for the support of narrowband services are still substantial. Whilst LLU has, to date, primarily been deployed to support residential service, once a network is in place to supply exchange lines to retailers selling to residential users, the same network can also be used to supply exchange lines to retailers selling to business users so that there is the possibility of supply-side substitution at the wholesale level.

Separate markets for analogue, ISDN2 and ISDN30 lines*Demand-side substitution*

- 5.118 As mentioned earlier, these markets are separate at the retail level because each product offers different features from the other ones. Because wholesale demand is derived from retail demand, it would be impossible for retail suppliers of, for example, ISDN2 to switch their wholesale demand for ISDN2 to analogue or ISDN30 lines in response to an increase in the wholesale price of ISDN2. This is because retail customers who demand ISDN2 lines do not view analogue or ISDN30 as substitutes to ISDN2.

Supply-side substitution

- 5.119 Supply-side substitution between the different types of access services is limited due to the need to incur significant sunk costs in building or upgrading a network.

Forward look

- 5.120 In defining these wholesale markets, Ofcom has considered the likelihood of relevant competitive and technical developments that might affect these market definitions. These concern mainly the increased fixed/mobile convergence, the deployment of NGN and NGA, VoIP, and the likely development of existing technologies.
- 5.121 As previously stated, our market research indicates that for access, retail customers consider fixed and mobile to be complements rather than substitutes. The primary reasons are security and the requirement for fixed broadband. We expect that over the next few years, consumers will attain higher broadband speeds via fixed access than those achievable via mobile networks. Our research also indicates that mobile-only households have chosen not to have a fixed line for reasons that are only to a limited extent affected by the relative prices of a fixed line and a mobile phone line (e.g., live in rented accommodation, students).
- 5.122 There is the possibility that in the future fixed and mobile services may converge (Fixed-Mobile Convergence). In particular, deployment of in-house (or in-office) mobile technology such as femtocells and Generic Access Network (GAN) solutions may lead to greater use of mobile devices in locations where consumers have traditionally used fixed services. However, both of these technologies provide access in the home/office via fixed broadband access. Therefore, these types of convergence drive use of fixed broadband access which in turn requires fixed narrowband access. It is also unclear that these technologies can meet other needs identified by consumers, such as security and having a single, geographic number for

the house or business. Whilst these services may develop over the next three to four years, we do not expect this development to drive significant reduction in the demand for fixed narrowband access.

5.123 In the context of exchange lines, NGN deployment across the industry may have three main effects:

- The NGN access device, the MSAN, allows both narrowband and broadband services to be provided. This may lead to a greater use of LLU for the provision of narrowband services than is currently experienced today. We have discussed this above;
- The deployment of MSANs, along with backhaul with higher bandwidth, may lead to increased broadband speeds over fixed networks reinforcing consumer demand for fixed access; and
- The deployment of new technology in mobile networks may lead to increased broadband speeds being available over mobile networks, reducing the demand for fixed access.

5.124 Taking the above points together, we consider that an increase in mobile broadband access speeds during the period considered in this review are unlikely to significantly reduce the requirements that consumers have for fixed access (either due to broadband requirements or other reasons).

5.125 Next Generation Access deployments may also impact narrowband access requirements, since this may affect the way consumers access fixed broadband services. NGA deployments have been announced by Virgin Media and BT. Whilst a narrowband access contract is not a pre-requisite of Virgin Media's super-fast broadband offer, other reasons identified by market research indicate to Ofcom that customers taking this offer may keep their narrowband access for other purposes. The Virgin Media service has been launched recently and will be available in the cable network areas. BT is trialling its NGA FTTP offer in Ebbsfleet. The percentage of the market covered by BT's proposed FTTP deployment is relatively small compared to its FTTC deployment and the total market. Therefore we believe that the use of current access technologies will continue to be significant over the next four years.

5.126 Consumers may also use voice over Internet Protocol (VoIP) technology. This may either be a managed service (such as BT's Broadband Talk package) or a service that uses the Internet (such as Skype). In both cases, broadband is required for the service to work, and this will drive the demand for narrowband access.

5.127 Regarding existing technologies, Ofcom considers that these will be subject to the following developments:

- ISDN – based on CPs' submissions, we consider that the ISDN30 market will remain relatively flat. The ISDN2 market is likely to slightly decline.
- Analogue access will continue to be provided. There may be an increase in the number of wholesale offers available if the number of CPs deploying narrowband service over LLU was to increase.
- Leased lines such as PPCs will continue to be used to provide ISDN30 lines.

5.128 Ofcom considers that these developments will not affect its proposed market definition during the period covered by the review. Ofcom will continue to monitor each of these potential market developments.

Geographic markets

5.129 Ofcom recognises that there are some variations in the competitive conditions due to the presence of cable and/or LLU in some parts of the UK. While there may be some difference in competitive conditions between areas with and without cable, and with and without LLU, competing CPs are unable to offer a national service without having access to BT's network. Since competition on the supply side of the market takes place at the national level with uniform pricing and national marketing campaigns, it seems appropriate to define a single national market within the UK excluding Hull.

5.130 We have discussed above that deployment of LLU will occur on a geographic basis. However, the deployment of this LLU does not necessarily lead to a definition of geographic markets. The following may limit the impact of LLU in creating sufficiently different competitive conditions to conclude there are separate geographic markets:

- even when a CP has deployed LLU, it CP may be reliant on BT, since there is currently no narrowband only LLU offer. Therefore, for customers wishing to take narrowband from one CP but broadband from another, the narrowband service needs to be provided on the BT network; and
- there are 40% of customers in the UK that currently do not take broadband service. Whilst technically these customers can be supplied narrowband services over LLU (the LLU CP could use full LLU but not provide a broadband service), the focus of LLU based competition has been on broadband or on bundling narrowband and broadband together, but not on providing narrowband only offers. Therefore, again, consumers that do not require broadband are likely to have to be served on the BT network even if they are in an area where LLU has been deployed.

Initial conclusions on the wholesale markets

5.131 In the discussions above we have proposed alternate fixed networks may be in the same market for the supply of exchange lines as the hypothetical monopolist network we have considered. Had we started with other networks (e.g. a cable network) as the focal product, we would have ended with a market definition that is wider (cable and other fixed networks) given that BT has a national network and is able to constrain the price of cable-based exchange lines everywhere in the UK. In addition, we expect LLU in particular may become an increasing constraint on other providers of exchange lines during the forward look period.

5.132 As said in Section 4, market definition is not an end in itself but a means to assessing effective competition for the purposes of ex-ante regulation. Given that BT's market shares would still be substantial whether the market is defined to include or exclude cable and LLU, and given that BT constrains LLU and cable such that suppliers using these options cannot profitably raise prices, we consider that further analysis of the market definition would not provide further clarity.

5.133 We propose that the following markets include alternate fixed narrowband networks such as direct access (via cable or PPC and self-provided fibre for larger sites) and LLU. In our SMP analysis we explain that a narrower market definition would not result in a change to our proposals of SMP.

5.134 We propose the following wholesale fixed narrowband exchange line markets in the UK excluding the Hull Area:

- wholesale analogue exchange line services on a fixed narrowband network;
- wholesale ISDN2 exchange line services on a fixed narrowband network; and
- wholesale ISDN30 exchange line services on a fixed narrowband network.

5.135 We propose the following wholesale fixed narrowband exchange line markets in the Hull Area:

- wholesale analogue exchange line services on a fixed narrowband network;
- wholesale ISDN2 exchange line services on a fixed narrowband network; and
- wholesale ISDN30 exchange line services a fixed narrowband network.

5.136 Ofcom is of the view that these are the wholesale markets in relation to which it is appropriate to consider whether there is SMP.

Question 5.1: Do you agree with Ofcom's assessment that there are separate markets for analogue, ISDN2 and ISDN30 wholesale exchange lines and that there are separate geographic markets for the UK excluding the Hull Area and the Hull Area? If not, please explain why.

Market power assessment

Assessment of SMP in the UK excluding the Hull area

Market share analysis

5.137 We now present market share information for each of the wholesale fixed narrowband exchange line markets in the UK, excluding Hull.

Analogue lines

5.138 Market shares are presented in Table 5.4 below³⁹.

Table 5.4: Analogue percentage share of lines

Market share	2003	2004	2005	2006	2007
BT	85%	85%	85%	84%	81%
Virgin Media	15%	15%	15%	15%	15%
LLU (MPF ⁴⁰)	0%	0%	0%	1%	4%

Source: Ofcom (based on CPs data)

5.139 Table 5.4 indicates that whilst BT's market share of wholesale analogue exchange lines is declining slowly, it still provides the vast majority of these lines. Virgin Media's market share has stayed flat since the last review. Growth has been mainly from LLU

³⁹ Obviously, if we take a narrower market definition and only consider networks that can provide a national service, BT will have 100% market share as it is the only CP with full geographic coverage.

⁴⁰ We have only included Metallic Path Facility (MPF) lines as these are the only LLU lines that support narrowband service

providers. Whilst LLU continues to grow, in 2008 this reached around 1.6 million lines, approximately 6% of the total lines. Therefore, this growth is unlikely to have significantly reduced BT's share in 2008 from that shown in the previous years.

ISDN2 lines

5.140 The business ISDN2 market is currently comprised of around 1.4 million channels in total. In this market, BT possesses a market share in excess of 99%⁴¹. This situation has endured throughout the history of the business ISDN2 market. Due to the development of broadband, residential ISDN2 has disappeared from the market⁴².

ISDN 30 lines

5.141 In our previous market review we showed ISDN30 market shares for the period 1999 to 2003. These shares are shown again in Table 5.5 below:

Table 5.5: ISDN30 percentage share of channels in last market review

Market share	Q2 99/00	Q2 00/01	Q2 01/02	Q2 02/03
BT	67%	66%	70%	72%
C&W	16%	15%	13%	12%
NTL	1%	1%	1%	2%
Telewest	0%	1%	0%	3%
Others	16%	17%	16%	11%

Source: Oftel

5.142 Since then, there has been consolidation between several of the major providers of ISDN30 services including C&W and Energis (and now Thus although data was provided separately by Thus) and NTL and Telewest. Because of these acquisitions, several respondents to Ofcom's request for market data were unable to provide a complete data set back to 2003. In addition, other providers of ISDN30 services were not able to provide data for the full period requested. Table 5.6 shows market share data based on information provided by CPs for 2007. This data is consistent with the market shares found in the previous market review. The number of channels is also consistent: in 2003 we stated that the market size was around 3 million channels. Our 2007 data shows this to be approximately 3.3 million lines.

Table 5.6: Current ISDN30 percentage share of channels

Market share	2007
BT	67%
C&W	12%
Virgin Media	8%
Others	13%
Total channels	3.3 mil

Source: Ofcom (based on Ofcom Market Research and CP data)

5.143 Based on data gathered for the 2004-2006 period together with the data presented in Table 5.5 and Table 5.6 we believe BT's market share has remained consistently above 60%.

⁴¹ Source: Ofcom (based on CP data)

⁴² As at Mar 2008, KCOM had 98 lines and BT had 663 lines, down from over 17,000 at Mar 2007.

5.144 The Competition Act 1998 guidelines and a European Court of Justice ruling states that dominance can be presumed in the absence of evidence to the contrary if an undertaking has a market share persistently above 50% (case C-62/86, AKZO Chemie BV v Commission [1993] 5 CMLR 215).

5.145 These market shares lead to a presumption of dominance, particularly given the limited number of competitors and the level of penetration that they have achieved despite competing with BT for a number of years. However, other key factors affecting competitiveness in this market must also be considered before concluding that a position of dominance exists. We do this in the next few sections.

Barriers to entry

5.146 The considerable investment required to set up an access network presents a substantial barrier to entry for the wholesale supply of analogue exchange lines. LLU was imposed as a remedy in the Wholesale Local Access (WLA) market to provide access to BT's access network for providers of narrowband and broadband services. While the existence of LLU reduces the cost of deploying products as it allows a CP to use BT's existing infrastructure, the investment required to deploy narrowband and broadband services over LLU remains substantial.

5.147 There has been significant deployment of LLU. In the context of narrowband services this has been limited by two factors:

- LLU deployment needs to occur at each BT Main Distribution Frame (MDF) site, of which there are 5,587, in order to be able to offer a nationwide service. Deployment to date has focused on the largest of these; and
- the majority of LLU deployment has been based on providing a broadband service. Narrowband services are only supported by a small number of CPs over their LLU deployment. The underlying LLU product is different (Shared Metallic Path Facility (SMPF) for broadband only versus Metallic Path Facility (MPF) for a combined narrowband plus broadband service). A CP supporting a narrowband product over LLU would also need to replicate the line features traditionally provided by the PSTN network. Therefore, migrating from broadband only to narrowband plus broadband service would potentially require significant capital expenditure and technological development.

5.148 Table 5.7 shows that there remains 16.4% of exchange lines that are not covered by LLU. In addition, it shows all LLU deployments. LLU capable of supporting broadband as well as narrowband may not be available in every MDF site⁴³, although the largest provider of narrowband services over LLU, CPW, also has one of the highest overall deployments of LLU.

Table 5.7: LLU coverage⁴⁴

Market	Description	Number	Coverage
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⁴³ In the wholesale broadband access market review we referred to local exchanges. For clarity, we refer to MDF sites for the locations where LLU equipment is located. We reserve reference to "local exchange" for switching of narrowband traffic in the local layer. However, it is common to use local exchange for both purposes.

⁴⁴ Table A2.7 in the *Review of the wholesale broadband access markets*, 21 May 2008. (<http://www.ofcom.org.uk/consult/condocs/wbamr07/statement/>)

		of MDF sites	
Hull Area	Those geographic areas covered by exchanges where KCOM is the only operator	14	0.7%
Market 1	Those geographic areas covered by exchanges where BT is the only operator	3720	16.4%
Market 2	Those geographic areas covered by exchanges where there are 2 or 3 Principal Operators present (actual or forecast) AND exchanges where there are forecast to be 4 or more Principal Operators but where the exchange serves less than 10,000 premises	670	13.7%
Market 3	Those geographic areas covered by exchanges where there are currently 4 or more Principal Operators present AND exchanges where there are forecast to be 4 or more Principal Operators but where the exchange serves 10,000 or more premises	1197	69.2%

Source: Ofcom

5.149 Other than CPW, the majority of CPs have deployed broadband-only services. Therefore, in Table 5.7 above, the coverage shown for Market 3 with 4 or more principal operators (including BT) is for broadband services. Whilst some CPs in addition to CPW have deployed, or are in the process of deploying, narrowband over LLU, Ofcom's view is that it is currently unlikely that there is a significant number of customer premises where there are multiple suppliers of narrowband services using their own infrastructure.

5.150 There are two further constraints to consider in relation to LLU:

- LLU deployment has mainly focused on providing retail services. To date, only C&W offers wholesale narrowband services over LLU; and
- where CPs have deployed LLU capable of supporting narrowband services, this has been to support analogue exchange lines, not ISDN.

5.151 In the ISDN30 market, it is possible for competing suppliers to enter the market by either:

- building their own infrastructure to the customer. However, this approach is sensitive to the distance between the customer and the CP's nearest network access point; or
- using another wholesale input, namely partial private circuits ("PPCs"). PPCs are likely to be less expensive than own-build infrastructure but they are susceptible to the same constraints, in particular they are distance sensitive.

5.152 Own-infrastructure build and PPCs involve an initial (sunk) cost of connection which would need to be recovered over the life of the retail contract. This may further restrict the deployment of these alternatives to compete with ISDN30. There would need to be sufficient traffic to justify deployment of PPCs or infrastructure build. This is likely to mean these are not viable alternatives for many sites with lower expected utilisation.

5.153 Finally, competition is likely to focus on businesses with lower switching costs (switching costs depend among other things on how the cost of purchasing alternative equipment compares with the forward-looking costs of operating the existing customer premise equipment).

Economies of scale and scope

5.154 Economies of scale are of critical relevance to the exchange lines market. Because an exchange connects a limited number of customers (especially in some areas), an entrant would need to win a large market share from incumbents in order for his investment to be profitable, be it at the retail or wholesale level.

5.155 However, as well as providing a wholesale input for its own retail services, a CP can improve its business case by providing wholesale services over its LLU deployment to other CPs. Whilst CPW does not currently provide a wholesale offer, it could do so. Sky has also recently announced that it would migrate a significant proportion of its retail customer base to LLU over the next twelve months. Sky could also choose to supply a wholesale product once deployment for its retail operations is in place.

5.156 BT enjoys significant economies of scope in the wholesale exchange line markets due mainly to its duct infrastructure that support a range of other communication services. Both the economies of scale and scope further strengthen entry barriers.

Countervailing buyer power

5.157 Potential future purchasers of BT's wholesale analogue exchange line services are unlikely to possess sufficient countervailing buyer power to undermine BT's market power given the limited availability of alternative suppliers.

Pricing and profitability

5.158 The prices of BT's wholesale analogue exchange lines are currently set by regulation which requires them to be cost oriented and to comply with a charge ceiling. Current regulated prices are £25.17 and £27.50 per quarter for residential and business analogue lines respectively. BT's wholesale ISDN2 exchange lines are currently subject to a cost orientation obligation. Prices have declined from £35.94 per channel per quarter in 2003 to £27.50 per channel per quarter currently.

5.159 Unlike for analogue and ISDN2 lines, ISDN30 lines are currently not subject to a cost-orientation obligation. Since the last review BT's prices for wholesale ISDN30 exchange lines have remained the same (£35.25 per channel per quarter). However, BT's regulatory accounts show that between 2004 and 2008, both operating profits and return on sales (sales – operating cost / sales) have more than doubled. Operating profits have risen from £75m to £190m and return on sales also rose from 27% to 56%. The Return on Capital Employed has increased five-fold during the same period, increasing from 13% in 2004 to 64% in 2008. These figures are detailed in Table 5.8 below:

Table 5.8: BT profitability analysis for ISDN30 based on its regulatory accounts

	2004	2005	2006	2007	2008
Sales (£m)	281	325	325	334	339

Sales (internal volume, 000s) ⁴⁵			1,997	1,938	1,846
Sales (external volume, 000s)			181	312	458
Operating costs (£m)	206	180	191	156	149
Operating profit (£m)	75	145	134	178	190
Capital employed (£m)	566	473	398	336	295
Return on sales	27%	45%	41%	53%	56%
Return on capital employed	13%	31%	34%	53%	64%

Source: BT Regulatory Accounts

- 5.160 At the time of the previous review, Oftel believed that PPCs or own-build by CPs may have been a viable means for some providers to deliver ISDN30 competitively to certain end-users and that this would constrain BT's prices. Based on this, and a belief that the ISDN30 market may decline over the period of the last review, Oftel decided not to impose a cost orientation remedy on the wholesale supply of ISDN30.
- 5.161 The figures in Table 5.8, combined with BT's large market share, suggest that the forecast supply side alternatives have not materialised as predicted. Furthermore, there is no indication at this stage that these competitive constraints will materially change during the review period.

Summary of assessment of SMP in the UK excluding the Hull Area

- 5.162 Based on the analysis above, in particular BT's high market share and the high barriers to entry, Ofcom proposes that BT has SMP in the UK excluding the Hull Area in the following markets:
- wholesale analogue exchange lines on a fixed narrowband network;
 - wholesale ISDN2 exchange lines on a fixed narrowband network; and
 - wholesale ISDN30 exchange lines on a fixed narrowband network.

Assessment of SMP in the Hull Area

Market shares

- 5.163 KCOM is the only supplier of retail analogue lines. It therefore has 100 % market share of exchange analogue lines at the wholesale level, which creates a presumption of dominance. For business customers in the Hull Area, there has been some entry into the ISDN2 and ISDN30 access markets, because of direct connection from other CPs via, in particular, PPCs and radio links. This, however, does not appear to be at the level that would prevent KCOM from setting prices above the competitive level.
- 5.164 An operator that is competing with KCOM in the Hull Area would need to incur significant sunk costs to develop a fixed narrowband access network. As set out above, there has been no entry into the residential access market.

⁴⁵ BT's regulated accounts do not show volume of channels prior to 2006

Ease of market entry

- 5.165 The barriers to entry in the exchange line markets in the Hull Area are similar to those in the exchange line markets in the rest of the UK. To enter this market in any significant way would require one of two approaches:
- build a direct access network to premises in the Hull Area; or
 - deploy a solution based on LLU within the Hull Area.
- 5.166 A major entry barrier is sunk costs. Where the recovery of the investment needed for such a build is uncertain, it will deter entry. In the two options identified above, substantial up-front capital expenditure is required. The cost of building a new access network would be at least as expensive as in a similar city in the rest of the UK, since a very significant proportion of the cost lies in the initial laying of the network.
- 5.167 In the case of LLU, there would be a high initial cost in establishing the systems required to interface to KCOM to manage an LLU product in Hull. In addition there would also be the cost of equipment and the payment of KCOM for accommodation services.
- 5.168 The Hull Area has 205,000 lines compared to 33 million⁴⁶ in the rest of the UK. This means that a new entrant has to recover the sunk costs from a smaller number of consumers making any offer unattractive. This exacerbates the problem of cost recovery of investment for a new entrant when compared to the incumbent.
- 5.169 There is no cable deployment in Hull and no CP has deployed LLU. This indicates that barriers to entry are at least as significant, or even more significant, than in the rest of the UK.
- 5.170 An exception to this could be to business customers where there has been some entry into the exchange line services market via PPC, leased lines tails and radio links. However, market entry has been limited to date.

Other criteria

- 5.171 Whilst the relevant narrowband access markets in the Hull Area are much smaller than in the rest of the UK, the assessment of the other SMP criteria as applied above to BT in the rest of the UK equally relate to KCOM and the Hull Area. This suggests that KCOM would not be constrained in its pricing of these services.

Summary of assessment of SMP in the Hull Area

- 5.172 Based on the analysis above, Ofcom proposes that KCOM has SMP in the Hull Area in the following markets:
- wholesale analogue exchange lines on a fixed narrowband network;
 - wholesale ISDN2 exchange lines on a fixed narrowband network; and
 - wholesale ISDN30 exchange lines on a fixed narrowband network.

⁴⁶ These figures include residential and business analogue lines and ISDN channels.

Forward look

5.173 As set out under the consideration of the forward look in the market definition section, there are a number of developments that could affect the level of SMP in the fixed narrowband exchange line markets:

- Fixed-Mobile Convergence: FMC drives the requirement for broadband access. In general, narrowband access is required to provide broadband access. In addition, consumers identify features of narrowband access (such as security) as reasons for keeping narrowband when other options are available;
- NGN: NGNs (for example BT's 21CN), leave the access infrastructure the same as current network deployments; and
- NGA: some NGA deployments (FTTC) leave in place the copper access for narrowband services. In terms of BT's announced NGA deployments, FTTC makes up the larger portion. FTTH, which does not use copper access, is forecast to have much smaller volumes. Virgin Media's NGA offer will cover the cable areas (50% of the population) and does not need a copper access to support it, although consumers may still value a narrowband access connection for reasons such as security and having a single connection to the home/business.

5.174 After considering these possible future developments, Ofcom considers that the assessments of market power and the findings of SMP in the relevant markets is unlikely to change in the period covered by the review given BT's and KCOM's high market share and the rate of deployment of alternative infrastructure solutions.

Question 5.2: Do you agree with Ofcom's assessment that BT has SMP in analogue, ISDN2 and ISDN30 wholesale exchange lines in the UK excluding the Hull Area? If not, please explain why.

Question 5.3: Do you agree with Ofcom's assessment that KCOM has SMP in analogue, ISDN2 and ISDN30 wholesale exchange lines in the Hull Area? If not, please explain why.

Question 5.4: Do you agree with Ofcom's analysis of future developments that may affect these assessments? If not, please explain why.

Relationship between the wholesale market definition and the Commission's Recommendation on product and service markets

5.175 In Section 4 we have explained our approach to the market review process and that we will take utmost account of the Commission's Recommendation on relevant services and product markets.

5.176 The Commission has, in its Recommendation defined the following as a relevant market in accordance with Article 15(3) of the Framework Directive:

Wholesale (physical) network infrastructure access (including shared or fully unbundled access) at a fixed location. (market 4).

5.177 Ofcom proposed to define markets based upon exchange lines. As the Commission's definition makes reference to unbundled access, it does not include the following, proposed exchange line markets:

- wholesale analogue exchange line services;
- wholesale ISDN2 exchange line services; and
- wholesale ISDN30 exchange line services.

5.178 Ofcom considers that it is necessary to define narrowband wholesale exchange line markets in order to examine the competitive conditions present and consider appropriate regulatory remedies. This approach remains consistent with our current definition of these markets.

5.179 Ofcom has, in proposing these market definitions, given careful consideration to the three criteria set out in the EM discussed at paragraph 4.25 above:

- Barriers to entry and to the development of competition;
- Dynamic aspects – no tendency towards competition; and
- Relative efficiency of competition law and complementary ex ante regulation.

5.180 In particular in considering the first two of the cumulative criteria, we have considered the barriers to entry at paragraph 5.146 to 5.153 and 5.165 to 5.170. We have discussed market share, economies of scale, countervailing buyer power and pricing and profitability at paragraphs 5.137 to 5.162 and 5.163 to 5.172, and are of the provisional view that the market dynamics are such that, for all three of the proposed exchange line markets in both of the geographic areas, that there is no tendency towards effective competition.

5.181 We have also assessed the third test, whether *ex post* competition law would be sufficient to adequately address the market failures concerned. Applying the considerations set out in Section 4, paragraphs 4.39 to 4.52, we believe that it would not be sufficient to rely upon competition law to address the issues that we have discussed above in relation to the identified exchange line markets.

5.182 We propose that, in relation to all three identified exchange line markets, the three criteria test, as set out in the Recommendation is met, and the imposition of appropriate ex ante regulation is necessary.

Remedies

5.183 Ofcom proposes to impose a number of remedies in the markets where BT and, separately, KCOM have SMP. These are discussed in the following sections of this consultation as outlined below.

5.184 We propose the following general remedies should be imposed on BT in the above three exchange lines markets in the UK excluding the Hull Area and on KCOM within the Hull Area:

- requirement to provide network access on reasonable request;
- requirement not to unduly discriminate;

- requirement to publish a reference offer;
- requirement to notify charges, terms and conditions;
- requirement to notify technical information;
- cost accounting; and
- accounting separation.

5.185 We also propose to impose the following obligations on BT and KCOM in the analogue exchange lines market and the ISDN2 exchange lines market:

- basis of charges.

5.186 These remedies are discussed in Section 11.

5.187 In addition, we propose the following remedies should be imposed on BT:

- transparency as to quality of service (discussed in Section 11);
- requests for new network access (discussed in Section 11);
- Obligation to provide Wholesale Line Rental (WLR). This is discussed in Section 13; and
- Charge control: we discuss the charge control to be imposed on BT for analogue exchange lines in Section 16.

5.188 Finally we include in this consultation options for price regulation in relation to ISDN30 exchange lines. This is discussed in Section 17.

Section 6

Call origination

Summary

6.1 In this section we discuss call origination. With regard to market definition, we propose that the relevant product market is:

- Wholesale call origination on a fixed narrowband network.

6.2 Call origination relates to the conveyance of all signals (including relevant control signals) originating on a customer's exchange line to the first point in the network where those signals can be accessed by another communications provider.

6.3 We also propose two separate geographical areas:

- The UK excluding the Hull Area; and
- The Hull Area.

6.4 With regard to SMP assessments, we propose that:

- BT has SMP in the market for call origination on a fixed network in the UK excluding the Hull Area; and
- KCOM has SMP in the market for call origination on a fixed network in the Hull Area.

6.5 We propose the following remedies as shown in Table 6.1:

Table 6.1: Summary of proposed remedies for call origination

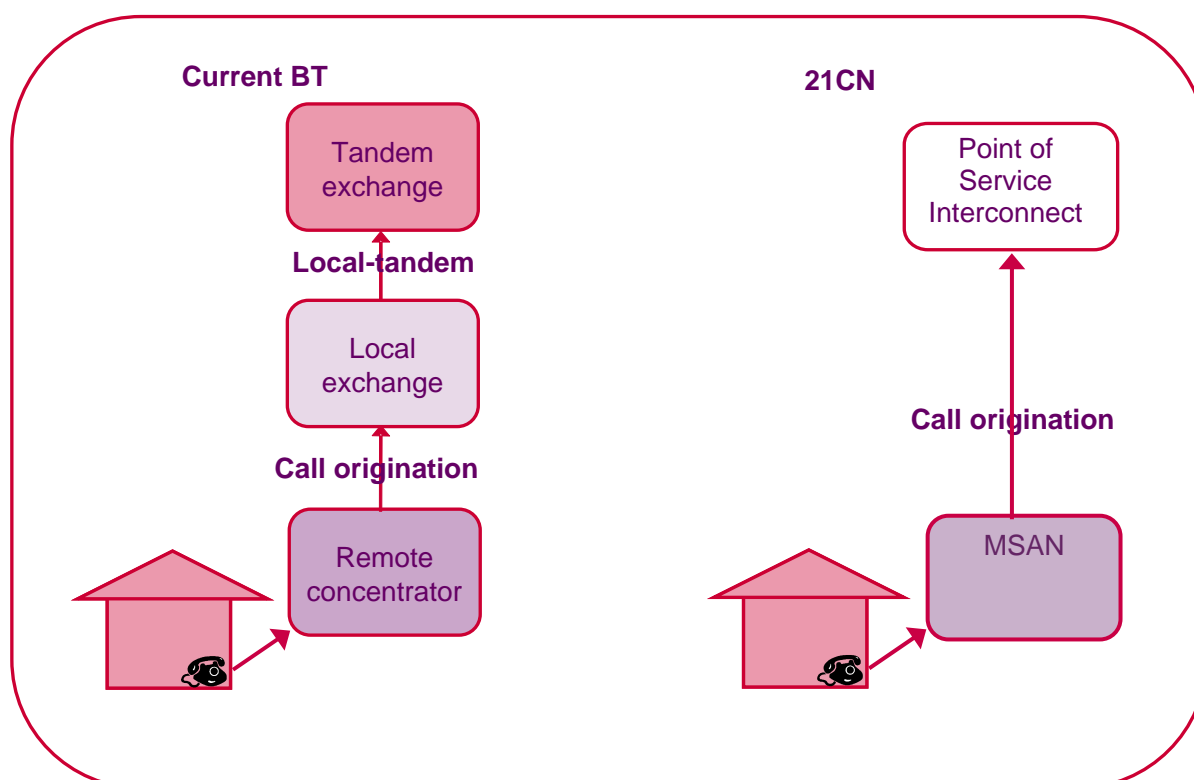
BT obligations	KCOM obligations
Requirement to provide network access on reasonable request	Requirement to provide network access on reasonable request
Requests for new network access	Requirement not to unduly discriminate
Requirement not to unduly discriminate	Basis of charges
Basis of charges	Requirement to publish a reference offer
Requirement to publish a reference offer	Requirement to notify charges, terms and conditions
Requirement to notify charges, terms and conditions	Requirement to notify technical information
Requirement to notify technical information	Cost accounting
Cost accounting	Accounting separation
Accounting separation	Obligation to provide CPS
Obligation to provide CPS	Obligation to provide IA
Obligation to provide IA	
NTS call origination	
Charge control	

Market definition

Relationship of wholesale products with the relevant retail products

- 6.6 The demand for wholesale call origination is derived from the retail calls market. However, retail calls are provided end-to-end. At the wholesale level, it is possible to segment the network into separate sections, based on the ability of other CPs to interconnect at different points in the network. This means several wholesale markets can be derived from the relevant retail markets to allow for competition to develop at different points in the network.
- 6.7 In the last market review, call origination was defined as the service that conveys calls originating on a customer's exchange line from the remote concentrator to and over the local exchange. The service was, however, defined differently in the Hull Area to take account of the fact that the KCOM network does not have separate local and tandem exchanges so that all originated calls used a call origination service that may include an element of local-tandem conveyance.
- 6.8 Since there are several different network topologies used to convey calls from customer's exchange lines and the deployment of next generation networks is likely to increase the possible network architecture options, a technology and architecture neutral definition of call origination is necessary.
- 6.9 Therefore, we now define call origination as:
- The conveyance of all signals (including relevant control signals) originating on a customer's exchange line to the first point in the network where those signals can be accessed by another communications provider.
- 6.10 This definition can be interpreted as shown in Figure 6.2 in reference to the current BT network and the proposed 21CN network architecture:

Figure 6.2: Call origination in BT's current and next generation network



- 6.11 Call origination can only be provided by the network to which the customer's exchange line is connected. Therefore, throughout this section, alternative supply of call origination, in the absence of wholesale regulation, also requires alternative supply of the exchange line.
- 6.12 This definition focuses the discussion that follows in this section on the delivery of traffic from the customer's exchange line to the first point where a CP can access this traffic, irrespective of how this is achieved.

Retail market competition

- 6.13 Call origination is a key input for any retailer that wishes to provide a calls product. Retailers either:
- self-supply using an upstream input (such as local loop unbundling or partial private circuits) or by building their own network out to the customer (direct access);
 - buy call origination separately – this requires them to build some network capability to accept the call origination traffic; or
 - purchase an end-to-end wholesale call product, i.e. sold as a bundle of origination, core network services and termination. In this instance the provider of the end-to-end wholesale call product is the customer of wholesale call origination.

Separate choice of access and calls

6.14 We have discussed that access and calls are separate markets in paragraphs 5.29 to 5.38.

Competition between mobile and fixed calls

6.15 While fixed and mobile access are largely complementary, the assessment of whether fixed and mobile calls belong to the same market is more complicated.

Residential users

6.16 With 79% of UK consumers having both mobile and fixed line access, most customers clearly have a degree of choice as to whether to make a call on their fixed line or mobile, although there are likely to be circumstances where customers can either only use a mobile or landline or where they have a strong preference for using one or the other. To the extent that fixed and mobile calls are substitutes we need to consider whether the competitive constraint imposed by mobile calls on fixed calls is sufficient for fixed and mobile calls to be placed in the same economic market.

6.17 The key results to emerge from our consumer survey are:

- For most types of call, other than international, consumers in general prefer to use their landline as they find it cheaper.
- However there are important differences between pay-as-you go and pay monthly mobile phone owners:
 - Pay monthly mobile phone customers often have a strong preference for using their mobile phone over landline. For example, 51% of pay monthly mobile phone users prefer to contact UK friends and family by mobile phone compared to 45% for landline;
 - Pay monthly mobile customers call much more frequently than other users;
 - Pay as you go mobile customers have much stronger preference for using landline and email and often rarely use their mobile phone;
 - For example, only 20% of pay as your go prefer to use their mobile phone to contact friends and family;

6.18 These results suggest that there is a great deal of variation in the way that consumers use their phones, with pay monthly mobile users twice as likely to prefer to use their mobile phone than pay as you go customers. While customer preferences for using different phone services can be informative about the extent to which fixed, mobile and email are complements or substitutes it does not provide any real information on the extent to which consumers are likely to substitute between fixed and mobile in response to changes in the relative prices of making a call.

6.19 The evidence from our market research survey suggests that customers in general have a clear idea of the relative cost of making certain types of calls from a fixed line or a mobile phone number. In particular, 68% of respondents regard fixed line local calls as cheaper than mobile calls to local numbers, 82% consider fixed to be cheaper for international calls, and 80% for non-geographic numbers. Off-network calls are also regarded as more expensive from a mobile phone (58% of

respondents). The only calls that are regarded as being cheaper from a mobile phone are on-net calls (59% regarding these calls as more expensive from a landline).

- 6.20 Our research shows that 26% of respondents would use their home phone less in response to a 10% increase in the cost of calls. When asked how they would reduce their usage, the respondents argued that they would make fewer calls (75%) and shorter calls (36%). Of the respondents making fewer calls, 46% planned to use their mobile phones more and 41% planned to use e-mail more.
- 6.21 A similar pattern emerges when respondents were asked to react to a hypothetical scenario where both the cost of the exchange line and the cost of calls increased by 10% with 20% responding that that they would use their land line phone less. Of those who stated that they would use their phone less, 45% noted that they would make more mobile calls.
- 6.22 Turning to actual consumer behaviour, we see that consumers are both making more calls, and choosing to make a higher proportion of those calls on mobile phones. Overall call volumes increased by 14% between 2002 and 2007, while mobiles share of call volumes increased from 24% to 40%.
- 6.23 Mobile call minutes increased by 47 billion minutes between 2002 and 2007, while fixed volumes declined by only 17 billion minutes. This suggests that while there is likely to be have been some substitution from fixed to mobile calls, most of the growth in mobile call volumes has been new calls.
- 6.24 Overall, the results of our survey suggest that mobile and landline calls are increasingly seen by consumers as substitutes and there is evidence that customers will respond to an increase in the relative price of landline calls by making more mobile calls. However, whether the extent of substitution is sufficiently strong to prevent a hypothetical monopoly supplier of fixed calls from raising prices by 5-10% above the competitive level is much less clear.

Business users

- 6.25 Business fixed call volumes declined by 58% between Q1 2003 and Q2 2008 despite there being only a 3% decline in the number of business analogue exchange lines. This decline is far more rapid than in the residential sector where volumes fell by only 10% over the same period.
- 6.26 The reduction in business call volumes is a reflection of a number of factors including increased competition from e-mail, voice over broadband, and mobile.
- 6.27 Unfortunately we do not have data of sufficient quality to determine the extent to which businesses have substituted to mobile. There are however some indications from our consumer survey that while there has been some fixed-mobile substitution, other factors, notably e-mail, may be more responsible for the decline in volumes.
- 6.28 For example, of the businesses in our sample, only 68% had mobile phones, and 13% blackberries. Of the total sample, 69% agreed with the statement "we use landline services where possible because they are cheaper than mobile." In contrast, only 14% of respondents indicated that they generally used mobile phones. Landline calls were also widely perceived to be cheaper than mobile calls apart from calls to mobile phones. For example, 70% believed that landline calls were cheapest for calls

to UK landlines, and 82% for international calls. There does not therefore appear to be widespread use of mobile phones for calls in our sample.

- 6.29 On-net calls to mobile phones were however perceived by 71% of respondents to be cheaper or the same cost as using a landlines, although the figure fell to 36% for off-net calls.
- 6.30 With calls to mobile numbers often being perceived as being cheaper using a mobile phone, we might expect business calls to mobile to have declined at a faster rate than for calls to geographic numbers where use of a mobile phone is considered to be relatively expensive. However, our survey results also show that calls to mobiles have actually declined at a significantly lower rate than calls to geographic numbers. The most likely explanation for this is that the call pattern of businesses has changed. The data does not however provide any suggestion that businesses are using mobile phones where mobile tariffs are cheaper than calling from a landline.

Competition between narrowband and broadband calls

- 6.31 Voice over broadband services can be provided in three main ways:
- **Managed Voice over Broadband:** The Internet Service Provider (ISP) that provides a customer's broadband service also provides a voice service over the broadband. The ISP controls the provision of the Voice Over Broadband service and can therefore make decisions to manage the quality of service end-to-end for calls between its voice over broadband customers. Calls to the narrowband PSTN network are handed via a media gateway. Prices may be similar to bundles in the narrowband market.
 - **Un-managed Voice over Broadband:** The call is made over the broadband service provided by the ISP but the ISP is unaware that it is voice over broadband traffic. A separate voice service provider (such as Skype) provides the service. The ISP simply hands the traffic off based on standard Internet routing. Therefore, quality of service is likely to be more variable than a managed service. The subscribers can make/receive calls to/from the PSTN via media gateways. Calling between customers subscribed to the service is likely to be free. Prices for calling to/from the PSTN may be reflective of narrowband service.
 - **Business Integrated Communications:** The business is provided a converged access connection to support all its traffic (voice, private data traffic and internet access). The provider of this integrated communications service will provide a managed voice service: the traffic will not be passed via the public Internet.

Residential users

- 6.32 Managed voice over broadband belongs to the calls markets because the product characteristics are similar to fixed narrowband products – high quality and reliability. This means that at least BT's main VoB product – BT Broadband Talk and similar products launched by other providers would also be included in the relevant market.
- 6.33 We do not currently include un-managed services in the market due to the more variable quality.

Business users

- 6.34 As in the residential market, managed voice over broadband and integrated business communications provide the same broad product characteristics of high quality and reliability as a fixed landline. We therefore include these in the wider retail market.

Fixed narrowband call types

Residential

- 6.35 We believe that there is now a single residential narrowband calls market (including geographic, fixed to mobile calls, international and other calls). The main reason for this is that consumers, with very limited exceptions, choose a single fixed line provider to meet all of their call type needs (geographic, calls to mobiles, international and others). They will therefore select their calls provider on the basis of which one provides the best value for money tariff given their particular pattern of calls.
- 6.36 To illustrate this, suppose a provider were to increase the price of calls to mobile numbers by 5-10%. A consumer who wished to switch to another provider of calls to mobile can only do so either by switching all of their call needs, or by purchasing additional fixed line access. The latter would tend to incur a substantial additional connection and rental cost and is unlikely to provide a realistic alternative for the consumer. Competition therefore takes place primarily on the basis of the overall value for money of the call package.
- 6.37 While retailers compete by offering a tariff package, we do however recognise that the competitive dynamics vary to some extent across different call types. For example, high volumes users of international calls will often chose to use a calling card or VoB, while the price of calls to mobile will be limited to a significant extent by the ability of consumers to use a mobile phone for the same call. In both of these examples there is some additional competition for consumers who have multiple forms of access.

Business

- 6.38 We believe that there is now likely to be a single narrowband business calls market which includes all call types, including geographic, fixed to mobile calls, international and other calls. As with the residential market, businesses generally choose to contract with a single fixed line calls provider and so competition takes place primarily on the basis of the overall value for money offered by the call tariff rather than on the price of any individual call type.
- 6.39 The increased popularity of business packages which offer very low or even zero priced calls in return for a higher monthly fee provides makes it even more likely that there will be a single business calls market. For example, BT's lowest priced business tariff, BT Business Plan, caps local and national geographic calls at 10p/hour, calls to mobile at 25p/hour, and many international calls at 10p or 20p/hour. Set up charges mean that the marginal cost of calling an additional minute for these types of calls is close to zero. There is thus very limited potential for businesses to be able to save money by using different call providers for different call types, particularly where there is a fixed monthly charge of purchasing a calling package from an alternative supplier.

Limited competition between residential and business markets

6.40 Competition between residential and business markets is similar to the discussion for the retail access market in Section 5, at paragraphs 5.56 to 5.63.

Retail geographic markets

6.41 Geographic variation in competition are similar to the discussion for the retail access market in Section 5, at paragraphs 5.64 to 5.65.

Summary of retail markets

6.42 Our market research therefore indicates that

- fixed access and calls are separate markets;
- mobile calls are (just) outside the market for fixed calls;
- managed voice over broadband (VoB) is in the market for calls;
- there is a single residential market for all call types;
- residential and business calls are in separate markets; and
- there is a single UK geographic market excluding Hull and a separate Hull geographic market.

Wholesale market definitions

6.43 To define the relevant economic wholesale market we start, as before, by considering whether it would be profitable for a hypothetical monopolist supplier of the service to impose a 5-10% increase in price. The result of this standard SSNIP test will depend on the extent of substitution possibilities for both immediate customers (direct competitive constraints) and final customers (indirect competitive constraints).

6.44 As for the market for exchange lines, we discuss a hypothetical monopolist provider of wholesale call origination on a fixed narrowband network with full geographic coverage based on providing access to customers via copper access (except large businesses where fibre will be used). This is akin to the BT network in the UK excluding Hull and the KCOM network in the Hull Area. We assess whether alternate solutions based on self-supply (for example via cable, LLU or mobile networks) may result in direct or indirect constraints.

6.45 We also first consider constraints at the retail level (indirect constraints) before discussing direct constraints at the wholesale level.

Indirect demand constraints from competition at the retail level

6.46 The channels of indirect substitution are similar to those described in the market for exchange lines. The proportion of any wholesale price increase that is passed on to retail consumers will be a key factor in the profitability of any SSNIP.

6.47 A 5-10% increase in the wholesale price of call origination would translate into a smaller price increase at the retail level. To provide an estimate of the importance of

wholesale call origination in the retail price we compare the regulated price of wholesale call origination with the price of a retail call. The regulated price of wholesale call origination is based on the costs of BT. It therefore provides a reasonable approximation of what prices would be in a competitive environment (since it would be expected that competition would drive prices to be reflective of the costs of an efficient provider).

6.48 Comparisons are not straightforward as:

- retail call packages increasingly offer a number of free calls so that the average price depends upon call volumes; and
- different retailers adopt different pricing strategies (e.g., providers may bundle calls with other services like broadband or TV, may offer or not to provide paper bills, may require or not a direct debit, may provide additional call associated services, etc.).

6.49 Ofcom estimates that the wholesale cost of call origination accounts for at most 30% of the price of a call, based on the following information and assumptions:

- average call packages prices (with unlimited calls) up to £5.49 per month⁴⁷;
- an average usage of between 250 and 350 minutes per month for minutes within the bundle, based on average usage per line for residential lines reported in Ofcom's telecommunications market data for Q3 2008⁴⁸ and data provided by BT and other CPs ; and
- Cost of wholesale call origination as per BT's rates⁴⁹ (see Table 6.3)

Table 6.3: BT charges for call origination

Daytime rate (ppm)	Evening rate (ppm)	Weekend rate (ppm)
0.2292	0.1049	0.0826

Source: BT Wholesale carrier price list

6.50 This implies that a 5-10% increase in wholesale call origination would imply at most an increase in the range of 1.5-3% at the retail level in the event that retailers would entirely pass the increase on to consumers. There are a number of reasons why retailers may choose to absorb some or all of any price increase. Firstly, retailers may not want to move away from a particular price point for marketing reasons, or because there are costs associated with informing customers of a modest price change. Secondly, it may not be profitable for a retailer to raise prices if this causes it to lose market share for associated/bundled services whose costs have not increased. Therefore, in the event of a wholesale call origination price increase, retail providers would be more likely to seek wholesale cost-effective alternatives. We discuss these in the direct constraints section below.

⁴⁷ Sky Talk Unlimited cost £5 per month to Sky TV customers. CPW offers its Talktalk Anytime for £5.49 per month. For Talktalk, the customer must take a TalkTalk line at £10.5 per month. For Sky, the customer is free to choose between a BT line (£10.27 per month) or a Sky line (£10 per month). Prices as at 23 February 2009 from providers' websites.

⁴⁸ http://www.ofcom.org.uk/research/cm/tables/q3_2008/

⁴⁹ There currently exists a price control based on cost orientation for call origination. Therefore BT's rates are a good proxy for its costs.

- 6.51 Given that the retailing market is highly differentiated with retailers offering bundled services, of which the cost of call origination represents a relatively modest part, we would not expect an increase in the price of call origination to be passed on to consumers in full.
- 6.52 We believe, for the reasons explained below, that:
- Indirect constraints arising from the existence of call origination on alternative fixed networks (i.e. cable and LLU) may be effective in rendering a 5-10% SSNIP by a hypothetical monopolist unprofitable depending on the assumptions made about the price increase; and
 - Indirect constraints arising from mobile calls would not be effective in rendering a 5-10% SSNIP by a hypothetical monopolist unprofitable.

Fixed calls vs mobile calls

- 6.53 At the retail level, we have established that mobile calls are just outside the market for fixed calls, which implies that a hypothetical monopolist for calls would be able to profitably implement a 5-10% increase in retail prices for fixed calls. Since we have concluded that a SSNIP at the wholesale level would result in a 1.5-3% increase at the retail level if passed on completely, it is clear that the SSNIP is likely to be profitable. We therefore conclude that, on the demand side, at the retail level mobile calls do not represent a sufficiently strong indirect constraint for call origination on a fixed narrowband network.

Competition based on other fixed networks

- 6.54 A SSNIP by a hypothetical monopolist supplier may be rendered unprofitable if consumers are able to move to suppliers that self-supply rather than purchase call origination from the hypothetical monopolist.
- 6.55 The retail market supports a significant degree of competition. Currently there is a commonality of pricing for calling plans at around £5 for “Anytime” types of plans:
- BT offers its Anytime plan for £4.85;
 - Sky offers an equivalent plan for £5; and
 - TalkTalk for £5.49⁵⁰.
- 6.56 Any CP that self-supplies call origination must be competitive with these price packages. Similarly, any CP that buys call origination must be able to purchase it at a price that allows it to compete in this market. Therefore any price increase at the retail level by a retailer is likely to lead to a loss of market share. However, as discussed above, in response to a SSNIP at the wholesale level it is unclear to what extent this will be passed through in retail prices.
- 6.57 As we discuss below all CPs rely on the ability to purchase wholesale call origination nationally at competitive prices to offer competitive retail calls. Their ability to self-supply is limited to the areas where they have their own networks. Therefore, an increase in wholesale prices by the hypothetical monopolist will impact all retailers.

⁵⁰ Prices as at 23 February from CP's websites.

Direct Constraints

- 6.58 The main providers of call origination on the fixed network in the UK are BT, KCOM, Virgin Media, CPW, and Cable & Wireless and several other providers focused on supplying business consumers that provide call origination via self-supply. Call origination on mobile networks is provided by each of the mobile network operators operating in the UK.
- 6.59 Below we consider whether these providers can act as effective direct constraints in the provision of wholesale call origination.

Fixed versus mobile

- 6.60 Substitution at the wholesale level between fixed and mobile would occur only if mobile networks could provide fixed call origination to fixed line operators selling narrowband calls at the retail level. This is not possible at the moment unless very significant investment is undertaken. We discuss the possibility of such developments in the forward look later in this section.

Alternate fixed networks

- 6.61 The discussion in the market for exchange lines in Section 5, paragraphs 5.106 to 5.114 also applies for call origination. We summarise the key points below.
- 6.62 If this hypothetical monopolist were to attempt to increase the price of wholesale call origination by 5-10% a CP could substitute through direct access (such as cable) or by using LLU. That is, both the exchange line and call origination would be substituted. This substitution may be onto the CPs' own network or that provided by another CP. However such investments would involve substantial sunk costs. Providers with networks in place already, who generally use these for their own retail operations, could provide wholesale offers relatively easily but, as for exchange lines, the geographic reach of these deployments will be limited.
- 6.63 Therefore, in the event of a uniform nationwide SSNIP by a hypothetical monopolist, retail providers may be able to switch their demand in those areas where alternative supply is available. This may be sufficient to render the SSNIP unprofitable in those areas but not in the other areas where no competing alternatives exist.
- 6.64 This substitution has, to date, been unlikely to be either sufficiently strong or sufficiently timely to impose anything other than a weak competitive constraint. This constraint may increase if more CPs choose to deploy LLU capable of providing narrowband services.
- 6.65 Furthermore, the threat of customers making purchasing decisions (e.g. moving to LLU) that may not be reversed in response to BT reducing its prices may act as a constraint even if these decisions would concern only a limited part of the UK, as long as BT adopts a policy of national prices.

Different calls types

- 6.66 On the supply side, as suppliers provide call origination services for a number of call types, suppliers of call origination face a common pricing constraint. The fact that call origination services face a common pricing constraint suggests that all call origination services should be treated as part of the same market.

- 6.67 Retail customers purchase either PSTN or ISDN service. This suggests that PSTN and ISDN call origination may be different markets, since an increase in price of PSTN calls is not likely to drive substitution with ISDN, since this would also require a move to an ISDN exchange line. In Section 5 we have proposed that analogue (PSTN) and ISDN exchange lines are in separate markets. However, in practice, costs and prices for PSTN and ISDN call origination do not differ. Hence, customers purchasing wholesale call origination services still face a common pricing constraint and hence both PSTN and ISDN call origination may be treated as part of the same wholesale market for call origination.
- 6.68 Ofcom therefore considers that wholesale call origination services constitute a single market.

Residential and Business call origination are within the same market

- 6.69 Wholesale call origination costs and charges to competing providers are the same, irrespective of whether they provide residential or business services. This means that, because of supply-side substitution, Ofcom considers that there is a single market for residential and business call origination.

Geographic markets

- 6.70 As for the exchange lines markets, there are some variations in the competitive conditions due to the presence of cable and/or LLU in some parts of the UK. Any such variation is limited:
- competition in voice services is currently based on uniform national pricing;
 - CPs are unable to offer a national geographic coverage service without having to rely on access to BT's network;
 - even where LLU deployment has occurred, a CP may be reliant on BT, since there is currently no narrowband only LLU offer (for example, CPW also uses WLR to provide its service). Therefore, any customer that wishes to take narrowband from one CP but broadband from another must take a narrowband service provided on the BT network; and
 - there are 40% of customers in the UK that currently do not take broadband service. Whilst, technically, these customers can be supplied narrowband services over LLU (the LLU CP could use full LLU but not provide a broadband service), the focus of LLU based competition has been on broadband or on bundling narrowband and broadband together, but not on providing narrowband only offers. Therefore, again, consumers that do not require broadband are likely to have to be served on the BT network even if they are in an area where LLU has been deployed.
- 6.71 Taken together, Ofcom considers that these result in sufficiently homogenous conditions to define a single market for the UK outside Hull.
- 6.72 We propose that there is a separate market within the Hull Area.

Forward Look

- 6.73 Ofcom does not consider that there will be developments in the market that will affect its proposed market definition during the period covered by the review. Mobile calls constitute an increasing competitive threat in the retail market for calls.
- 6.74 Providing services that are much closer in nature to fixed traffic via the mobile network may further increase this threat. This would require the mobile operators to replicate the call plans offered by fixed suppliers so that mobile was competitive on all call types. It would also require the MNOs to address any potential quality of service concerns customers have in using mobile instead of fixed when there is a fixed line available (e.g. calls from the home). Developing technologies such as femtocells may address this latter concern.
- 6.75 However, the relatively small proportion of the total retail call price that wholesale call origination represents, combined with current pricing strategies that consist in offering a bundle of minutes, imply that mobile convergence is unlikely to affect our proposed market definition during the period covered by the review.

Conclusions on market definition

- 6.76 The analysis above indicates that mobile wholesale call origination is not in the same market as wholesale call origination on a fixed narrowband network.
- 6.77 In the discussions above we have also proposed alternate fixed networks may be in the same market for the supply of wholesale call origination as the hypothetical monopolist network we have considered.
- 6.78 As said in Section 4, market definition is not an end in itself but a means to assessing effective competition for the purposes of ex-ante regulation. Given that BT's market shares would still be substantial whether the market is defined to include or exclude cable and LLU, and given that BT constrains LLU and cable such that suppliers using these options are unlikely to be able to profitably raise prices, we consider that further analysis of the market definition would not provide further clarity.
- 6.79 Given the lower impact at the retail level of a SSNIP at the wholesale level, it is less clear than for exchange lines that the constraint imposed by alternate networks is sufficient to include them in the same market. However, we propose for clarity that the following markets include alternate fixed narrowband networks such as direct access (via cable or PPC and self-provided fibre for larger sites) and LLU. In our SMP analysis we explain that a narrower market definition would not result in a change to our proposals of SMP.
- 6.80 We also propose two separate geographic markets:
- The UK excluding the Hull Area; and
 - The Hull Area.
- 6.81 Ofcom is of the view that these are the wholesale markets in relation to which it is appropriate to consider whether there is SMP.

Question 6.1: *Do you agree with Ofcom's assessment that the relevant call origination market is wholesale call origination on fixed narrowband networks and that there are separate geographic markets for the UK excluding the Hull Area and the Hull Area? If not, please explain why.*

Market power assessment

Market share

- 6.82 By definition, BT has 100% of the wholesale market for call origination on the market defined as including geographic networks with full national coverage. It also has almost 100% of the third-party wholesale call origination market (C&W is the only other CP that supplies wholesale call origination to third parties and it sells limited volumes compared to BT). Some CPs (e.g., Gamma) do offer call origination services to other CPs but they are re-sellers who purchase call origination primarily from BT.
- 6.83 CPs were unable to provide consistent data for the period 2003-2007, partly related to market consolidations (such as the NTL/Telewest merger that led to the creation of Virgin Media in 2006). Based on data provided by CPs, we estimate BT's market in 2007 share was approximately 73%. In the last review, Oftel estimated BT's market share in 2002-03 to be about 78%. This indicates that BT's market share has held relatively constant.
- 6.84 Several factors have contributed to the decline in BT's share. Dial-up internet has declined dramatically because of increased broadband take up. CPW's narrowband offer over LLU has also developed since 2006. Nevertheless, BT still enjoys a substantial market share in the market for call origination when all fixed networks are included (73% in that case).
- 6.85 The above leads to the presumption that BT enjoys a dominant position in the market for call origination.

Barriers to entry

- 6.86 For a CP to be able to offer call origination services, it would need to have an access network. Therefore, the barriers to entry in the market for call origination are similar to those discussed for the market for exchange lines which we discussed in section 5.
- 6.87 Even assuming that Virgin Media and LLU operators could supply wholesale call origination services to other CPs (which they have not done to date in significant volumes), their level of deployment implies that they would be unable to provide a national service without having to rely on BT.

Economies of scale and scope

- 6.88 There are significant economies of scale in the market for call origination. Call origination services can only be supplied once a provider has set up an access network. The issues here are similar to those mentioned in the market for exchange lines discussed in section 5.

Pricing and profitability

6.89 Call origination is subject to a charge control based on cost orientation. BT's charges for wholesale fixed call origination are shown in Table 6.4 below:

Table 6.4: BT's charges for call origination

Start date	End date	Daytime rate (ppm)	Evening rate (ppm)	Weekend rate (ppm)
01/04/2001	31/03/2002	0.3316	0.1518	0.1196
01/04/2002	31/03/2003	0.3048	0.1395	0.1099
01/04/2003	31/03/2004	0.2774	0.127	0.1
01/04/2004	31/03/2005	0.2577	0.118	0.0929
01/04/2005	31/03/2006	0.2397	0.1097	0.0864
01/04/2006	31/03/2007	0.2346	0.1074	0.0846
01/04/2007	31/03/2008	0.2306	0.1056	0.0831
01/04/2008		0.2292	0.1049	0.0826

Source: BT carrier price list

6.90 In the 2009 retail review, Ofcom considers that BT does not have SMP in the market for calls. Ofcom considers that, since the last review in 2003, competition has developed and has become effective in constraining BT's retail prices. As Table 6.4 shows, wholesale call origination rates have declined year by year since the last review in 2003 because of the charge controls imposed on BT's prices. While BT's does not have the ability to raise its rates above the regulated ceiling, it can further decrease its prices if strong competitive constraints in the market impose it. For example, BT has drastically decreased its prices in the regulated single transit market where it faced strong competition (see section 9 on wholesale transit services). Together with BT's market shares (especially in the segment for call origination services to other CPs), BT's pricing for call origination is consistent with the view that it is not facing strong pricing constraints other than those imposed by regulation.

6.91 BT's total revenues from call origination services have remained constant in 2003-2006 but have declined by circa 10% per year in the subsequent two years. This is however related to falling volumes triggered by mobile substitution, the decline of unmetered internet dial-up based on FRIACO and LLU substitution.

6.92 Any alternate network that provides a wholesale call origination product would have its prices constrained by the BT rates since BT provides this service on a national basis (excluding Hull). This means that all purchasers of call origination are likely to use BT for some parts of the country (either directly or indirectly) and will therefore be in a position to substitute onto the BT network if prices of other CPs are not competitive.

Summary of SMP Assessment in the UK excluding the Hull Area

6.93 The analysis above indicates that BT has SMP in the market for wholesale call origination on fixed narrowband networks. In our market definition analysis we have proposed that alternate networks may be in this market. Even considering this wider market definition, BT's market share is still significantly above 50% and it is the only supplier able to provide a service across the whole market.

- 6.94 The analysis above indicates that BT has SMP. In our market definition we have proposed that alternate networks may be in the same market as the market within which BT has SMP. Taking this wider market definition, BT's market share is still significantly above 50% and it is the only supplier able to provide a service across the whole market.
- 6.95 No alternate networks have SMP since their prices are constrained by BT.
- 6.96 Therefore we conclude that only BT has SMP in call origination on fixed narrowband networks in the UK excluding Hull.

SMP Assessment in the Hull Area

- 6.97 As said in the review of exchange lines (see section 5), KCOM has a 100% market share of wholesale residential exchange lines and does not face strong constraints in the pricing of its wholesale business lines. Furthermore, there are little alternative networks as both Cable and LLU are not present in Hull. Alternatives are mainly in the ISDN 30 market and are provided mainly via PPCs.
- 6.98 Barriers to entry are at least as stronger, or possibly stronger, in the market for wholesale call origination in the Hull Area as in the rest of the UK (see section 5 on exchange lines).

Forward look

- 6.99 Increasing competition in the retail market for calls arising from other providers of fixed calls (Virgin Media, CPW and CPs using WLR) and mobile providers currently act as an effective constraint to BT's pricing for retail calls. However, for the same reasons as those mentioned in the forward look on market definition, these constraints are unlikely to pose an immediate threat to BT's market power in the wholesale market for call origination.

Summary of conclusions on SMP

- 6.100 Having taken into account the analysis above, Ofcom proposes that BT has SMP in call origination on a fixed network in the UK excluding the Hull Area.
- 6.101 We also propose that KCOM has SMP in call origination on a fixed network in the Hull Area.

Question 6.2: *Do you agree with Ofcom's assessment that BT has SMP in wholesale call origination on fixed narrowband networks in the UK excluding the Hull Area? If not, please explain why.*

Question 6.3: *Do you agree with Ofcom's assessment that KCOM has SMP in wholesale call origination on fixed narrowband networks in the Hull Area? If not, please explain why.*

Question 6.4: *Do you agree with Ofcom's analysis of future developments that may affect these assessments? If not, please explain why.*

Relationship between the wholesale market definition and market power assessment and the Commission's recommendation on product and service markets

- 6.102 In Section 4 we have explained what we must do before making a market determination and that we must take due account of the Commission's recommendations.
- 6.103 The Commission has, in its Recommendation defined the following as a relevant market in accordance with Article 15(3) of the Framework Directive:
- Call origination on the public telephone network provided at a fixed location.
- 6.104 For the purposes of this Recommendation, call origination is taken to include call conveyance, delineated in such a way as to be consistent, in a national context , with the delineated boundaries for the market for call transit and for call termination on the public telephone network provided at a fixed location" (market 2)
- 6.105 We propose to define the call origination market as:
- Wholesale call origination on a fixed narrowband network.
- 6.106 In the above, call origination means the conveyance of all signals (including relevant control signals) originating on a customer's exchange line across a fixed narrowband network to the first point in the network where those signals can be accessed by another communications provider.
- 6.107 We propose to define separately the call origination market and the local-tandem conveyance ("LTC") and local-tandem transit market ("LTT") market. Ofcom's proposed market definition therefore differs from the market 2 in the Commission's recommendation. This approach remains consistent with the current market definitions which reflected different competitive conditions in the origination and LTC markets. Our proposed definition is drafted to be technology neutral, and takes into account likely changes to the network architecture on the implementation of BT's 21CN. Within BT's 21CN architecture there is no LTC market, and, as the first point of interconnect would be at the POSI, the proposed call origination market definition would then include transit to that point.
- 6.108 Ofcom has, in proposing these market definitions, given careful consideration to the three criteria set out in the EM (section 2.3), namely:
- Barriers to entry and to the development of competition;
 - Dynamic aspects – no tendency towards competition; and
 - Relative efficiency of competition law and complementary ex ante regulation.
- 6.109 In particular in considering the first two of the cumulative criteria, we have considered the barriers to entry at paragraphs 6.86 to 6.87 and 6.98 above. We have discussed market share, economies of scale and scope and pricing and profitability at paragraphs 6.82 to 6.96 and 6.97, taking into account a forward look at paragraph 6.99 and are of the view that the market dynamics are such that there is no tendency towards effective competition.

- 6.110 We have also assessed the third test, whether *ex post* competition law would be sufficient to adequately address the market failures concerned. We have taken into account the Commission's own view that in relation to its defined market for call origination, the remedies necessary to address market failure could not effectively be imposed on the basis of competition law. We are of the view that this holds true for the market definition we have proposed, and that the third test is met.
- 6.111 We have addressed the LTC/LTT market separately in Section 8, below.
- 6.112 We propose that in relation to the call origination market, the three criteria test, as set out in the Recommendation is met, and the imposition of appropriate *ex ante* regulation is necessary.

Remedies

- 6.113 Ofcom proposes to impose a number of remedies in the wholesale call origination on fixed narrowband networks markets where BT and, separately, KCOM have SMP. These are discussed in the following sections of this consultation as outlined below.
- 6.114 We propose the following general remedies should be imposed on BT and KCOM:
- requirement to provide network access on reasonable request;
 - requirement not to unduly discriminate;
 - basis of charges;
 - requirement to publish a reference offer;
 - requirement to notify charges, terms and conditions;
 - requirement to notify technical information;
 - cost accounting; and
 - accounting separation.
- 6.115 These remedies are discussed in Section 11.
- 6.116 We also propose to impose the following remedies on BT and KCOM:
- obligation to provide Carrier Pre Selection; and
 - obligation to provide carrier selection (Indirect Access).
- 6.117 These are discussed in Section 13.
- 6.118 In addition, we propose the following remedies should be imposed on BT:
- transparency as to quality of service (discussed in Section 11); and
 - Charge control: we discuss the charge control to be imposed on BT for analogue exchange lines in Section 16.

Section 7

Call termination

Summary

- 7.1 In this section we discuss fixed geographic call termination, i.e. the final service needed to deliver a call to a called party on a fixed network.
- 7.2 We propose the following market definition:
- Wholesale fixed geographic call termination on each individual network.
- 7.3 Similar to call origination, call termination includes the conveyance of all signals (including relevant control signals) required to terminate calls on a customer's exchange line from the first point in the network where those signals can be accessed by another communications provider.
- 7.4 With regard to SMP assessments, we propose that each individual network has SMP in the market for fixed geographic call termination on its own network
- 7.5 We propose that the following remedies should be imposed:

Table 7.1: Remedies to be applied in the call termination market

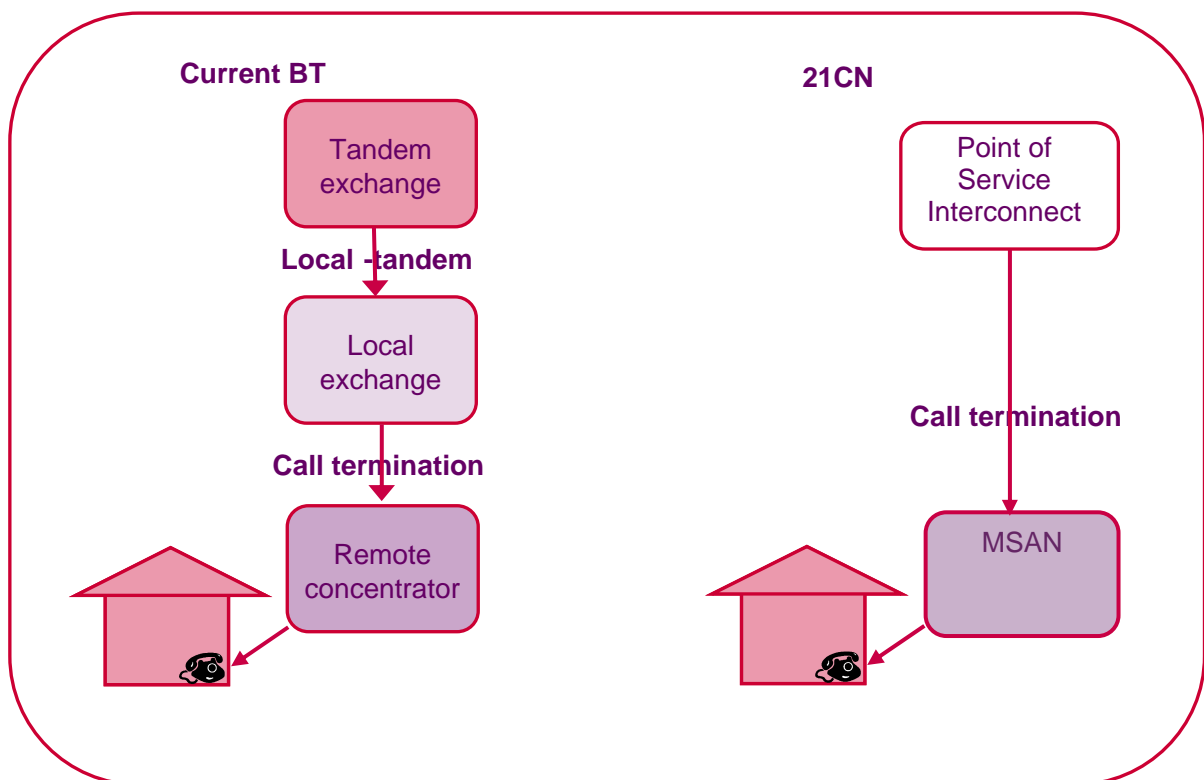
CP	Obligations
BT	Requirement to provide network access on reasonable request Requirement not to unduly discriminate Basis of charges Charge control Requirement to publish a reference offer Requirement to notify charges, terms and conditions
KCOM	Requirement to provide network access on reasonable request Requirement not to unduly discriminate Basis of charges Requirement to publish a reference offer Requirement to notify charges, terms and conditions
All other CPs that provide call termination	Requirement to provide network access on fair and reasonable terms

Market definition

Description of the relevant retail products

- 7.6 Retail customers expect (and demand) to be able to speak with (or send narrowband data such as faxes to) any other retail customer irrespective of the network to which the called party is connected. CPs therefore need to interconnect with each other to allow calls to be seamlessly delivered between them. However, there are costs associated with the delivery of calls between and over networks. This review considers the final service needed to deliver a call to a called party on a fixed (i.e. not mobile) network. This service is fixed call termination. In this particular review, Ofcom considers fixed geographic call termination only. Figure 7.2 below illustrates call termination on the current BT network. For the call origination market discussed in Section 6, we updated the definition to include migration to next generation networks. We propose the same approach for call termination on 21CN, as shown in Figure 7.2.

Figure 7.2 Call termination on BT's current network and 21CN



- 7.7 As previously explained, networks other than BT's may not have physically separate RCUs and DLEs (they may have combined local and tandem exchanges so that LTC is also included). In this case, call termination would essentially be the service involved in switching the call across the exchange to which the customer is connected.
- 7.8 Given that the market definition should consider all network architectures and technologies that can supply the call termination service, Ofcom proposes that call termination should be taken to include the conveyance of all signals (including relevant control signals) required to terminate calls on a customer's exchange line from the first point in the network where those signals can be accessed by another communications provider.

- 7.9 For fixed geographic telephone calls, the UK telecommunications industry has a system whereby the calling party (and not the called party) pays the total price of the retail call (unless the called party accepts the responsibility for payment, e.g. reverse charge calls). This is the Calling Party Pays principle.
- 7.10 Calling Party Pays means that the call termination charge is included in the originating network provider's cost base and is a factor determining the retail price for calls. It follows that increasing the price of fixed geographic call termination may lead to higher retail call prices. Contrastingly, the called party does not directly bear the cost of the termination charge on their own network, and it is therefore unlikely that wholesale termination charges are a key factor in consumers' network choices.
- 7.11 Additionally, as the cost is not paid by their customers, terminating providers may have an incentive to raise the charge for termination to maximise their call termination profitability. The fact that this potential increase in price is borne by customers of rival networks provides a further incentive to increase termination prices. In other words, the act of increasing termination charges will increase revenues and increases competitors' end-to-end retail costs. This implies that a provider with higher call termination prices has a competitive advantage at the retail level over its direct competitors. This perverse cost incentive is known as the 'termination externality'.
- 7.12 Call termination considered in this document is a wholesale product. An originating network demanding call termination services has no alternative than to demand it from the network of the subscriber to whom the call has to be delivered. This implies that, once a call has been made, the network of the subscriber to whom the call has to be delivered has a monopoly on terminating that call, and hence faces no direct constraint at the wholesale level on the price it charges for terminating the call.

Retail market definitions

- 7.13 At the retail level, calls are sold on an end-to-end basis. In this consultation we are considering only termination to fixed geographic numbers (the call types identified as local and national geographic calls). The analysis of the retail markets in Section 6 for call origination also applies to call termination.

Wholesale market definitions

- 7.14 As for call origination, call termination on a fixed network is a wholesale product and is not sold as a standalone product at retail level. However, it is a component of the retail end-to-end call.
- 7.15 As for call origination, to define the relevant economic wholesale market we start by considering whether it would be profitable for a hypothetical monopolist supplier of the service to impose a 5-10% increase in price. The result of this standard SSNIP test will depend on the extent of substitution possibilities for both immediate customers (direct competitive constraints) and final customers (indirect competitive constraints).
- 7.16 We first consider constraints at the retail level (indirect constraints) before discussing direct constraints at the wholesale level.

Indirect constraints

- 7.17 Indirect constraints at the retail level may affect wholesale market definition if:

- any increase in the price of wholesale call termination translates into higher retail prices for calls; and
- the relative prices of alternatives (calling to a mobile or to a VoB line) mean increased retail prices make calling fixed lines less attractive in comparison.

7.18 Non-price factors relevant to substitution include the convenience of calling an end-user's mobile number (e.g., sensation of immediate proximity) and consumers calling patterns regarding their use of different calling alternatives.

Fixed vs mobile

7.19 For a subscriber that has both a fixed line and a mobile phone, calling the mobile phone provides an alternative to calling the fixed line⁵¹. This is not necessarily the case in reverse. However, whether alternatives to calling an end user on his landline are effective depends on their relative prices. The price differential between a call to a mobile and a call to a fixed line depends on the calling network, as discussed below.

7.20 Fixed to mobile calls are still substantially more expensive than fixed to fixed calls despite some operators (e.g., BT) now offering discounts for calling mobile phones through package offers⁵². Even if a 5-10% increase in the price of call termination by a given fixed network would be fully passed by other fixed network operators to their calling party retail customers, the relatively high price of mobile call termination means that many callers would still be unlikely to switch to calling end-users on their mobile (see also the retail market evidence on mobile vs fixed calls in Section 6).

7.21 As an example, "Unlimited Anytime Plan" offered by BT (which is BT's only plan offering discount on calls to mobile phones) features free unlimited calls to UK landlines and discounted rates for calls to mobile at 7.34p/min; outside call plans, calls to landline cost 3.91p/min while calls to mobile cost 12.23p/min during daytime⁵³. Given these rates, it is clear that mobile termination is unlikely to impose a strong constraint on fixed geographic termination when calls are made from a landline as it would require a very large price increase in geographic termination prices for any likely substitution to take place. BT's rates for calls to landline would likely be, in the absence of regulated call termination charges, higher than its current rates, therefore lowering the price differential between fixed to fixed and fixed to mobile calls. However, they would still likely be well below the rates for calls to mobile.

7.22 Mobile termination is more likely to impose constraints on geographic termination charges when calls are made from a mobile phone. Currently, most mobile operators offer the same rates for calls to mobile phones or calls to landlines (only Virgin and O2 appear to price calls to fixed lines at the same rate than on-net calls but at a lower rate than off-net calls⁵⁴). These facts hold true independently of whether

⁵¹ Ofcom estimates that, at the end of 2007, the penetration rate for mobile connections among people aged eight and over was 120 per cent. (<http://www.ofcom.org.uk/research/cm/cmr08/telecoms/telecoms.pdf>)

⁵² Technically, the relevant retail prices are those that would prevail in the absence of regulated fixed termination prices. However, although the termination rates that would then prevail on fixed networks are likely to be higher (monopoly rates), (i) they are unlikely to be fully passed into retail prices for calls; and (ii) because call termination is only part of a call, an increase in its price will have a lower impact on the price of a call. All this implies that it is unclear whether, in the absence of regulation on fixed termination, the differential in retail prices between fixed to mobile and fixed to fixed calls would be small enough to make the two types of call effective substitutes.

⁵³ Information obtained from BT website on 21 January 2009.

⁵⁴ Pure Pricing, "UK Mobile Pricing Factbook, December 2008 Update".

subscribers are on a post-pay contract or on a pre-pay/pay-as-you-go and suggest that, when calling from their mobile phones, consumers are likely to view calls to mobile phones as a substitute for calls to landlines.

- 7.23 The above therefore suggests that, for calls made from a mobile phone, mobile termination can potentially impose a constraint on geographic termination. However, a 5-10% increase in the price of call termination by a given fixed network operator is unlikely to result in the mobile operators increasing the price of calls to fixed geographic numbers. The reason is that even with such a price increase, geographic termination rates would still remain far below the cost of mobile termination. On that basis, we believe that it is highly unlikely that mobile operators would increase their retail prices to reflect the relatively small increase in fixed geographic termination.
- 7.24 There is no supply-side substitution as no mobile network provider can benefit from a price increase in call termination by a fixed network provider.

Conclusion on fixed/mobile substitution

- 7.25 It is unlikely that the hypothetical SSNIP for geographical call termination would;
- change materially the relative price difference between fixed to fixed calls and fixed to mobile calls; or
 - change the price of mobile to fixed calls.
- 7.26 Therefore, Ofcom considers the market for geographic termination on a given network not to include mobile termination.

Narrowband/broadband

- 7.27 Broadband is another potential constraint on the price of geographic termination. In particular, both managed Voice over Broadband services (e.g. BT Broadband Talk) and unmanaged voice over the public Internet (e.g., Skype) can provide alternatives to reaching an end user on his landline.
- 7.28 Some providers of broadband now include a voice over broadband service. Lines provided over broadband (and the public internet) often use a fixed geographic number and calls to those lines cost the same as a call to a landline. In addition, these services may allow calls between subscribers to the service at no charge.
- 7.29 Despite these existing alternatives which generally cost the same or less than calls to traditional fixed lines, we believe that they are unlikely to constrain geographic termination rates for the following reasons:
- the level of broadband penetration in the UK is currently at 58%. This implies that 42% of UK homes cannot access voice over broadband. Also, only a limited number of providers of broadband include voice in the broadband offer; and
 - calling an end-user's VoB line would require having that user's (second geographic) number. It is currently less common for consumers to distribute to their contacts multiple landline numbers.
- 7.30 Voice services using the internet are likely to have the same issues as managed voice over broadband services. In addition, the following may mean they are less likely to act as a constraint:

- it is more likely to be necessary for the user to be connected (be online) in order to be reached; and
- there is a perception that voice services over the internet have lower quality or are more susceptible to variation in quality.

7.31 There is no supply-side substitution as no broadband provider can benefit from a price increase in call termination by a fixed network provider.

Conclusion on narrowband/broadband

7.32 Due to the low penetration of broadband (as compared to mobile and fixed lines), current norms surrounding the communication of contact numbers, convenience and services quality factors, Ofcom considers that the wholesale market for fixed geographic call termination should not include calls to broadband voice services.

Direct constraints

Demand-side substitution

7.33 On the demand-side, when purchasing wholesale fixed geographic call termination, the originating network provider will not find termination on a network other than the one its retail customer wishes to call (actually dials) to be an adequate substitute. A hypothetical monopolist in the supply of wholesale fixed geographic call termination on an individual network would find a price increase (SSNIP) profitable, as those seeking to terminate calls on its network would not find termination on a different network to be a suitable substitute. This follows from the fact that the demand for wholesale fixed geographic call termination is derived from the demand of retail customers to make end-to-end calls and, as explained above, there are no effective substitutes at the retail level for the fixed line end-to-end call desired.

Supply-side substitution

7.34 There is no possibility for supply-side substitution. Competitors are physically unable to offer an equivalent wholesale fixed geographic call termination service as by definition the called party customer is connected to the terminating network.

Forward Look

Regulatory Framework

7.35 The European Commission has developed a draft 'Recommendation on the regulatory treatment of fixed and mobile termination rates in the EU'. The Recommendation seeks to create a uniform approach to the regulation of voice call termination rates across the EU. In particular it recommends the adoption of a uniform cost accounting methodology and the use of a cost model which assumes the core network for fixed networks to be NGN based.

7.36 In addition, Ofcom will review regulation regarding mobile call termination rates during the forward look period, since the current controls expire in March 2011.

7.37 We do not currently expect either of these developments to impact the analysis above. Given the low rates of fixed geographic termination compared to mobile, any changes in either regime based on the above may close the gap but is unlikely to

result in mobile call termination providing an effective substitute for fixed geographic termination.

- 7.38 Ofcom is mindful of its duty under s84 of the Act to carry out further market analyses at such intervals that we determine to be appropriate. Should changes occur that significantly affect matters that have been taken into account in this review, a further review of the market may be appropriate.

BT's 21CN

- 7.39 BT has discussed with CPs potential products that could be deployed on its 21CN. A replication of the current call termination may be supported. In addition, there has been discussion around the WVC product.
- 7.40 Currently, the fixed geographic telephone number is hosted on the same network to which the customer is physically connected. Call termination includes conveyance across this network as well as the termination service related to the number. WVC offers the ability to split the hosting of the number from the physical network on which the customer connects. In this case, the customer's number is hosted on the call server of a CP that controls the BT network elements to which the customer is physically connected. WVC therefore requires provision of service on two networks in order to provide call termination.
- 7.41 WVC has not been launched, and it is unclear if or when it will be launched and in what form. If a CP reasonably requested a call termination product from BT similar to that discussed as part of WVC, and BT did not offer such product under the obligation imposed on it in the call termination market, it may be appropriate for Ofcom to review whether the call termination market definition discussed in this review is relevant for this product.

Conclusion on market definition

- 7.42 Having had regards to all the above, Ofcom considers that market definition for geographic call termination is fixed geographic call termination on each individual network.

Question 7.1: *Do you agree with Ofcom's assessment that there is a separate market for wholesale fixed geographic call termination for each provider of fixed geographic call termination? If not, please explain why.*

Market power assessment

Market shares

- 7.43 We have explained above that for the purpose of this review the relevant market is wholesale fixed geographic call termination on individual networks, as it is only the terminating network provider that can terminate calls over its network (this is an absolute technical entry barrier). Each network provider therefore has 100% of the market for calls terminating on their networks and this means that each is a monopoly. However, as criteria other than market share need to be considered this factor on its own does not necessarily mean that each provider possesses SMP in the provision of fixed geographic call termination.

Countervailing Buyer Power

- 7.44 As explained in the analysis of market definition above, the retail price for calls is very likely to include the charge paid to the terminating network provider. In the absence of regulation, the monopolist terminating network provider may have an ability and incentive to increase its call termination charge in order to increase both its revenues and its competitors' costs. However, terminating network providers with customers connected to their networks also provide retail services and will also need to buy call termination from their competitors. This implies that, in the absence of regulation, networks are likely to enter into negotiations over the termination rates they charge each other. In these negotiations, there is the potential for the termination prices set by a network provider to be constrained by the countervailing buyer power of other parties to the negotiation.
- 7.45 The Commission notes in the EM that a market definition of call termination on individual networks:
- “...does not automatically mean that every network operator has significant market power; this depends on the degree of any countervailing buyer power and other factors potentially limiting that market power.”
- 7.46 Countervailing buyer power ('CBP') is the extent to which the terminating provider's monopoly position may be counteracted by the latter's bargaining power⁵⁵. CBP is not an absolute concept but, rather, refers to the relative strength of the buyer in its negotiations with the prospective seller for the good or service in question. It may be relevant when negotiating either bilateral termination rates or one-way termination rates⁵⁶.
- 7.47 Factors to be taken into account when considering the existence and scope of any CBP include whether and to what extent the relevant purchaser: represents an important outlet for the terminating operator; is well informed and price sensitive; is able to exert bargaining strength by reason of reciprocity of trade; is able to draw on alternative sources of supply; or has the option not to purchase or to delay purchase (see further, Ofcom's Mobile Call Termination Statement of 27 March 2007, paragraph 5.10 and 5.105-5.162).
- 7.48 The test to assess whether CBP is sufficient to prevent the exercise of SMP is that set out in Article 14 (2) of the Framework Directive, namely: whether CBP can constrain an MCT provider from having the “power to behave to an appreciable extent independently of competitors, customers and ultimately consumers”. As regards the termination price, in the context of this review, Ofcom considers that an application of the test is that providers of fixed call termination will have SMP if they are able to sustain charges to an appreciable extent above the competitive level.
- 7.49 Consistent with the analysis adopted by the European Commission (the so-called modified Greenfield test), the assessment of whether a given provider has SMP should be conducted on the basis that no SMP-related regulation currently exists on that provider in the market being reviewed. Nor should other regulation of termination on that provider be taken into account, including the potential for action under competition law and dispute resolution (see below). However, regulation in other

⁵⁵ While the size of a network provider may be a determinant of its bargaining power, other factors can affect it (e.g., commercial agreements with other networks, regulatory obligations etc.)

⁵⁶ One-way termination occurs when the network provider wishing to buy fixed geographic call termination offers indirect access services only.

markets or on other parties, which will continue to exist throughout the period of the forward looking assessment independently of an SMP finding on the market concerned, should be taken into account.

- 7.50 The issue of which regulation Ofcom should take into account also arises in determining whether any undertaking has CBP and the same principles apply. Given this, Ofcom has identified the following regulatory factors which are relevant to an assessment of CBP and are discussed below.
- 7.51 **Control of fixed termination rates and other services** – Absent regulation, the extent of BT's buyer power and the buyer power of other CPs (including Mobile Network Providers) when purchasing fixed call termination could be considered to be influenced by the extent to which they can take into account the prices they charge for their own services as part of the negotiations. For example, because of their large number of connections, the four largest Mobile Network providers might potentially be able to exert significant bargaining power vis-à-vis BT, and both BT and the mobile providers might potentially be able to exert significant bargaining power vis-à-vis other providers of fixed call termination by varying, or threatening to vary, their charge for call termination in response to proposals for charges made by the provider of fixed termination whose SMP is being assessed. However, BT is subject to an end-to-end connectivity obligation (see below), which significantly weakens the extent of its CBP. Mobile call termination is subject to cost-based regulation. In practice, therefore, the price that Mobile Network Providers charge other fixed network providers for termination on mobile networks cannot influence the negotiations of the price the other fixed networks charge for termination on their networks. It cannot therefore be considered to be a source of the mobile operators' bargaining strength.
- 7.52 **Carrier pre-selection and indirect access obligations**; BT is obliged by existing regulation to provide CPS and IA services (see Section 14) to other Electronic Communications Providers who wish to offer retail call services to consumers and Ofcom proposes to maintain such regulation. The purpose is to stimulate competition in the calls market and enhance competition in areas with limited direct access competition.
- 7.53 While the purpose of these conditions is to promote competition in a range of markets downstream from wholesale call origination, they also have a specific impact on the retail market for calls to other fixed networks. The ability of consumers to switch to alternative CPS or IA based providers of such calls weakens BT's ability to threaten to cease purchasing fixed network termination services.
- 7.54 **General Condition 1.1** – Ofcom has also considered whether General Condition 1.1 should be viewed as relevant existing regulation. However, as this is a condition which imposes an obligation on providers of Public Electronic Communications Networks to *negotiate* interconnection rather than to interconnect, it is Ofcom's view that it would not have material impact on the level of CBP held by purchasers of fixed call termination.
- 7.55 **BT's end-to-end connectivity obligation and Ofcom's dispute resolution powers in relation to this obligation (pursuant to section 185(2) of the Communications Act 2003)** – End-to-end connectivity describes the ability of consumers to make calls to other customers or services on the same network or other providers' networks. This is a key feature that customers expect; they want to be able to call everyone with a telephone and not just a subset of that group.

7.56 With the objective of ensuring end-to-end connectivity, Ofcom has imposed on BT an access related condition⁵⁷ which requires BT:

- To purchase wholesale narrowband (fixed and mobile voice and narrowband data) call termination services from any provider of public electronic communications networks ('PECN') that reasonably requests in writing that BT purchases such services;
- 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), and on such terms and conditions (including charges) as Ofcom may from time to time direct;
- 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; and
- To comply with any direction Ofcom may make from time to time under this Condition.

7.57 When Ofcom imposed this condition on BT, Ofcom noted that it did not consider that it was proportionate to impose a similar obligation on other providers of Public Electronic Communications Services. However, Ofcom considered that all providers should provide end-to-end connectivity and therefore if Ofcom became aware that this was not being provided Ofcom would consider whether such an obligation were appropriate and proportionate in that case.⁵⁸

7.58 If the obligation on BT was to provide end-to-end connectivity whatever the terms proposed by MNOs, it would eliminate any CBP on BT's part. However, the obligation on BT is to purchase MCT on reasonable terms and conditions. If BT and an MNO are unable to agree the terms and conditions on which MCT is to be provided, either party may refer the matter to Ofcom to resolve under the statutory dispute resolution powers (s185 (2) of the Act). For the reasons summarised below, in relation to mobile call termination, both Ofcom and the CAT have concluded that BT does not have CBP, in part because of its end-to-end connectivity obligation. Ofcom considers that the same reasoning applies to the weakness of BT's CBP in relation to termination from other fixed network providers.

BT's position in the provision of its fixed geographic call termination service

7.59 As BT is the largest provider of fixed services in the UK, it is appropriate to consider initially whether its monopoly in termination is offset by the countervailing buyer power of the purchasers of its fixed geographic call termination services. First, we shall consider the case of BT's negotiations with other fixed network providers. Then we consider the case when BT provides fixed geographic call termination to mobile providers.

⁵⁷ *End-to-end connectivity*, 13 Sep 2006

(http://www.ofcom.org.uk/consult/condocs/end_to_end/statement)

⁵⁸ See paragraph 3.25 "End-to-end connectivity" Statement 13 September 2006.

Other fixed network providers

- 7.60 BT has approximately 27 million customers connected to its network and this makes it the largest fixed network provider in the UK. In contrast, BT's two largest direct access competitors (Virgin and Carphone Warehouse) have less than 7 million connections between them⁵⁹. KCOM has approximately 210,000 connections in the Hull area.
- 7.61 One consequence of the fact that the majority of retail customers are connected to BT's network is that other fixed operators require termination on BT's network in order to offer a viable service. This weakens CBP as they are unable to credibly threaten not to purchase termination services from BT. The size of BT's access network is such that it cannot be easily duplicated by competitors and thus the ability to compete with BT in relevant retail calls markets depends upon the ability to acquire termination from BT. This implies that, in the absence of regulation of any fixed geographic call termination services, Ofcom would not expect other fixed network providers to have sufficient CBP to negate BT's SMP.
- 7.62 Furthermore, as set out below, Ofcom proposes to conclude that other fixed network providers have SMP in termination and that regulation of their termination services should continue.
- 7.63 For all these reasons, we consider that other fixed networks providers cannot exert CBP on BT. BT therefore possesses SMP in the provision of its own network fixed geographic call termination services to other fixed network providers.

Mobile network providers

- 7.64 The provision of mobile call termination services will be considered in a separate market review. In the present document, we consider whether mobile network providers would individually have sufficient CBP to offset against BT's fixed call termination monopoly when buying termination from BT.
- 7.65 As with the fixed CPs, mobile CPs need BT to terminate calls on its network. Their services would be less attractive if their customers could not call customers on BT's network. In term of number of connections (abstracting from whether they are fixed or mobile), four of the top five communication providers in the UK are mobile providers and the three largest mobile operators have, each, just about 5.5% less connections than BT⁶⁰. Given the fact that the retail economic markets for mobile and fixed calls have converged rapidly since the last market review (at the moment mobile calls are just outside the market for calls), these operators have, each and in theory, the potential to exert CBP with BT. However, there are a few arguments against mobile operators being able to exert CBP.
- 7.66 Firstly, at the moment, consumers are more likely to use their mobile phone to call landlines than the opposite. The reason is that the per-minute calling rates from landline to mobile phones are generally higher than calling rates from mobile phones to landlines⁶¹. It can therefore be argued that mobile CPs are more reliant on fixed

⁵⁹ On the basis of data provided by CPs to Ofcom for the 2008 Retail Narrowband Review, Virgin Media has a little bit more than 5 million customers connected and CPW has about 1.5 million customers connected.

⁶⁰ Ofcom: "Mobile Citizens, Mobile Consumers", Consultation paper, 28 August 2008, Figure 2, page 11. The figures provided are for 2007.

⁶¹ We have said earlier at paragraph 7.21 that, outside call plans, BT charges 12.23p/min for calls to mobile. For mobile contract customers, calls to landline that are within the bundle have a zero charge. For Pre-pay rates, with the exception of Orange and Vodafone, almost all mobile operators offer rates that are below the BT's 12.23 p

termination than the opposite. However, as the convergence between fixed and mobile economic call markets increases in the future, and landline subscribers increasingly call mobile phones, mobile network operators will likely be able to exert greater CBP.

- 7.67 Secondly, different mobile phone operators have different degrees of CBP. At one extreme, small start-up operators may have no or very limited CBP vis-à-vis BT⁶². As regards the five incumbent mobile operators, as said earlier, mobile call termination rates are subject to cost-based regulation, so they would have limited CBP vis-à-vis BT. Therefore, we cannot conclude that BT has no SMP vis-à-vis mobile phone operators because of CBP.
- 7.68 Therefore, in the absence of wholesale regulation for call termination on BT's network, it seems unlikely that mobile network providers would possess sufficient CBP to prevent BT from setting call termination charges above the competitive level.
- 7.69 Ofcom's initial view is therefore that BT has SMP in the provision of fixed geographic call termination services to mobile providers.

Summary of BT's SMP

- 7.70 For these reasons Ofcom proposes to regulate the provision of fixed geographic call termination services by BT to all CPs. The level and type of regulation is discussed in Section 12.

Assessment of potential SMP of other CPs

- 7.71 We consider in turn, whether BT on the one hand, and other (non-BT) CPs and Mobile network providers on the other hand have potential CBP with respect to a non-BT CP.

BT

- 7.72 In relation to BT's ability to exercise CBP against other monopoly providers of fixed call termination, BT's position in the fixed retail local and national calls markets is a relevant factor.
- 7.73 In the 2009 consultation document entitled Review of the fixed narrowband retail markets, Ofcom proposed that BT does not have SMP in the provision of calls. Nevertheless, BT has a substantial market share in the market for calls and, considered individually, its competitors have much lower market shares⁶³. This relatively large market share could be considered to provide BT with CBP when negotiating to buy other providers' fixed termination services since other fixed providers might have a far greater need to buy BT's call termination services than BT would theirs. According to this argument, if other fixed providers refused to provide their termination services to BT on terms acceptable to BT, it could refuse to buy their termination services. This would not damage BT's competitiveness as much as it would its competitors since BT could offer a viable retail service even if it did not

charge, at least after the first few minutes in a day; the latter varies from 2 min for T-Mobile to 6 minutes for Virgin. (See the Pure Pricing document referenced at footnote 54).

⁶² Although mobile operators taken as a whole have together 59.2% of total connections (i.e., including fixed and mobile – see footnote 60), they do not negotiate as a single entity with BT.

⁶³ The 2009 Retail Narrowband Review shows that for the second quarter of 2008, BT's share of the market for residential and business calls was 49% and 40% respectively. Virgin Media had market shares of 17% and 6% respectively.

include termination on other networks, whilst other network providers' retail services would not be viable if they could not receive inbound calls from BT. But, BT's CBP is greatly weakened by regulation of BT outside of its termination market, including CPS/IA regulation and the end-to-end connectivity obligation.

- 7.74 First, as noted above, the existence (and proposed maintenance) of regulation in wholesale call origination, which requires BT to provide CPS and IA services, weakens BT's incentive to threaten to cease purchasing call termination.
- 7.75 Second, arguments about the existence and scope of BT's CBP have been considered recently by the CAT in relation to the purchase of wholesale mobile call termination. BT is subject to an end-to-end connectivity obligation, which obliges BT to purchase wholesale call termination from all other CPs. However, it had been argued that this obligation only obliges BT to interconnect at a "reasonable" price. If BT cannot agree the price for call termination with a CP, BT has the option to refer a dispute to Ofcom according to section 185 of the 2003 for Ofcom to set a reasonable price. It had been argued that this possibility for BT to refer a dispute negates any SMP a mobile operator might otherwise have in the sale of wholesale mobile call termination. In its judgment (Non price control matters - non-confidential version⁶⁴), the CAT rejected this argument, determining that BT does not have sufficient CBP in purchasing wholesale mobile call termination, in particular because:
- Ofcom could set a "reasonable" price that is appreciably above the competitive level; and, in any event
 - Ofcom's powers of dispute resolution constitute a form of price regulation on H3G which falls to be disregarded when assessing H3G's market power, according to the modified Greenfield approach previously applied by the European Commission .
- 7.76 The CAT's reasoning above applies equally to the sale of call termination by fixed networks to BT. Therefore, other CPs could, in the absence of regulation, exploit their monopoly in the provision of their fixed geographic call termination services when they are sold to BT. Other CPs therefore possess SMP in the provision of their fixed geographic call termination services when they are provided to BT. In the absence of regulation on their termination services, they would have the ability and incentive to increase their termination revenues and BT's costs.

Other Fixed Network Providers and Mobile Network Providers

- 7.77 A further issue for consideration is whether fixed CPs other than BT possess SMP when providing call termination services to each other or to mobile CPs. The extent to which any CP would have CBP when dealing with another CP and the extent to which the CBP could be offset against the terminating provider's monopoly is again relevant.
- 7.78 For bilateral negotiations between fixed CPs, it is not clear whether the level of CBP in any case would be sufficient to restrict the termination monopolist's pricing freedom or would be strong enough to drive the terminating CPs' prices down. It is also unclear whether this would be the case for fixed CPs when terminating calls from mobile CPs.

⁶⁴ See case [1083/3/3/07 Hutchison 3G UK Limited v Office of Communications \(Mobile Call Termination\)](#)

- 7.79 To understand fully when or if call termination would be constrained by the possession of CBP, Ofcom would need to compare the market power of each fixed CP against the CBP of all other CPs.
- 7.80 This analysis would be very extensive and, Ofcom believes, not very informative. Ofcom is of the view that it would be the exception rather than the rule that the level of CBP in these negotiations would be of the precise magnitude to ensure that call termination charges were constrained to the competitive level.
- 7.81 Furthermore, because non-BT fixed providers are, in general, interconnected to BT, the BT price may act as a floor and a ceiling on the possible charges for termination that they can levy. For example, if provider A tries to get a price lower than provider B charges BT, provider B may refuse to terminate provider A's calls directly, but provider A's calls to provider B could be routed via BT. Provider A's cost for terminating its calls on provider B's network would then vary between provider B's charge to BT and the same charge marked up by any transit charge on the BT network.
- 7.82 As is the case vis-à-vis BT, because mobile call termination rates are currently regulated at cost, Mobile Network Providers would have limited CBP vis-à-vis other non-BT fixed providers.
- 7.83 Ofcom's proposal is that each non-BT fixed CP possesses SMP in the provision of call termination services to all other fixed and mobile CPs. Each relevant fixed CP is therefore identified in Annex A of Schedule 3 in the notification in Annex 7 of this consultation. Those CPs are all believed to be active providers of fixed geographic call termination services on the basis of information supplied to Ofcom and therefore have been provisionally notified as having SMP in the provision of call termination services.

Summary of conclusions on significant market power in wholesale call termination markets

- 7.84 The analysis set out in this chapter has led Ofcom to propose that all fixed network CPs have SMP in the provision of their fixed geographic call termination services to all other CPs. All these providers are identified at Annex A of Schedule 3 in the notification in Annex 7 of this consultation.

Question 7.2: *Do you agree with Ofcom's assessment that each provider of wholesale fixed geographic call termination has SMP? If not, please explain why.*

Question 7.3: *Do you agree with Ofcom's analysis of future developments that may affect these assessments? If not, please explain why.*

Relationship between the wholesale market definition and the Commission's Recommendation on product and service markets

- 7.85 In Section 4 we have explained what we must do before making a market determination and that we must take due account of the Commission's recommendations.
- 7.86 The Commission has, in its Recommendation defined the following as a relevant market in accordance with Article 15(3) of the Framework Directive:

Call termination on individual public telephone networks provided at a fixed location.

7.87 For the purposes of this Recommendation, call termination is taken to include call conveyance, delineated in such a way as to be consistent, in a national context, with the delineated boundaries for the market for call origination and the market for call transit on the public telephone network provided at a fixed location” (market 3)

7.88 Ofcom propose to define the call termination market as:

Wholesale fixed geographic call termination on each individual network.

7.89 In this context call termination includes the conveyance of all signals (including relevant control signals) required to terminate calls on a customer’s exchange line from the first point in the network where those signals can be accessed by another communications provider.

7.90 Ofcom is therefore proposing to define separately the call termination market and the local-tandem conveyance (“LTC”) and local-tandem transit market (“LTT”) market. Ofcom’s proposed market definition therefore differs from the market 3 in the Commission’s recommendation. This approach remains consistent with the current market definitions which reflected different competitive conditions in the termination and LTC/LTT markets. We consider that it remains necessary to separately define call termination and LTC/LTT markets because of the continuing different competitive conditions that are present in each of the markets within the UK. Further, Ofcom’s market definition only relates to fixed geographic calls. The market for non-geographic call termination was found in 2003 to differ from the market for geographic calls in that it was a competitive market within the UK. Ofcom’s proposed market definition therefore differs in two respects from the market 3 in the Commission’s recommendation.

7.91 Our proposed definition is drafted to be technology neutral, and takes into account likely changes to the network architecture on the implementation of 21CN. Within BT’s 21CN architecture there is no LTC market, and, as the first point of interconnect would be at the POSI, the proposed call termination market definition would then include transit from that point.

7.92 Ofcom has, in proposing these market definitions, given careful consideration to the three criteria set out in the EM (section 2.3), namely:

- Barriers to entry and to the development of competition;
- Dynamic aspects – no tendency towards competition; and
- Relative efficiency of competition law and complementary ex ante regulation.

7.93 We consider the issues within the call termination market in the section which discusses Market power assessment at paragraphs 7.43 to 7.84, above. We consider that our analysis is consistent with the Commission’s consideration of the call termination market set out in the EM, which confirms each of the three criteria set out above are satisfied for the termination market. We consider that the same reasoning applies equally to our proposed market definition: that the three criteria test is satisfied, and the imposition of appropriate ex ante regulation is necessary.

Remedies

7.94 We propose the following remedies should be imposed in the call termination market:

Table 7.3: Remedies to be imposed in the call termination market

CP	Obligations
BT	Requirement to provide network access on reasonable request Requirement not to unduly discriminate Basis of charges Charge control Requirement to publish a reference offer Requirement to notify charges, terms and conditions
KCOM	Requirement to provide network access on reasonable request Requirement not to unduly discriminate Basis of charges Requirement to publish a reference offer Requirement to notify charges, terms and conditions
All other CPs that provide call termination	Requirement to provide network access on fair and reasonable terms

7.95 We discuss these remedies and Ofcom's justification for proposing them in Section 12.

Section 8

Local-tandem conveyance and transit

Summary

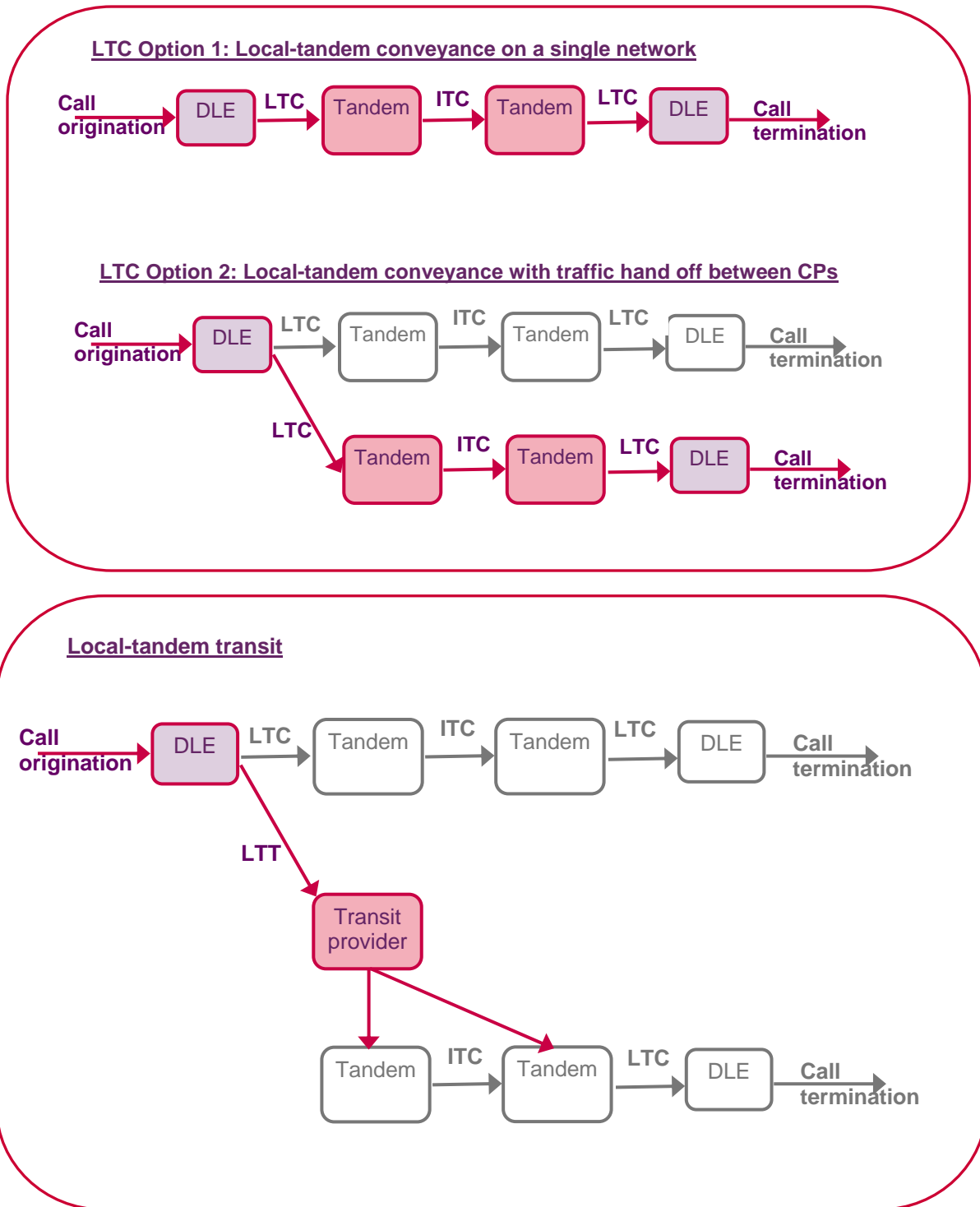
- 8.1 This section focuses on Local-tandem conveyance (LTC) and Local-tandem transit (LTT). LTC is the service that an originating or terminating CP provides to carry traffic between the local and tandem layers in the network. LTT is the service that a transit CP provides to carry traffic to or from the local layer of one CP's network to the tandem layer of another CP.
- 8.1 With regard to market definition, Ofcom proposes the following wholesale market:
- Local Tandem Conveyance/Local Tandem Transit.
- 8.2 We propose that the geographic market is the UK excluding Hull. In this section we discuss the possibility of geographically differentiated markets and outline our reasoning for defining a single market outside of the Hull Area.
- 8.3 We do not propose to define an LTC/LTT market in the Hull Area as the KCOM network does not have separate local and tandem layers.
- 8.4 With regard to SMP assessments, we propose that, considering all the evidence presented in this section, no CP has SMP in the Local Tandem Conveyance / Local Tandem Transit market.

Market definition

Product definition

- 8.5 As for call origination and termination, LTC and LTT are wholesale services that constitute part of the end-to-end call path needed to meet the requirements for retail calls.
- 8.6 In many networks other than BT, local and tandem functions are combined in the same physical exchange. This means that LTC/LTT may not be relevant markets on these networks.

Figure 8.1 LTC and LTT



8.7 In Figure 8.1 above, hand-off between the originating CP and either the terminating CP (for LTC) or the transit provider (for LTT) is shown occurring at the originating DLE. Hand-off could also occur between the tandem and local layers at the terminating side of the call.

8.8 Specific examples of how a CP may provide LTC and LTT are:

- instead of interconnecting to BT at the tandem exchange, a CP can interconnect to BT's DLEs. BT will then route originating traffic to the CP at the local

exchange. The CP does not buy LTC from BT. Instead it self-provides it. Similarly, the CP could send termination traffic via this route to avoid paying BT for LTC; and

- the CP could also sell LTT and become a transit provider. For origination, if a smaller CP does not have interconnection to BT's local exchanges, it could get BT to route traffic via the DLE interconnects to the transit provider. The transit provider would then onward route it. For terminating traffic the smaller CP routes the traffic to the transit provider instead of handing it to BT at the tandem exchanges. Instead of paying BT's LTC charges it pays the transit provider a transit fee plus BT's call termination charge, which the transit provider incurs when it hands the call off at the terminating DLE.

8.9 A number of different traffic types may use the LTC/LTT product as defined in this section. These include:

- Call origination traffic that needs to route via the tandem network. As explained in section 6, all calls use call origination irrespective of the call type;
- Call termination traffic. Since customers connect to the local exchanges, any call that traverses the tandem exchange layer must ultimately route back to the local exchanges layer for termination; and
- Number portability traffic may also use LTC/LTT.

8.10 NGNs (in particular BT's 21CN) have a different architecture in terms of the support of narrowband services. Whilst a tiered network architecture may be deployed in the transport layers of the network, a flat network architecture for the support of voice services is most likely to be implemented. In this architecture, separate local and tandem layers no longer exist, and therefore the LTC and LTT markets are no longer relevant.

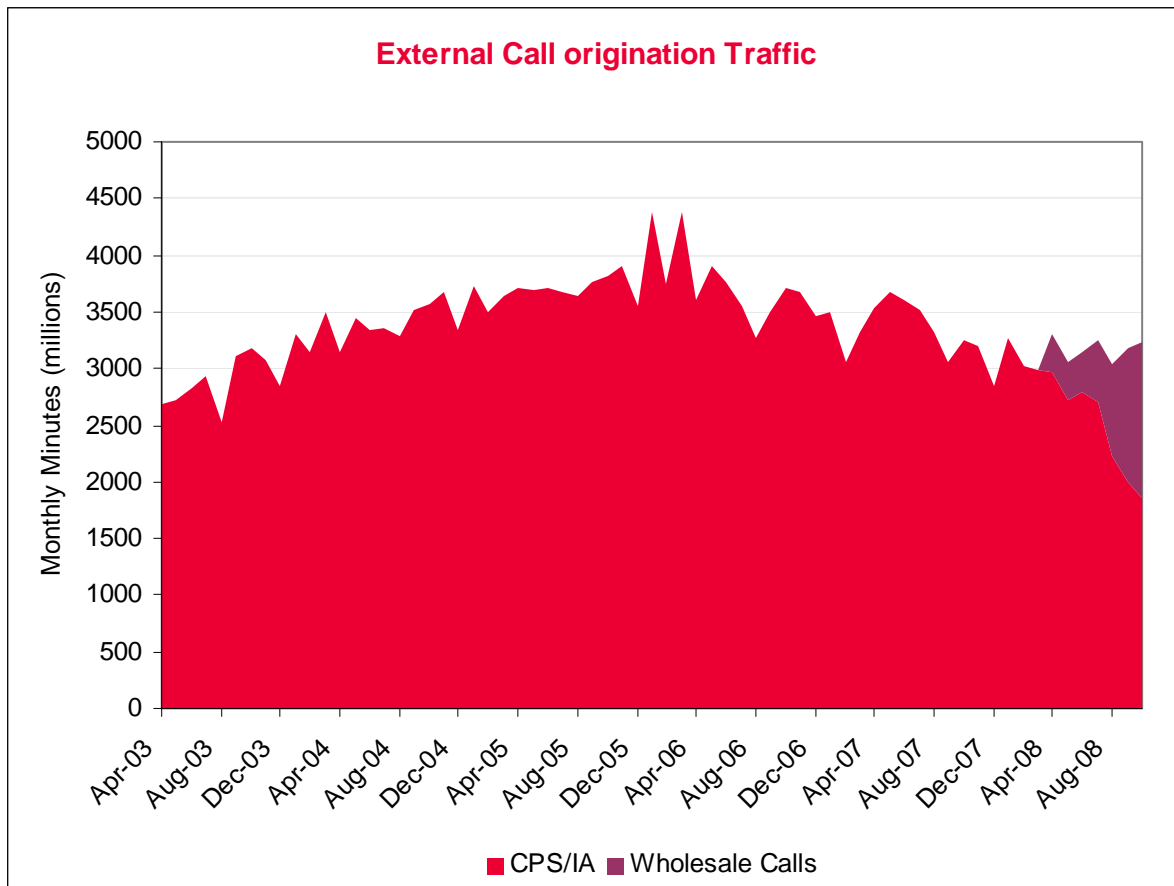
8.11 The markets defined in this Section are therefore based on TDM network deployments, not NGNs, and are based on BT's current PSTN architecture.

Wholesale market definitions

8.12 The purpose of this section is to determine what the relevant market is for LTC and LTT.

8.13 In the previous sections we have considered both indirect and direct constraints. However, we propose that indirect constraints are less relevant in the case of these markets. This is because the contribution of LTC to the total cost of the call is lower than for origination and termination so that a wholesale SSNIP is less likely to be reflected at the retail level. We consider that the key constraints to consider are therefore direct constraints.

8.14 Figure 8.2 below shows the volume of wholesale traffic originated on the BT network but supplied to other CPs.

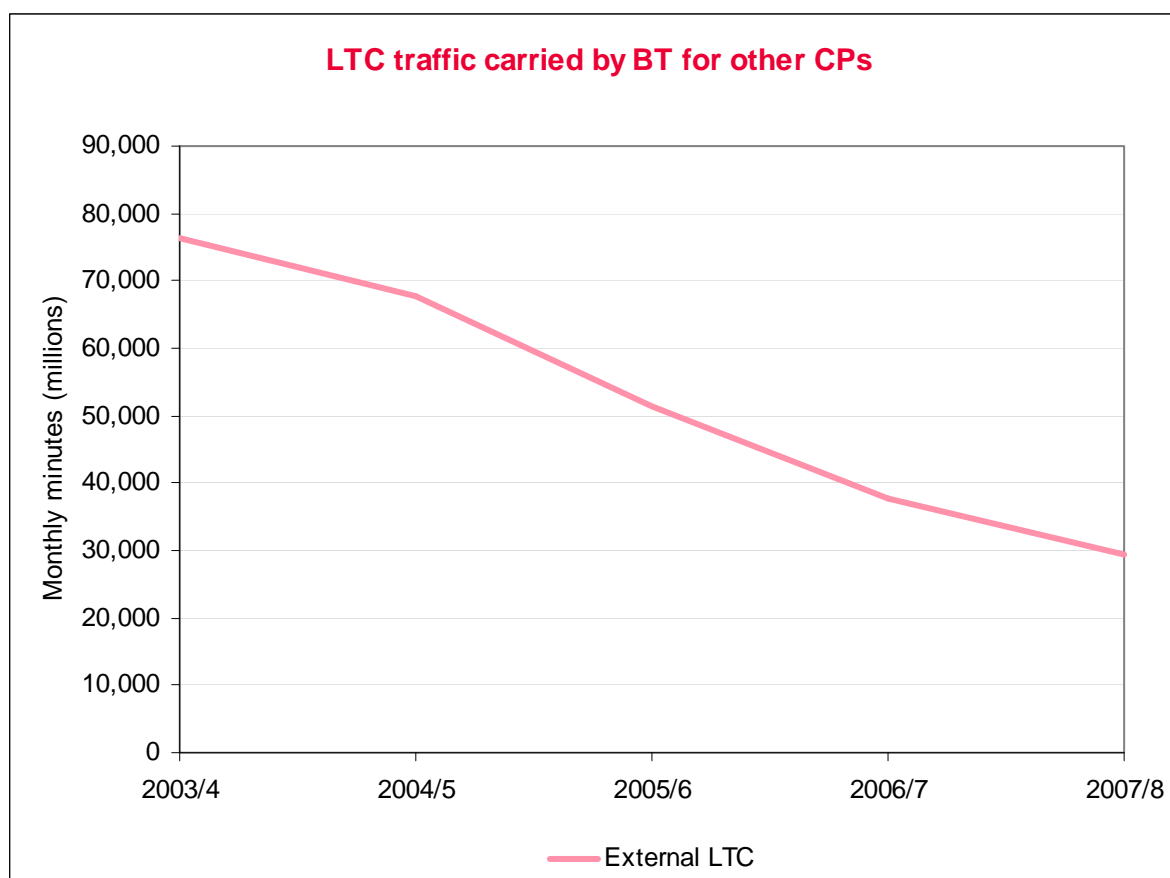
Figure 8.2: Wholesale call origination traffic provided by BT for other CPs

Source: Ofcom (based on BT data)

- 8.15 This shows that traffic initially grew until around the end of 2005 but has subsequently declined slightly. This is consistent with the trend for call origination traffic where the effects of the growth in mobile calls and LLU and the decline of dial-up internet has impacted the call origination traffic generated on the BT network.
- 8.16 In the second half of 2008 there has been a move from CPS traffic to BT's own wholesale calls product, which provides an end-to-end wholesale product. Again, as for BT's own retail traffic, the call will be handed to another CP only if this is required for termination.
- 8.17 A customer may be supplied using a mix of CPS and wholesale calls. This is because CPS supports different routing options:
- all calls;
 - national calls only (excluding local); or
 - international calls only.
- 8.18 Until the middle of 2008, almost all CPS provision used the all calls options. With the move to wholesale calls, some customers are now provided services using wholesale calls for all national traffic (including local calls) but CPS (international only option) for international traffic.

8.19 Figure 8.3 below shows the evolution of LTC traffic provided by BT for other providers using CPS. It reveals a steep fall in volumes from nearly 80 billion minutes in 2003 to 30 billion minutes in 2008.

Figure 8.3: LTC traffic provided by BT for other CPs using CPS



Source: Ofcom (based on BT data)

8.20 This steep decline in BT’s external LTC traffic suggests either a decline in the volume of calls of other CPs or the existence of effective alternatives to LTC which are available to CPs. As shown in Figure 8.2, whilst there was a slight decline in overall traffic during 2006 – 2008, externally provided LTC has fallen at a much more rapid rate.

8.21 The move to wholesale calls is not captured in Figure 8.3 above. BT has not provided data showing the volume of LTC minutes used by wholesale calls. Based on data on wholesale calls provided by BT, Ofcom estimates that a full year figure of LTC traffic generated by wholesale calls may be in the region of 20 billion minutes⁶⁵. Since this is likely to replace some, but not all of the traffic previously carried over LTC by BT before hand-off to a CP, this 20 billion minutes will replace a portion of the traffic shown in Figure 8.3. Therefore, the total volume of LTC provided by BT to other CPs, taking account of this wholesale calls traffic, is likely to increase to around 40 to 50 billion minutes per annum.

⁶⁵ This estimate is provided as an illustrative figure only. Ofcom has estimated this figure by assuming that: (1) traffic for November and December 2008 is representative of the average monthly wholesale calls traffic; (2) 20 to 25% of calls are “own DLE” and so do not consume LTC; and (3) all other wholesale calls consume two LTC segments – one for origination and two for termination.

- 8.22 Figure 8.3 indicates that from 2003/4 to 2007/8 LTC traffic carried on BT's network for other CPs has declined at a faster rate than the volume of calls originated and terminated by BT for those CPs. This suggests that substitution to other alternatives is taking place. These alternatives are explored below.

LTC/LTT vs direct interconnection

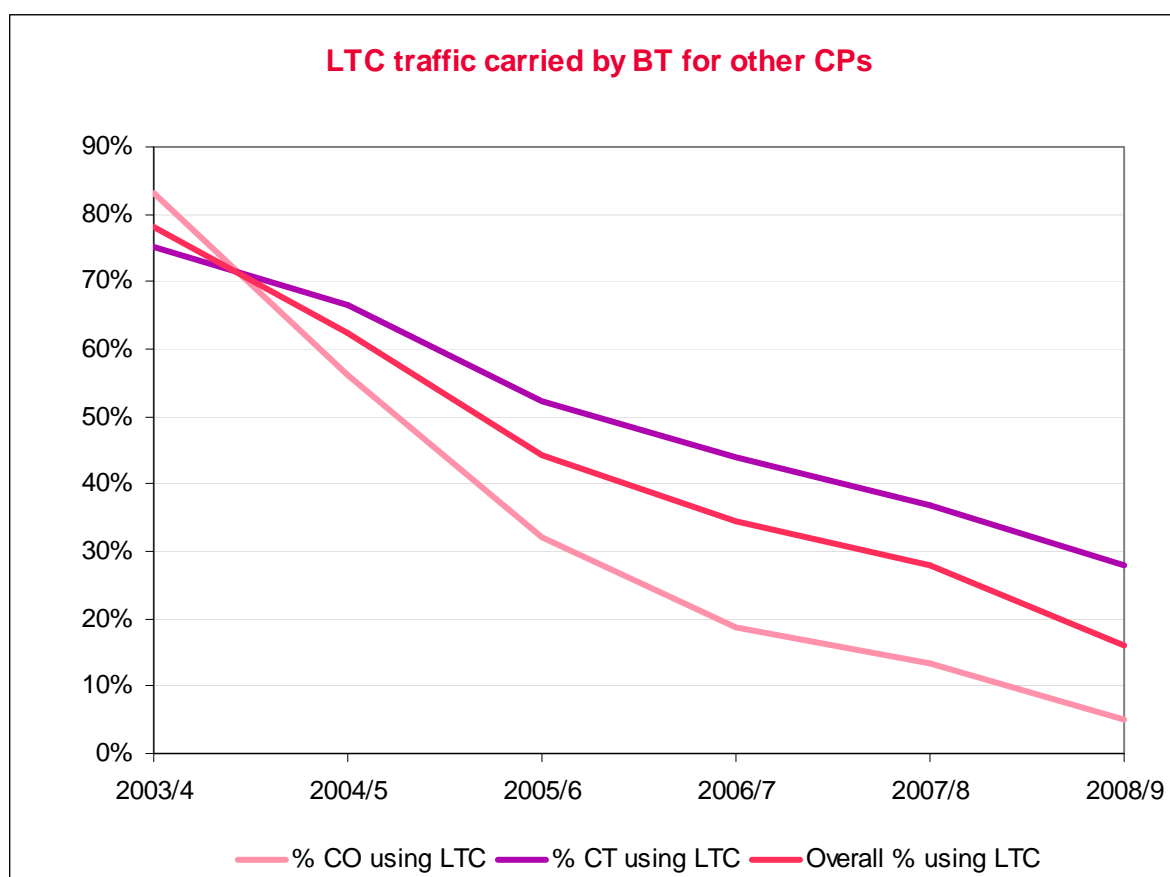
- 8.23 Interconnection is a pre-requisite for being able to switch between LTC and LTT, or to switch between purchasing or self-providing LTC.
- 8.24 Interconnection between CPs other than BT is achieved based on commercial negotiations between the two CPs, although all CPs have obligations to interconnect under General Condition 1⁶⁶. Interconnection to BT is established based on a set of regulated interconnection services. Ofcom defines these as associated technical areas rather than specific markets under the EC Framework because:
- they are required to make a number of markets effective; and
 - interconnection circuits provide the underlying transmission path but do not include the costs of switching which is included in each of the markets. Therefore interconnection circuits are components of a number of markets.
- 8.25 Interconnection circuits are discussed in Section 10 of this consultation.
- 8.26 Below we discuss to what extent interconnection circuits may constrain substitution of LTC purchased from BT (since LTC primarily occurs in the context of the current BT network).

Demand side substitution

- 8.27 As a consequence of the high level of interconnection at DLEs (see section on entry barriers in the market power assessment), the amount of other CPs' traffic originating (via CPS or IA) or terminating on the BT network that uses LTC provided by BT has decreased as shown in Figure 8.4 below.

⁶⁶ http://www.ofcom.org.uk/telecoms/loi/g_a_regime/gce/

Figure 8.4: Percentage of LTC in BT's traffic carried out for other CPs



Source: Ofcom (based on BT data)

- 8.28 For call origination, the ratio has declined from more than 90% prior to August 2003 to less than 10%. For call origination plus call termination, the ratio has also fallen substantially from nearly 80% in 2003 to less than 30% in 2008 and continues to fall. The percentage decrease for the total (call origination plus call termination) is not as high as for call origination. This is because CPs that do not use call origination on the BT network but terminate traffic to BT tend to purchase more LTC than those CPs that use both call origination and call termination supplied by BT. This may be because advantages that can be gained by DLE interconnection related to Same/Adjacent DLEs which drive DLE interconnection are not relevant for CPs that do not purchase call origination.
- 8.29 As discussed previously, in the second half of 2008, a significant volume of traffic has shifted from CPS to BT's wholesale calls product. This migration is based on new pricing offers by BT. Prior to this, BT's wholesale calls product was not attractive compared to CPS using DLE interconnection. This tends to suggest that BT's pricing of products based on LTC are constrained by direct interconnection to the DLE. However, Ofcom is currently investigating a complaint regarding the pricing of BT wholesale calls⁶⁷.
- 8.30 The above evidence suggests that interconnecting at the DLE has allowed CPs to self-provide LTC and provide LTT products to other CPs. Ofcom is therefore of the

⁶⁷ *Complaint from Thus Plc and Gamma Telecom Limited against BT about alleged margin squeeze in wholesale call pricing*, case opened 1 Aug 2008 (http://www.ofcom.org.uk/bulletins/comp_bull_index/comp_bull_ocases/open_all/cw_988/)

view that DLE interconnection provides an effective constraint on LTC and LTT offered by BT.

Supply side substitution

- 8.31 Whilst the available evidence suggests that a CP without any DLE interconnection might not necessarily establish such interconnects in response to a 5% to 10% increase in the price of LTC by BT, the alternative supply options available from those CPs already deployed at a high number of DLEs would suggest that a SSNIP by a hypothetical LTC monopolist would be unprofitable. The existing interconnected suppliers already carry a large proportion of the total traffic. Expanding current interconnects to handle further traffic lost by BT in response to a SSNIP could therefore be completed within a year without involving substantial sunk costs. Several of the CPs with a high degree of interconnection at the DLEs actively promote wholesale offers to other CPs based on these interconnections (effectively LTT based products). It is therefore unlikely to be difficult or time consuming for a CP without significant DLE interconnection to enter negotiations with LTT providers in the event of an increase in the price of LTC by BT.

Local-tandem conveyance versus local tandem transit

Demand-side Substitution

- 8.32 On the demand side, at least some customers might be able to switch relatively easily to LTT in response to an increase in the price of LTC by BT if there is a transit provider available, as shown in Figure 8.1. Both services involve the cost of transmission of traffic and the switching cost at the tandem exchange. While substitution to LTT would imply additional switches and interconnect links, these additional costs are not likely to present a significant barrier to switching for those CPs with large volumes of traffic.
- 8.33 Several CPs in the UK provide transit services. For example, C&W, Thus and Gamma offer services whereby they collect call origination traffic from BT on behalf of CPs. Similarly, they also provide call termination to BT's DLEs and to other CPs, to other CPs that have deployed less interconnection. These CPs have presence across the UK where they offer interconnection to other CPs. This means these other CPs do not necessarily need to deploy interconnection to BT on a full national basis.
- 8.34 Similarly, it would be relatively easy for a customer to switch to LTC in response to an increase in the price of LTT. The customer can either purchase LTC from the originating or terminating operator, or self-supply it by directly interconnecting to the local exchange if it has sufficient traffic volumes.

Supply side substitution

- 8.35 The strongest arguments for including LTC and LTT in the same market come from supply side substitution. An LTC provider connected to the local exchange of an originating CP can also provide LTT services provided it has a connection with the terminating CP. The costs involved in supplying LTT where a CP already provides LTC are low if there is already a connection to the terminating CP since the costs of interconnection to the originating CP would have already been incurred to provide LTC. Similarly, an LTT provider can also provide LTC services for calls that originate and terminate on its own network.

Geographic market

- 8.36 BT's current charges for LTC are geographically uniform with the exception of the Hull Area where BT does not have a direct access network. BT's uniform pricing means that any response by BT to competition in a given area in the form of lower prices would apply throughout the country, excluding the Hull Area. This national common pricing constraint suggests that the geographical extent of the relevant markets should be regarded as the whole of the UK excluding the Hull Area and the Hull Area. Therefore, it is appropriate to define a national market excluding the Hull Area where a single national pricing constraint holds.
- 8.37 Absent regulation, BT would be in a position to set geographically differentiated prices. However, there are several constraints that are likely to restrict such pricing behaviour:
- the largest customers of LTC are those CPs with limited DLE interconnection that have so far not moved traffic onto an alternative provider's LTT offer. These customers are likely to demand a single geographic price for traffic on BT's network. Since there is interconnection by CPs other than BT at all but one of the 655 DLEs, increasing prices on the less connected DLEs may drive traffic off the BT network as CPs that have previously relied on LTC attempt to bypass BT's higher charges;
 - setting different rates on an originating CP basis to raise prices to those CPs with little or no DLE interconnection is unlikely to be profitable as these CPs could move to LTT supplied by other CPs. In addition, BT has indicated that supporting customer specific rates is likely to require development of its interconnection billing system which, given the limited lifetime of LTC as a market, is unlikely to be recoverable; and
 - setting different rates on a DLE by DLE basis to take account of different levels of interconnection would be a complex task. The value of such traffic, given the small number of DLEs with limited interconnection is unlikely to be sufficient to justify the cost. If BT sets rates too high on DLEs even with limited interconnection this may lead to CPs currently using BT for all LTC to move traffic to that DLE to other providers.

Forward look

- 8.38 We are of the opinion that we have fully taken into account likely competitive and technical developments that might affect the market definition set out above during the period covered by the review.
- 8.39 Once BT has completed migration to its 21CN, LTC/LTT is no longer a relevant market since 21CN does not include separate local and tandem layers to which CPs can interconnect for the routing of voice traffic. Therefore, the market definition discussed above is based on the current network technology. We have concluded that attempting a technology neutral approach to account for next generation network technology is not appropriate for LTC/LTT.

Initial conclusions on the wholesale markets

- 8.40 We have discussed that CPs are able to self-provide LTC by deploying interconnection to the DLEs of, in particular, BT. These interconnection circuits constitute a technical area related to several markets and so are not included within

the market definition considered here. Based on this self-provision of LTC and the fact that providers that have deployed high levels of interconnection also tend to provide transit products to other CPs, we consider that the relevant market is LTC and LTT on fixed public narrowband networks in the UK excluding the Hull Area.

Question 8.1: *Do you agree with Ofcom's assessment that there is a single LTC/LTT market in the UK excluding the Hull Area? If not, please explain why.*

Market power assessment in LTC/LTT

Market share analysis

- 8.41 From the discussions above, it is clear in this case that BT's market shares in the overall LTC/LTT market would provide an imperfect indication of BT's market power. In fact, it would be incorrect for the assessment of SMP to rely on BT's market shares because BT's own retail operations are the largest user of LTC and will always demand LTC from BT. Hence this demand is non-contestable. However, we have seen above that BT's external sales have dropped to a level that suggests BT is not a dominant player in this market.
- 8.42 A further consideration when analysing the market share data is that, since most other networks do not have separate local and tandem layers, LTC does not necessarily have relevance. Indeed, no other large CP has been able to provide explicit LTC data for traffic originated or terminated on its own network. Several CPs provided Ofcom with data related to traffic on their own networks. However it is not straightforward to establish a clear equivalence between this data and that provided by BT. Given this, it is quite difficult to estimate market shares.
- 8.43 Since the majority of exchange lines are on the BT network and the majority of call origination occurs on the BT network, the ratio of LTC traffic to call origination/termination on the BT network can form a basis for considering market shares. Table 8.5 shows that BT's market share of LTC minutes (including self-supply) has decreased substantially since the last review (Ofcom estimated it at 65.2% in the third quarter of 2002/03), yet remains relatively high. As discussed above, this is mainly due to the high volumes of its retail operations. Ofcom could not estimate market shares for the years between 2003 and 2006 because of gaps in some CPs data.

Table 8.5: BT's share of LTC minutes (including self-supply)

	2006/07	2007/08
BT market share	43%	40%

Source: Ofcom (based on CPs data)

Barriers to entry

- 8.44 There are two ways in which CPs can provide LTC or LTT in competition with BT: either by using their own direct access network or by connecting to BT's local exchanges and providing LTC or LTT for BT's originated calls.
- 8.45 Whilst initial deployment of interconnection to BT may have high capital costs the high degree of CPs' direct connection to BT exchanges suggests that interconnection at the DLEs is increasingly feasible.
- 8.46 CPs' interconnection at DLEs is shown in Table 8.6 below. At the time of the last market review there was very limited interconnection at the DLEs. BT does not have

historic data from prior to 2007 so we are not able to analyse the growth in DLE interconnection over time. However, table 8.6 illustrates the very high degree of interconnection now in place at the DLEs.

- 8.47 BT has provided data showing that interconnection at 496 DLEs is via In Span Interconnection (ISI) and that two separate CPs have ISI based interconnection to over 400 DLEs. The rest of the DLEs are reached using Interconnection Extension Circuits (IECs).
- 8.48 Whilst some infrastructure build may have occurred to support this specific DLE interconnection, it is likely that existing network deployments made by CPs to connect to BT exchanges for other purposes have also been used, since 2004, to support DLE interconnection. There has also been, in some cases, the deployment of ISI connections using third party infrastructure. That is, wholesale provision of fibre by CPs other than BT to support DLE interconnection has occurred.
- 8.49 In these cases, self-provide of LTC/LTT by CPs is not based on purchasing capacity from BT. Nonetheless, a significant proportion of the current competition is supported on BT provided regulated products (IECs), which are discussed, along with other interconnection mechanism, in Section 10.

Table 8.6: Frequency of CPs interconnection at DLEs

Number of CPs connected at the DLE (by DLE)	Jan-07	Jun-07	Oct-08	Feb-09
0	0	0	0	1
1	1	1	1	4
2	1	1	5	13
3	2	5	13	17
4	8	12	45	47
5+	660	653	606	573
<i>Total number of DLEs</i>	<i>672</i>	<i>672</i>	<i>670</i>	<i>655</i>

Source: BT

- 8.50 In Table 8.6 the apparent decrease in the total number of DLEs is due to Ofcom removing from the February 2009 data three standby units and 11 DLEs involved in the Pathfinder trial⁶⁸ at which interconnection has been completely migrated off the DLEs. The data above also needs to take into account that there has been rationalisation of the market. In some cases, this has led to routes that were previously counted as separate being merged into a single route, leading to a net reduction in the total number of interconnected CPs. In other cases, however, the data above continues to count CPs that have merged as separate entities, because the data is based on the contractual entity and in some cases merged operations have not yet rationalised their interconnect agreements with BT.
- 8.51 Because of this, we are concerned that there may be more DLEs with only one or two CPs connected than appears in table 8.6 above. According to the data in table 8.4, there are four DLEs with only one CPs interconnected. BT informs Ofcom that all

⁶⁸ Pathfinder is BT's 21CN voice services trial programme. Customers are migrated off the current network onto 21CN. BT has worked with industry to ensure interconnection is migrated where necessary in line this customer migration.

four of these are locations where migration in preparation for the Pathfinder trial has started.

- 8.52 Of the 13 DLEs with two CPs interconnected, BT informs Ofcom that eight are undergoing migration in preparation for Pathfinder, leaving a further five DLEs with two CPs connected. However, at one of these, a third CP is connected using the Virtual Interconnect Circuit (VIC) product leaving four DLEs with two CPs connected. Ofcom has checked the data provided by BT. In each case these two CPs are not part of the same group of companies.
- 8.53 Similarly, of the 17 DLEs shown with three CPs interconnected, five of these are interconnected by multiple CPs within the same group of companies. Twelve host interconnection from three completely separate CPs.
- 8.54 Taking into account the above evidence, there do not appear to be significant barriers to entry in the LTC/LTT market in general.

Economies of scale and scope

- 8.55 There are significant economies of scale that characterise fixed communications networks, where total costs can be minimised at large levels of volume. Data provided by BT regarding the degree to which interconnection has been accomplished at its DLEs and the volume of minutes being carried over these routes indicates that several CPs have been able to generate sufficient volumes to achieve efficient scale.

Pricing and profitability

- 8.56 There currently exists a charge control on LTC. BT's rates for LTC are presented in Table 8.7 below.

Table 8.7: BT's rates for LTC

Effective Date	Daytime (ppm)	Evening (ppm)	Weekend (ppm)
2003/04	0.1317	0.0603	0.0475
2004/05	0.1174	0.0538	0.0423
2005/06	0.1042	0.0477	0.0376
2006/07	0.1071	0.049	0.0386
2007/08	0.1106	0.0506	0.0399
Current	0.1155	0.0529	0.0416

Source: BT⁶⁹

- 8.57 Table 8.7 shows that BT's pricing has largely followed the charge control. Prices decreased in line with the control until 2005 when the control was reset to RPI+0 in 2005. Since volumes have been declining based on the attractiveness of DLE interconnection, BT appears to have made the decision that a lower uniform price was unlikely to win back significant traffic volumes given that CPs that interconnected have already incurred sunk costs.

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http://www.btwholesale.com/pages/downloads/service_and_support/pricing_information/carrier_price_list_browse/C1.rtf

Other considerations

8.58 LTC is used as a component cost in the price calculations for some other traffic types. Several CPs have raised concerns to Ofcom that deregulation of LTC may impact on these areas. Generally, Ofcom's view is that whilst there may be concerns over the method of calculation of the prices of these particular services, these do not influence the assessment of SMP. Nonetheless, we briefly set out Ofcom's view on these issues below.

Number portability

8.59 A potential concern relates to the Average Porting Conveyance Charge (APCC) that is applied by BT to calls it conveys across its network to numbers ported from BT. The APCC is paid by the recipient operator (the operator to which the number is ported). The recipient CP does not, however, control call routing and so cannot make routing decisions to avoid incurring elements of the APCC charge.

8.60 Currently, one of the components used to calculate the APCC is the regulated price of LTC. CPs have expressed concern that if LTC is de-regulated, the APCC may increase.

8.61 However the price of LTC for non-ported traffic is constrained by the competitive supply for LTC. General Condition 18 requires that charges for ported traffic should be the same as for non-ported traffic (that is, switching and conveyance components used by ported traffic should be charged at the same rate as is charged for non-ported traffic). General Condition 18 also places cost orientation obligations on elements of ported call conveyance. Together these constrain the impact of LTC on APCC such that it should be no less competitively priced than it has been prior to the de-regulation of LTC.

NTS Call origination

8.62 Following the deployment of the INCA/CLI billing development for NTS traffic, BT provides a number of different rates for NTS traffic:

- DLE;
- Single Tandem;
- Double Tandem Plus (short, medium, long); and
- Other CP originated.

8.63 For calls that originate on the BT network, the charge is calculated based on efficient routing so that where a CP is connected at the originating customer's DLE, the call is charged at the DLE rate.

8.64 However, traffic originated on other CP's networks is charged based on a Single Tandem rate that uses, as a component in its calculation, LTC.

8.65 If BT continues to calculate this rate in the same way, using LTC as now, competition in the LTC market is likely to mean the LTC rate is driven to the competitive level. However, if BT attempts to use a different LTC price in this calculation, CP's have indicated they would not be able to avoid this charge. However, Ofcom believes that direct interconnection between CPs may act to constrain this. Whilst CPs use BT for

transit of NTS traffic currently, large CPs are heavily interconnected to each other. The existence of these routes are likely to constrain BT's prices, since if BT increases prices for NTS transit CPs could move the traffic onto direct routes.

- 8.66 Ofcom is of the view that the charge for NTS transit traffic is not related to the use of LTC e.g. the transport of traffic between the local and tandem layer of the network. Notwithstanding Ofcom's view that pricing of NTS transit may be constrained by direct interconnection, regulating LTC would not an appropriate approach to address this concern.

21CN pricing

- 8.67 It has been suggested to Ofcom that when BT migrates service to 21CN, LTC remains relevant as a proxy in calculating the relevant charge for call origination. This is because, in 21CN, there are fewer points of interconnection and the network is flatter. Therefore, call origination covers a larger portion of the BT network, up to the POSI. (The same argument is true, in reverse, for call termination.) This 21CN call origination may be considered to include both call origination and LTC. However, whilst it is clear that call origination plus LTC on the current network appears to cover a similar distance in terms of transmission as call origination to the POSI on 21CN, there are a number of key differences which include:

- call origination/termination plus LTC on 20CN includes two switching stages whereas call origination on 21CN includes one switching stage;
- switching on current PSTN and next generation networks such as 21CN are not necessarily equivalent as explained in section 3; and
- whilst the distance of transmission involved may be similar, BT is also deploying Wavelength Division Multiplexing (WDM) equipment deeper into the backhaul network.

- 8.68 Taken together, these points indicate to us that the cost basis of 21CN may be sufficiently different to the current network that it is not safe to assume that call origination plus LTC on the current network will provide a good indication of pricing for call origination on 21CN.

- 8.69 Ofcom has proposed in section 6 of this consultation that BT retains SMP in call origination and in section 7 that it retains SMP in call termination. We propose that in both cases BT will be obliged to price its services on a cost oriented basis. Therefore, we do not consider it is necessary to use a current PSTN proxy for pricing 21CN products, since these must meet BT's cost orientation obligations based on its 21CN network costs.

Reciprocity

- 8.70 LTC is also used in the calculation of call termination rates that CPs charge BT, via the reciprocity agreement. We outline our views on reciprocity in section 12, which covers the remedies we propose in the fixed geographic call termination market.

Proposed conclusion on SMP

- 8.71 We are proposing that the LTC/LTT market is effectively competitive and therefore that BT does not have SMP in this market. It is Ofcom's belief that the current extent of DLE interconnection, with over 99% of DLEs supporting interconnection from three

or more different CPs, indicates that CPs are able to effectively self-provide LTC rather than purchasing it from BT. In addition, some of these CPs offer wholesale LTT products to CPs with less interconnection.

8.72 For traffic excluding BT's own retail traffic, BT's market share has reduced substantially. Prior to its re-pricing of its wholesale calls product, BT provided LTC for less than 10% of originating traffic and less than 30% of terminating traffic on its own network.

8.73 Since then BT has grown its share of the LTC market through growth in its wholesale calls product. This has been achieved by reducing the prices of its wholesale calls product. Notwithstanding the complaint about this product's pricing that Ofcom is currently investigating, this increased volume of LTC traffic that BT is providing externally appears to be dependent on the pricing. Ofcom also notes that LTC is only one of the component costs of the wholesale calls product which also includes other components that are not currently regulated (such as inter-tandem conveyance).

8.74 We think the following points are also relevant in considering the impact of wholesale calls:

- the degree to which CPs have deployed interconnection via their own networks (rather than via capacity leased from BT such as IECs) means they may be less likely to exit the market in response to BT winning back some traffic volumes via wholesale calls;
- the market for call termination to BT for traffic originating on networks other than BT is unaffected by wholesale calls as this is an end-to-end service. This uses LTC/LTT provided either by BT or by another CP; and
- there still remain significant volumes using CPS.

8.75 Therefore, we believe DLE interconnection is likely to remain to a significant degree.

8.76 We have discussed Ofcom's view that there are sufficient constraints to restrict BT's ability to set different prices based on either the level of interconnection at a specific DLE or on the level of interconnection that a specific CP has deployed. We have explained that we do not consider that there is opportunity to discriminate on certain traffic streams such as number portability and NTS call origination.

8.77 Based on this analysis, Ofcom is of the view that, on balance, BT does not have SMP in the LTC/LTT market and that consumer welfare is enhanced by allowing competitive forces to operate in this market even if there might be a few limited instances where BT might initially be able to take advantage of deregulation to raise LTC prices to some CPs.

8.78 We are of the opinion that *ex post* competition law provides the appropriate mechanism to address any specific cases where the wider market conditions do not provide sufficient constraint on BT's behaviour.

Question 8.2: Do you agree with Ofcom's assessment that BT does not have SMP in the LTC/LTT market? If not, please explain why.

Relationship between the wholesale market definition and the Commission's Recommendation on product and service markets (Dave)

- 8.79 In section 4 we have explained what we must do before making a market determination and that Ofcom must take due account of the Commission's recommendations.
- 8.80 The Commission has, in its Recommendation defined the following as a relevant market in accordance with Article 15(3) of the Framework Directive:
- Call origination on the public telephone network provided at a fixed location.
- 8.81 For the purposes of this Recommendation, call origination is taken to include call conveyance, delineated in such a way as to be consistent, in a national context, with the delineated boundaries for the market for call transit and for call termination on the public telephone network provided at a fixed location" (market 2)
- 8.82 Ofcom set out its proposals for the call origination market in Section 6, above. The proposed definition excluded local-tandem conveyance (LTC) / local-tandem transit (LTT), which are considered to be in a separate market. In paragraphs 8.38 and 8.39 above we have outlined the likely changes to the network architecture on the implementation of 21CN. Within BT's 21CN architecture there is no LTC market because the first point of interconnection would be at the POSI. Any transit to that point would fall within the proposed call origination market definition.
- 8.83 We consider that it is necessary to define local-tandem conveyance / local-tandem transit markets separately from call origination because of the different competitive conditions that are present in each of the markets in the UK. This remains consistent with our current approach to the LTC / LTT market, whilst taking into account the move to NGN by adopting a technology neutral market definition.
- 8.84 As Ofcom is proposing a market definition outside of those contained within the Commission's Recommendation, careful consideration has been given to the three criteria set out in the EM (section 2.3) namely:
- Barriers to entry and to the development of competition;
 - Dynamic aspects – no tendency towards competition; and
 - Relative efficiency of competition law and complementary ex ante regulation.
- 8.85 In particular in considering the first two of the cumulative criteria, we have considered the barriers to entry at paragraph 8.44 to 8.54. We have discussed market share, economies of scale and scope, countervailing buyer power and pricing and profitability at paragraphs 8.41 to 8.78 above, and are of the provisional view that the market dynamics are such that, for the local-tandem conveyance/local-tandem transit market the three criteria test is not met on the basis of either the first or second tests.
- 8.86 As the first two tests are not, on our analysis, satisfied we would not necessarily need to consider whether the third test was satisfied, however, we have considered specifically considered the efficiency of competition law at paragraph 8.78 above. We identified that, although we propose that the LTC / LTT market is effectively competitive some CPs may be affected by price rises as a result of deregulation. In these circumstances we consider that *ex post* regulation would be an appropriate

way to address any specific cases, and therefore, in relation to the third of the Commission's criteria we consider that it is not met.

- 8.87 We are proposing that the LTC / LTT market is effectively competitive and therefore ex ante regulation is not applicable.

Section 9

Wholesale Transit Services

Summary

- 9.1 This section focuses on wholesale transit services that are used to carry traffic at the tandem layer of the network.
- 9.2 With regard to market definition, we propose a single market, which we denote the “transit services” market, that includes:
- Inter-Tandem Conveyance (ITC), Inter-Tandem Transit (ITT) and Single Transit.
- 9.3 With regard to SMP assessments, we propose that BT does not have SMP in the transit services market.
- 9.4 Ofcom proposes that the geographic market is the UK excluding Hull. We do not propose to define an ITC/ITT/Single Transit market in the Hull Area due to the scale of the KCOM network.

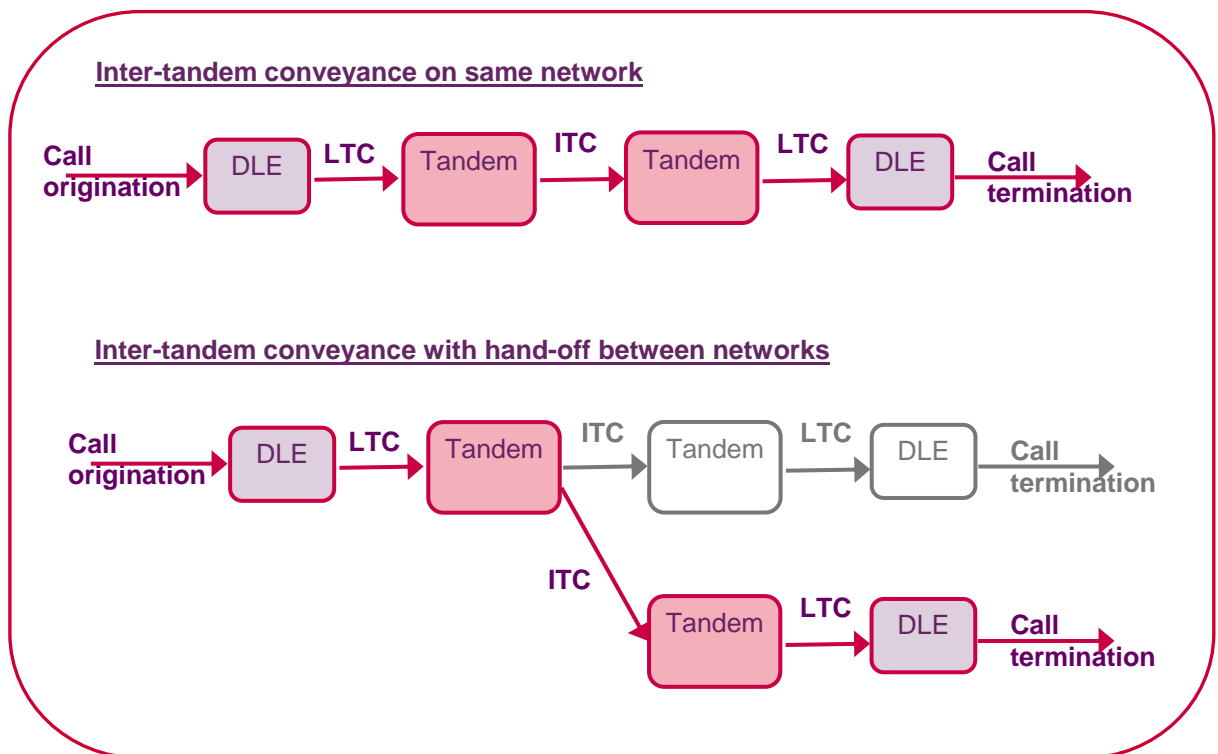
Market definition

- 9.5 Wholesale transit services are used to carry traffic between two CPs that do not have direct interconnection in place. Transit services are wholesale services that constitute part of the end-to-end call path needed to meet the requirements for retail calls. Different transit service CPs may offer services in slightly different ways, depending on the type of call (terminating to fixed geographic numbers, fixed non-geographic numbers, mobile numbers, etc), the terminating CP, the point at which the originating CP connects to the transit service or a combination of these. Where the transit provider takes into account the points at which the originating and terminating CP connect to its network, three specific transit services can be identified.

Inter-tandem conveyance

- 9.6 Inter-tandem conveyance (ITC) is the service that an originating or terminating CP provides to carry traffic between two or more tandem exchanges in its network (Figure 9.1a);

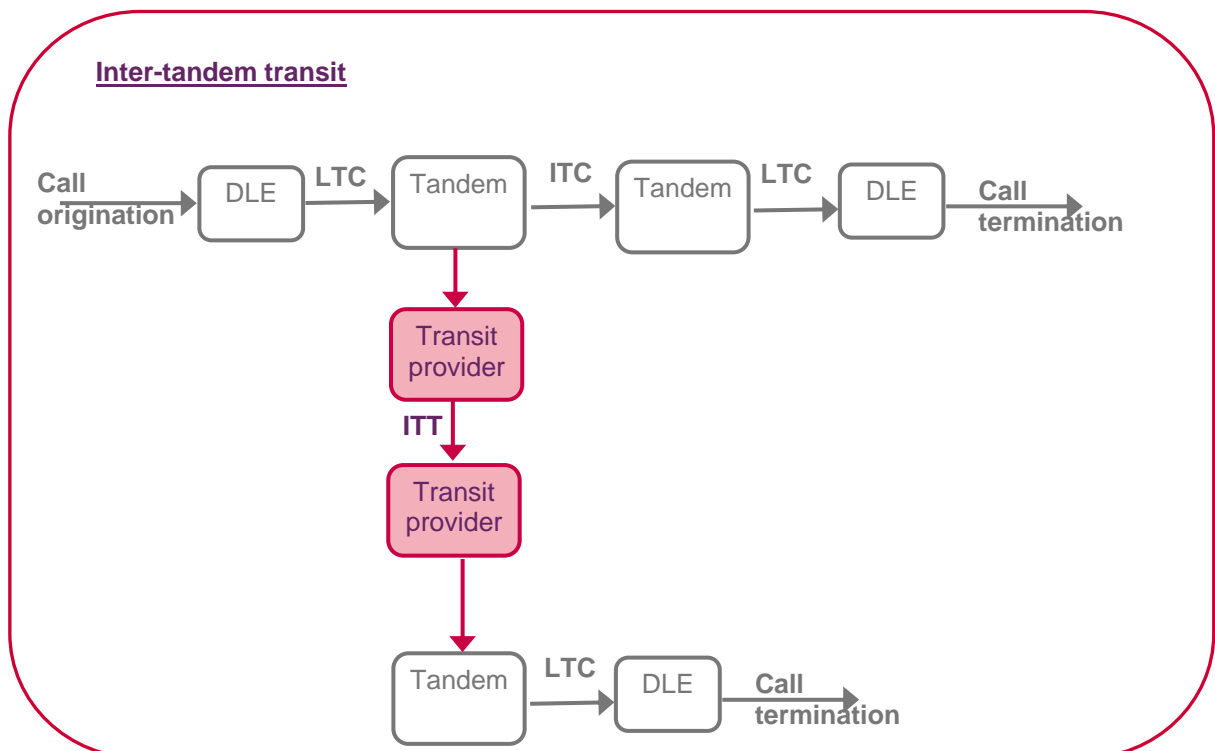
Figure 9.1a: ITC



Inter-tandem conveyance

9.7 Inter-tandem transit (ITT) is the service that a CP provides to carry traffic between its tandem exchanges in order to connect calls between two other CPs' networks (Figure 9.1b); and

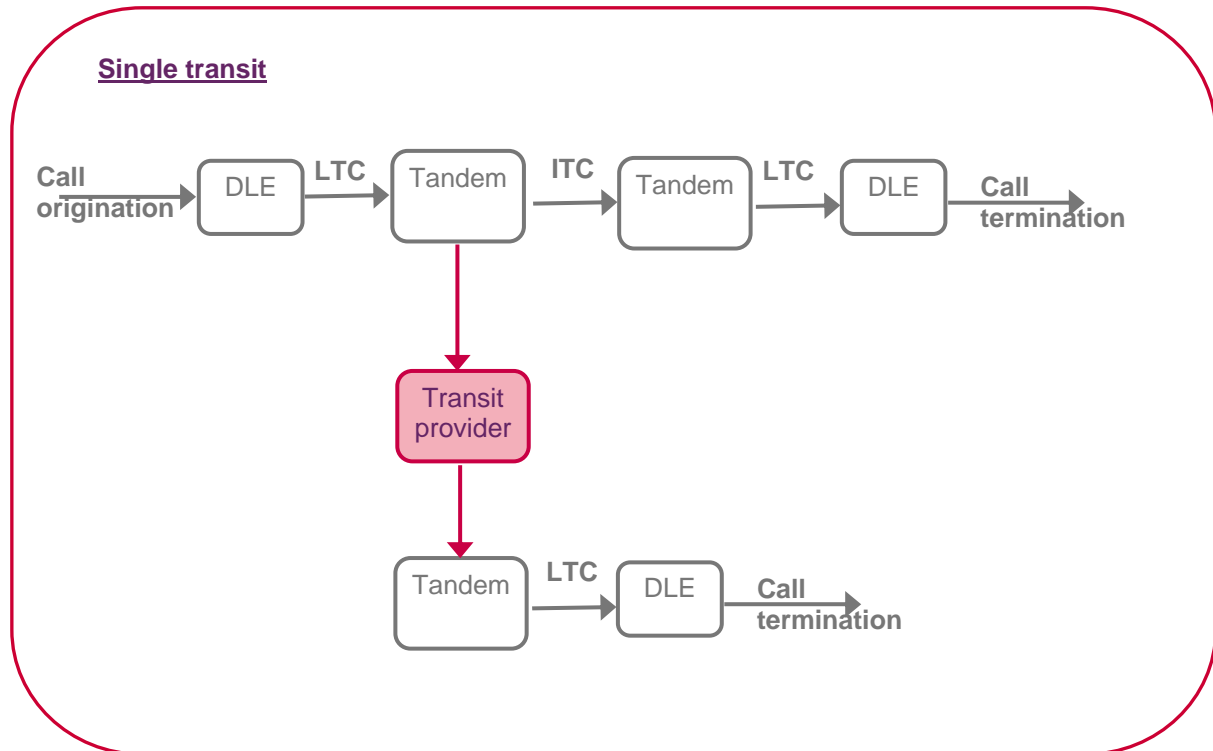
Figure 9.1b: ITT



Single transit

9.8 Single transit (ST) is the service that a CP provides to connect calls between two other CPs' networks, using only one of its tandem exchanges (Figure 9.1c).

Figure 9.1c: ST



9.9 BT currently provides separate ITC/ITT and ST products. Other transit providers tend to base their services on other factors. For example, a single rate may be offered for calls to all UK fixed geographic numbers, whilst a single rate per number range per terminating provider may be used for non-geographic traffic.

Wholesale market definitions

Substitution between conveyance (ITC) and transit (ITT)

Demand-side substitution

9.10 Ofcom considers that there is some demand side substitution between ITT and ITC for the following reasons:

- A terminating (or originating) operator purchasing ITT would be able to switch to purchasing ITC from the originating (or terminating) operator or build out interconnect links and provide ITC itself (although establishing interconnect links is only justified at larger volumes of traffic). and
- An operator purchasing ITC could switch to purchasing ITT, if there was a transit operator present between the originating and terminating operators switches. ITT involves the cost of an extra switching stage but this cost is less significant over larger volumes and longer distances.

Supply-side substitution

- 9.11 Ofcom considers that there is supply substitution between ITT and ITC for the following reasons:
- an operator who provides ITC to several other operators and has an extensive interconnected network, would easily be able to offer ITT; and
 - an operator offering ITT would be able to provide ITC for calls originating and terminating on its own network.
- 9.12 Ofcom considers that the terms of competition in ITC and ITT are such that each service provides a competitive constraint on the pricing of the other. Therefore, ITT and ITC services are part of the same market. This is consistent with the conclusion that Ofcom reached in its review of the market in 2005⁷⁰ in deregulating BT's supply of ITC and ITT.

Substitution between ITC/ITT and ST

Demand-side substitution

- 9.13 There is limited substitutability on the demand side between ST and ITC/ITT. Currently, ITC/ITT prices are about three times higher than ST prices. This implies that if a hypothetical monopolist implemented a SSNIP in ST, other CPs requiring ST would be unlikely to switch to ITC/ITT as a result of the SSNIP. They may consider interconnecting directly between themselves depending on the relative cost of such alternative, but would be unlikely to switch to purchasing ITC/ITT.

Supply-side substitution

- 9.14 In the previous review, ST and ITT were found not to be substitutes on the supply-side. For an ITC/ITT provider, there were substantial sunk costs associated with providing the different interconnections needed for supplying ST services. This is because, to obtain single transit rates, a CP would need to be interconnected to the same transit exchange as the terminating CP. Therefore it is likely that a higher degree of interconnection is required to achieve ST than is required for ITC/ITT.
- 9.15 However, there is now a higher degree of interconnection between CPs. Several CPs, (for example, C&W and Virgin Media) interconnect to 40 or more other CPs. BT has provided data showing transit traffic over its network between mobile operators. It shows that for some pairs of mobile operators' traffic transiting via BT has fallen sharply. Given the increasing trend in mobile traffic volumes, this indicates that an alternate route has been found (either direct interconnection or transit via a third party). BT has also provided data of around 50 CPs to which it sends traffic via a transit provider. The increased pressure faced by BT is evidenced by the fact that BT cut its uniform national prices for single transit by 66% in 2008 as discussed below.
- 9.16 CPs that provide transit services, other than BT, have indicated to Ofcom that they do not necessarily price services as single transit or inter-tandem transit. They are more likely to base the charges for the service on the type of traffic (fixed geographic, mobile, international). BT is the only CP providing single transit and inter-tandem transit products.

⁷⁰ Review of BT's network charge controls, 18 Aug 2005
(<http://www.ofcom.org.uk/consult/condocs/charge/statement/>)

- 9.17 The above means that not only are competing CPs able to substitute direct interconnection for ST but also that switching the supply of ITC/ITT to ST has become relatively easier. If a hypothetical monopolist was to increase its prices for ST by 5-10%, CPs that are not directly connected could switch to transit services – either ITC/ITT or ST - provided by a CP to which they both connect.

Impact of NGN

- 9.18 Once BT has completed its migration to 21CN, CPs will connect to BT at the POSIs. In addition, they are likely to retain direct interconnections between their own networks and it may be that direct interconnection becomes more efficient, since a single network connection can support multiple traffic types (as for the MSILs to connect to BT).
- 9.19 Given the reduced number of points of interconnection to BT, transit traffic is more likely to be single transit (e.g. single POSI transit) than inter-tandem transit (e.g. multiple POSI transit).

Geographic market

- 9.20 BT's charges for ITC, ITT and single transit are geographically uniform with the exception of the Hull Area where BT does not have a network. BT's uniform pricing means that any response by BT to competition in a given area in the form of lower prices would apply throughout the country, excluding the Hull Area. This national common pricing constraint suggests that the geographical extent of the relevant markets should be regarded as the whole of the UK excluding the Hull Area and the Hull Area. Therefore, it is appropriate to define a national market excluding the Hull Area where a single national pricing constraint holds.
- 9.21 If, in the event of a removal of non-discrimination obligation for Single Transit BT was to price differently in different geographic areas, the geographic market definition might have to be reconsidered. However, since transit services are focused on the tandem layer of exchanges, there is less likely to be an argument for geographic differences in pricing. The high degree of interconnection at the BT tandem layer would make it impractical to manage different rates, since CPs could easily re-route traffic to take advantage of the lower transit rates.
- 9.22 The only network provider in the Hull Area is KCOM. The product market in the Hull Area is different from the rest of the UK and KCOM does not provide ITC, ITT or single transit services. The product market in the Hull Area has been explained in Chapter 6.

Initial conclusions on the wholesale markets definition

- 9.23 For the reasons mentioned above, Ofcom considers that there exists one transit market that includes ITC, ITT and Single Transit services. While there is limited demand-side substitution between ITC/ITT and ST, there is evidence of substitution on the supply side which is strong enough to suggest that these services are in the same market.

Question 9.1: *Do you agree with Ofcom's assessment that there is a single market for conveyance and transit services at the tandem layer in the UK excluding the Hull Area? If not, please explain why.*

Market power assessment in ITC/ITT/ST

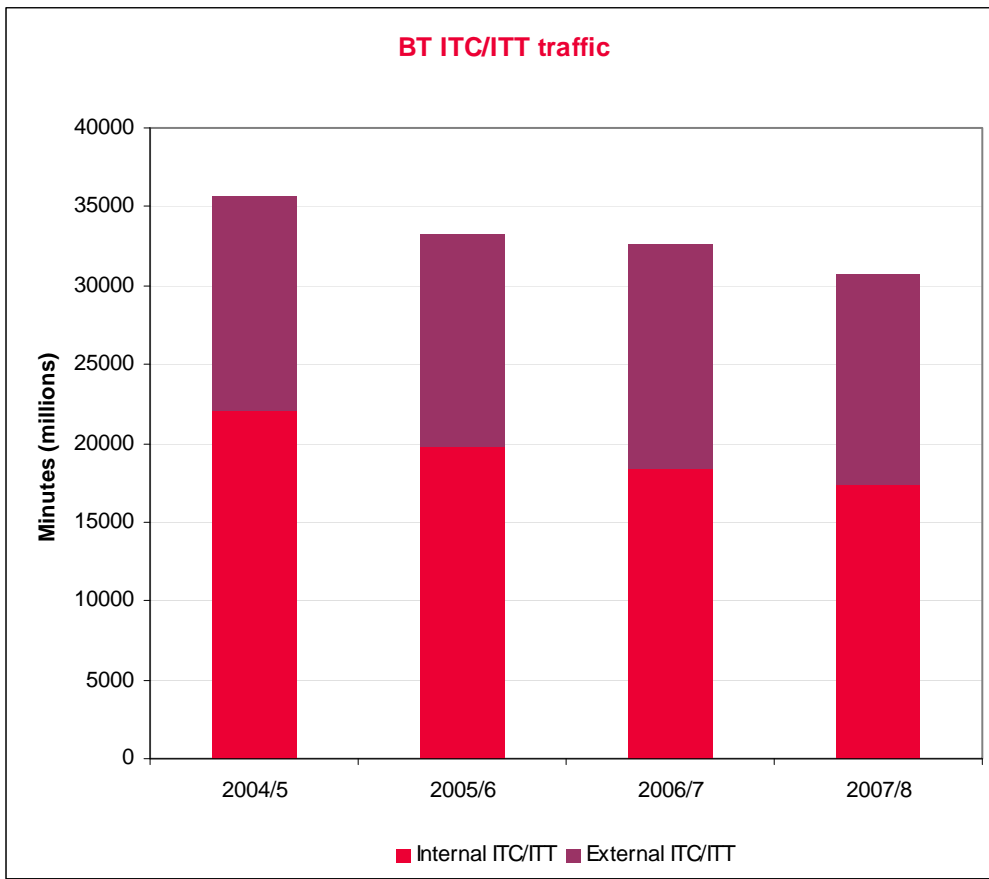
Market share analysis

- 9.24 BT has provided data for ITT/ITC and ST. Other CPs have provided some data but, since ITT/ITC and ST are largely products defined around the BT network and are not supported in the same way by these other CPs, interpreting this data and comparing to BT's data is often problematic.
- 9.25 BT has provided Ofcom with its estimate of its market share in the transit market. This suggests that BT has been losing market share and that its share of the transit market is significantly less than 50% and continuing to fall. However, Ofcom has not attempted to estimate the size of the market because of data issues and therefore cannot estimate market shares for BT and competing CPs. Market size is a function of both the total volume of inter-CP traffic and the degree to which these CPs have direct interconnection and therefore do not use transit products.
- 9.26 Furthermore, assessing dominance on the basis of market share data alone for transit services may be mis-leading since traffic may be removed from the market if direct interconnection is more attractive. (The same issue arose in the LTC market.)
- 9.27 We have nevertheless conducted an analysis of the submarkets based on the data available to us to check whether BT's estimation provided above is consistent.

ITT/ITC

- 9.28 As it can be seen from Figure 9.2 BT's ITC/ITT traffic has been declining since 2005.

Figure 9.2 BT's ITC/ITT trends



Source: Ofcom/BT data

9.29 Ofcom has also estimated BT's market shares for ITC/ITT, which are presented below in Table 9.3. BT's market share has declined from 60% in 2003/04 (Ofcom's estimate in the 2003 review) to around 43% in 2007/08. Ofcom was not able to estimate market shares between 2003 and 2006 because of gaps in the data provided by some CPs.

9.30 The market shares in Table 9.3 appear to be consistent with BT's suggestion that its share of the transit market is declining. It suggests that there is competition for ITC/ITT traffic, with other strong competitors to BT.

Table 9.3: BT share of ITC/ITT minutes

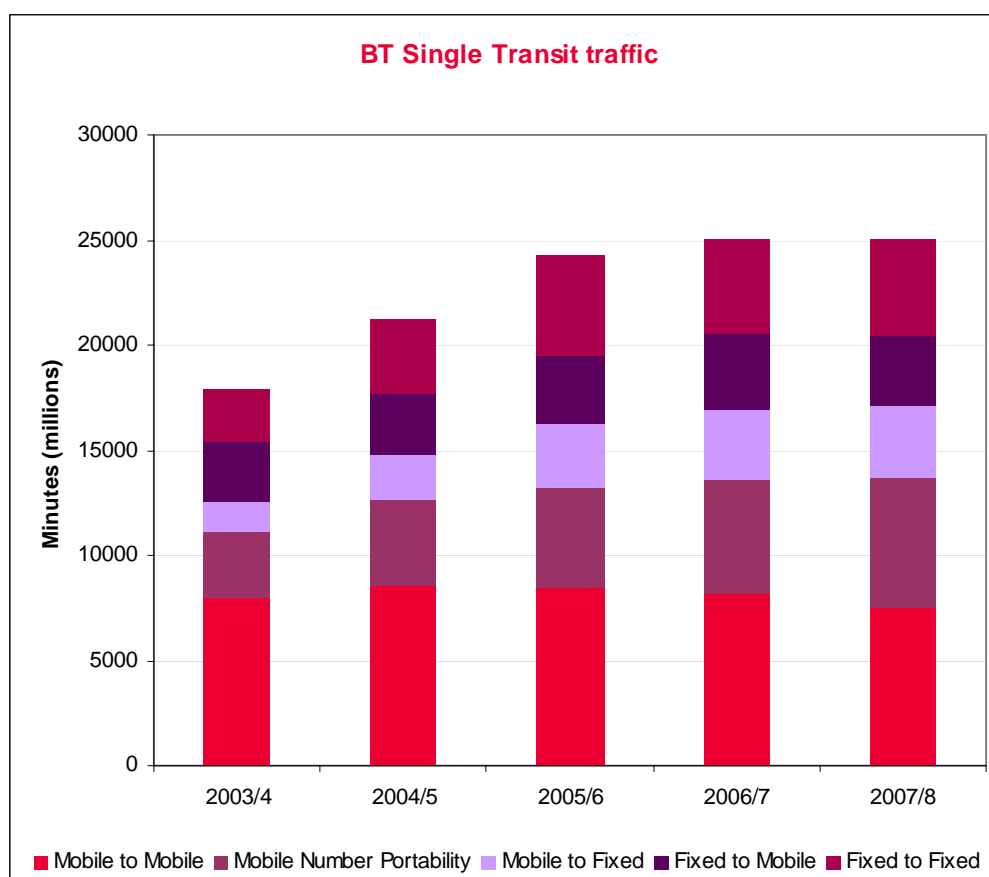
	2006/07	2007/08
BT share	47%	43%

Source: Ofcom

Single Transit

9.31 For Single Transit, BT's traffic volume has generally increased consistently since the last review. This trend would seem *prima facie* inconsistent with BT's suggestion that its share of the transit market is falling. BT has however argued that although its traffic volume for ST has been increasing, the total volume in the market has been increasing more quickly, mainly because of traffic between mobile operators. Figure 9.4 below shows that traffic between mobile operators makes up a considerable portion of ST on BT's network.

Table 9.4: BT single transit minutes



Source: Ofcom/BT data

9.32 Ofcom recognises that, in total, mobile to mobile traffic has grown substantially. As well as routing via BT, this traffic could route between the mobile CPs directly or transit via other CPs (e.g. C&W).

9.33 Ofcom also notes that in the data presented above, other traffic streams (fixed to fixed and traffic between fixed and mobile networks) have either remained constant or shown slight growth.

9.34 However, as said earlier, Ofcom does not currently have complete data on ST to accurately estimate BT’s market share in the wider transit market.

Barriers to entry

9.35 A number of factors need to be examined to analyse whether BT has SMP in the supply of these products and in particular how significant is the risk that BT might be able to raise prices selectively to some CPs if the non-discrimination requirements were to be removed:

- limited interconnection to BT may allow BT to price discriminate its ITC, ITT or ST services;
- limited interconnection between CPs may restrict their ability to avoid BT’s transit services; or

- specific traffic types may restrict CPs to buying transit services from BT.

9.36 We consider each of these potential concerns in turn.

Limited interconnection to BT's tandem exchanges

- 9.37 There are a number of CPs with a high level of connectivity to BT's tandem exchanges. BT has provided data that shows that the ten CPs with the highest level of interconnection interconnect at over 40 tandem exchanges. Whilst there are more tandems (67 giving full national coverage plus additional tandems providing regional coverage), a CP needs to interconnect to 35 – 40 tandems in order to reach every DLE using LTC (as opposed to needing to purchase LTC+ITC from BT). This degree of interconnection increases significantly the proportion of transit traffic that can be routed as single transit, since the terminating CPs with large traffic volumes will similarly be interconnected at many switches. There is a high likelihood therefore that large CPs are all interconnected at a common set of BT's tandem exchanges.
- 9.38 With this degree of interconnection in place, these CPs are able to route their traffic to get the lowest transit price from BT. They can also use their ability to get the lowest transit prices from BT in offers to CPs with lower BT interconnection (essentially creating a case where there are two transit providers). This means BT is less able to raise prices for CPs with lower levels of interconnection.
- 9.39 We discuss in the next sub-section the degree of interconnection between CPs to analyse whether this is practical.

Limited interconnection between CPs

- 9.40 Interconnection between two CPs other than BT can be achieved in several ways. Either one of the two may provide infrastructure to connect the two together or leased circuits may be purchased from other CPs. This may be BT if one or both CPs are in relatively remote locations. However, within city centres, there may be multiple options for purchasing capacity.
- 9.41 In addition, the two CPs may agree to interconnect at a mutually convenient location, such as at a telehouse facility.
- 9.42 As shown above, the volumes of traffic carried by BT using its Single Transit product are large. For example, traffic between fixed network CPs is currently over 300 million minutes per month. This traffic is very likely to be concentrated between a limited number of the larger CPs. Direct interconnection between these CPs would carry large volumes of traffic and so could be efficiently implemented.
- 9.43 Similarly, traffic between mobile network operators is over 600 million minutes per month plus an additional 550 million minutes related to mobile number portability. Given that there are five mobile networks, it is clear that there is likely to be sufficient traffic volumes to justify efficient direct interconnection.
- 9.44 Absent de-regulation, it is likely BT will want to keep traffic on its network to achieve lower unit costs. It is reasonable to expect, therefore, that rather than increasing prices to larger CPs, which may drive substitution with direct interconnection, BT will aim to offer competitive prices to these CPs.
- 9.45 For small CPs, whilst the volume of traffic they have to exchange with any single large CP other than BT may be relatively small, interconnection to a CP other than

BT may be attractive. The smaller CP is potentially able to reduce its call charges because sending traffic via BT will mean a high proportion of traffic incurs expensive inter-tandem rates. Conversely, a large alternate CPs can offer a competing transit services based on all their direct interconnection including to BT at the DLE level. The small CP will incur the cost of interconnection to the transit provider but potentially can save the cost of interconnecting to BT (which is likely to be realised via CSI links). Larger traffic volumes will increase the large CPs efficiency gain. Both the large and the small CP will benefit from this.

- 9.46 Absent de-regulation, BT may have the incentive to attempt to provide a similar solution to the smaller CP by pricing competitively to maintain volumes on its network.

Pricing and profitability

- 9.47 There is currently a charge control on ST. BT's rates are presented in Table 9.5 below. Recent evidence on BT's revenues and pricing for ST suggests that BT is facing strong competitive pressures. BT has provided Ofcom with data that shows on some very large transit routes, such as between mobile network operators, there have been steep declines (to zero in some cases). Given the general growth in mobile usage, this is inconsistent and indicates that alternates to BT provided Single Transit are developing in the market. While the average BT rates for ST services have remained roughly constant in 2003-2007, they have been cut by 66% in 2008.

Figure 9.5: BT rates for Single Transit

Effective Date	Daytime (ppm)	Evening (ppm)	Weekend (ppm)
2003/04	0.0798	0.0365	0.0288
2004/05	0.0798	0.0365	0.0288
2005/06	0.0833	0.0381	0.03
2006/07	0.076	0.0348	0.0274
2007/08	0.0698	0.0319	0.0252
2008/09	0.0238	0.0109	0.0086

Source: BT⁷¹

- 9.48 BT's rates for ITC and ITT have remained relatively flat between 2003 and 2008 although ITT rates have seen a very modest increase year on year⁷². Note that rates have remained constant despite no remedies (in particular, a charge control) being imposed on BT since 2005, and falling volumes (which implies higher average cost). This is consistent with the existence of competitive constraints on BT's prices.
- 9.49 The above suggests that BT faces some constraints on its pricing of both ITT/ITC and ST services. For ST, the substantial decrease in prices in 2008 is consistent with strong competition created by a higher level of interconnection at tandem switches (both with BT and other CPs) and increased mobile traffic.

71

http://www.btwholesale.com/pages/downloads/service_and_support/pricing_information/carrier_price_list_browser/C2.rtf

⁷² We do not present here the rates for ITC/ITT as there are 6 tables differentiated by ITC/ITT, Day/evening/weekend and short/medium/long conveyance. These rates can be found at:

http://www.btwholesale.com/pages/downloads/service_and_support/pricing_information/carrier_price_list_browser/C1.rtf

Economies of scale

- 9.50 There are significant economies of scale that characterise fixed communications networks, where unit costs can be minimised at large levels of volume. In particular, for CPs to exploit economies of scale, they must be able to achieve a high utilisation of their interconnect links which is only possible with large volumes of traffic.
- 9.51 There are several large CPs with relatively large volumes and a high degree of interconnection to BT and other CPs that take advantage of scale in this market and act as competitive constraints to BT.

Countervailing buyer power

- 9.52 Ofcom recognises that the increasing mobile traffic that transits on fixed networks, combined with the existence of a number of substitution alternatives (including direct interconnection between mobile operators) imply that some mobile operators may be able to exert countervailing buyer power, especially for ST.

Additional considerations

- 9.53 Similar concerns regarding the pricing of number portability and NTS traffic as those discussed in LTC have been raised to Ofcom. We consider that the arguments set out in section 8 relate also to the services discussed here.

Summary of conclusions on significant market power in wholesale transit markets

- 9.54 Having reviewed all the evidence currently available, Ofcom is of the view that, on balance, no CP has SMP in the transit market defined as including ITC, ITT and ST.
- 9.55 This is based on our assessment that, even for traffic to/from small CPs and for specific traffic types where there may be reliance on transit via BT, constraints imposed by the wider market are usually sufficient to limit BT's ability to differentially price for these particular types of traffic. It would not seem proportionate to continue regulating the single transit market and restrict competition in this market simply because there might be a few instances where competing CPs might not be able in the short term to find alternative to BT's single transit product.
- 9.56 We are of the opinion that *ex post* competition law provides the appropriate mechanism to address any specific cases where the wider market conditions do not provide sufficient constraint on BT's behaviour.

Question 9.2: *Do you agree with Ofcom's assessment that BT does not have SMP in the market for conveyance and transit services at the tandem layer? If not, please explain why.*

Relationship between the wholesale market definition and the Commission's Recommendation on product and service markets.

- 9.57 In Chapter 4 we have explained what we must do before making a market determination and that Ofcom must take due account of the Commission's recommendations.

- 9.58 The Commission has not included a market for transit services in the products and services markets identified in its current Recommendation, having previously defined the following market in the 2003 Recommendation.

Transit services in the fixed public telephone network (formerly market 10 in the 2003 Recommendation)

- 9.59 The removal of the market from the list published by the Commission indicates that the Commission no longer presumes that, in principle, *ex-ante* regulation is warranted for this market. This does not mean, however, that NRAs are not in a position after an analysis of the relevant market and the finding of SMP to impose regulatory remedies in these markets, should the national circumstances justify such a step and whilst taking due account of the Commission's SMP Guidelines and Recommendation.
- 9.60 Although Ofcom found the inter-tandem conveyance (ITC) / inter-tandem transit (ITT) market competitive in the 2005 review '*Review of BT's Network Charge Controls*', we still found SMP in Single Transit market, and found that it was necessary to impose regulation. Given the current continued regulation we are required, under the Act, to carry out a further analysis of the market to review the market power determination.
- 9.61 We are proposing, following our review of wholesale transit services a market definition that encompasses both the currently defined Single Transit market and the Inter-tandem conveyance / inter-tandem transit markets.
- 9.62 As Ofcom is proposing a market definition outside of those contained within the Commission's Recommendation, careful consideration has been given to the three criteria set out in the EM (section 2.3) namely:
- Barriers to entry and to the development of competition;
 - Dynamic aspects – no tendency towards competition; and
 - Relative efficiency of competition law and complementary *ex ante* regulation.
- 9.63 In particular in considering the first two of the cumulative criteria, we have considered the barriers to entry at paragraph 9.35 to 9.46 above. We have discussed market share, economies of scale, countervailing buyer power and pricing and profitability at paragraphs 9.24 to 9.56 above, and are of the provisional view that the market dynamics are such that, for the wholesale transit services market that the three criteria test is not met on the basis of either the first or second tests.
- 9.64 As the first two tests are not, on our analysis, satisfied we would not necessarily need to consider whether the third test was satisfied, however, we have considered specifically the efficiency of competition law at paragraph 9.56 above. We identified that, although we propose that the LTC / LTT market is effectively competitive some CPs may be affected by price rises as a result of deregulation. In these circumstances we consider that *ex post* regulation would be an appropriate way to address any specific cases, and therefore, in relation to the third of the Commission's criteria we consider that it is not met.
- 9.65 We are proposing that the wholesale transit services market is effectively competitive and therefore *ex ante* regulation is not appropriate.

Section 10

Interconnection circuits and PPP

Introduction

10.1 In this section we address two areas that we do not consider to be markets but are related to the provision of regulated products in the markets previously discussed. These are:

- Interconnection circuits; and
- BT’s Product Management, Policy and Planning (PPP) activities related to regulated products. This includes administration overheads, marketing activities directly related to the regulated products, customer service management for these products and billing and finance activities.

10.2 We propose that the following remedies should be imposed in these areas:

Figure 10.1: Proposed remedies for interconnection circuits and PPP

	BT obligations	KCOM obligations
Interconnection circuits	Requirement to provide network access on reasonable request Requests for new network access Requirement not to unduly discriminate Basis of charges Requirement to publish a reference offer Requirement to notify charges, terms and conditions Requirement to notify technical information Cost accounting Accounting separation Transparency as to quality of service Charge control	Requirement to provide network access on reasonable request Requirement not to unduly discriminate Basis of charges Requirement to publish a reference offer Requirement to notify charges, terms and conditions Requirement to notify technical information Cost accounting Accounting separation
PPP	Charge control	

Interconnection Circuits

10.3 In this section we address interconnection circuits. Interconnection circuits provide the facilities to allow calls to be routed between the networks of different CPs.

10.4 Interconnection circuits are not identified within the Commission’s recommendation on products and service markets as a market that should be considered for ex ante regulation⁷³. However, paragraph 5 of Section 2.6 of the EM states:

⁷³ http://ec.europa.eu/information_society/policy/ecommm/doc/library/proposals/rec_markets_en.pdf

“In principle, the proposed obligations should pertain to the relevant product market in which SMP has been found. However, in dealing with lack of effective competition arising from a position of SMP in an identified market, it may be necessary to impose several obligations to remedy the competition problem relating to services both inside and outside the market. In principle, an NRA may impose obligations in an area outside but closely related to the relevant market under review, provided such imposition constitutes:

- the most appropriate, proportionate and efficient means of remedying the lack of effective competition found on the relevant market; and
- an essential element in support of obligation(s) imposed on the relevant SMP market without which those obligations would be ineffective.”

10.5 In this section we explain that we consider it is appropriate to require BT and KCOM to provide interconnection services based on the initial conclusions that they have SMP in the following markets:

- wholesale call origination on fixed public narrowband networks; and
- wholesale call termination on fixed public narrowband network.

Reasons for requiring the provision of interconnection circuits

10.6 We consider that it is appropriate to require BT to provide interconnection circuits in addition to the remedies we discuss in the following sections 11 – 17 in order to make these remedies effective. We consider that without an obligation to provide interconnection circuits, the remedies required in the wholesale call origination and call termination markets imposed on BT are unlikely to be effective. This is because without the obligations to provide interconnection circuits as set out in this section BT could restrict access to the proposed call origination and call termination remedies.

10.7 For similar reasons, we consider it is appropriate to require KCOM to provide interconnection within the Hull Area.

10.8 In this review we have determined that other CPs have SMP in call termination. However, we do not consider it is appropriate to require these CPs to provide interconnection circuits. BT and KCOM have ubiquitous network coverage in the geographic areas where they have SMP, whereas other CPs do not. Therefore, the interconnection circuits to be provided by BT and KCOM are required to provide other CPs with a mechanism for reaching all the points in the BT or KCOM network to which they need to interconnect in order to efficiently use the services provided by BT and KCOM. As other CPs do not have the same scale of network, it would not be reasonable to expect them to provide interconnection circuits.

10.9 Irrespective of the obligations imposed as a result of this market review, all CPs have a general requirement related to interconnecting with other networks. General Condition 1 of General Conditions of Authorisation states:

“The Communications Provider shall, to the extent requested by another Communications Provider in any part of the European Community, negotiate with that Communications Provider with a view to concluding an agreement (or an amendment to an existing agreement) for Interconnection within a reasonable period.”

Description of interconnection circuits

- 10.10 An interconnection circuit connects the exchanges (switches) of two CPs in order to allow traffic to pass between them. Some CPs may use leased lines to provide the transmission facilities between their locations. However, interconnection circuits differs from leased lines since they include switch ports and, where required, signalling termination.
- 10.11 BT supports three types of interconnection circuit:
- In Span Interconnection (ISI): to provide ISI, a CP builds its own network up to a Point Of Connection (POC), generally located just outside the BT exchange. BT then connects its network to the POC;
 - Interconnect Extension Circuit (IEC): IECs build out from a POC provided via ISI as above, and allow CPs to extend their interconnection network beyond the building to which they have built their own network; and
 - Customer Site Interconnection (CSI): CSI does not require any infrastructure build by the CP. Instead, BT builds to the CP's site. Once the build is complete, the CP can use this BT-provided infrastructure to interconnect to other BT exchanges.
- 10.12 CPs with larger networks and larger traffic volumes are likely to provide some or all of their interconnection via ISI. This minimises the payment to BT. Of course, this approach will incur by far the highest costs for the CP for initial build. CPs can also buy Nominated ISI from BT. This is similar to an ISI connection, except that BT builds out its network some way in order to meet the CP's network. The CP pays for this extension from the BT exchange to the nominated POC.
- 10.13 Once a CP has established ISI to a particular BT exchange, it can use this, in conjunction with an IEC, to connect to other BT exchanges. The extent to which IECs can be used to extend reach is restricted based on the structure of the BT network (IECs can only be used to connect two exchange buildings if transmission links already exist in the BT network between them) and geography. IECs incur fixed installation and annual rental charges as well as distance-related rental charges.
- 10.14 CPs that have not built ISIs use CSIs to connect to BT exchanges. It reduces the up-front cost of interconnection. BT provides the CSIs to the CP's location. CSIs incur fixed installation and annual rental charges as well as distance-related rental charges.
- 10.15 KCOM provides ISI and IECs. It does not provide CSI. Ofcom considers it would not be reasonable to require KCOM to provide CSI build-out to other CPs, given its limited network footprint outside of the Hull Area.
- 10.16 Ofcom considers that all three (or, in the case of KCOM, two) delivery methods are required because:
- not all CPs are of sufficient size to deploy ISI. To meet the requirements of these CPs, CSI is required;
 - if only CSI was available, larger CPs would not be able to take advantage of their own infrastructure deployments to provide interconnection. Therefore, ISI is required; and

- IECs allow CPs to more efficiently use the ISIs they have deployed. They may help justify building ISIs which would not be economic if they were limited to providing interconnection only to the exchange to which they connect.

Virtual Interconnection Circuits (VICs)

- 10.17 BT provides a fourth type of interconnection called Virtual Interconnection Circuits (VICs). VICs allow a CP to access the DLEs connected to a tandem switch through the tandem without paying LTC rates.
- 10.18 VICs were introduced to assist the run up and migration to 21CN. The announcement of 21CN and subsequent delays to the programme has meant CPs have been unable to forward plan their requirements for DLE interconnection, since the lifetime of any related investment is uncertain. VICs allow CPs to realise DLE interconnection rates during this period of uncertainty.
- 10.19 VICs provide an interconnection using one of the methods outlined above (ISI, CSI or IEC) to a tandem exchange. A virtual circuit is then provided across the existing BT network to the DLE, based on traffic volumes. The CP then pays the rates for conveyance that would be charged by BT if there was a physical interconnection at the DLE. VICs are charged based on the costs of the underlying interconnection. Therefore, if a CP uses ISI to connect to a tandem exchange and extends reach to a DLE, the interconnection circuit is charged as per ISI rates to the tandem, and traffic is charged at the DLE rates. VICs are however restricted: the CP can only connect to DLEs that have a direct route to the tandem exchanges to which the CP is connected.
- 10.20 VICs have been widely deployed. 21CN voice services are currently only available within the Pathfinder trial taking place in South Wales. However, DLEs outside this area have been migrated in preparation for the rollout of 21CN. This has led to CPs having Migration VICs in place to these DLEs.
- 10.21 In addition, CPs have been deploying VICs to DLEs not included in the initial phases of migration. These Business As Usual VICs have been used by CPs to continue to develop DLE interconnection against the backdrop of uncertainty in relation to the lifetime of each DLE.
- 10.22 VICs were agreed through commercial negotiations between BT and CPs without intervention from Ofcom. They were put in place to support migration to 21CN but have been used more widely. BT has indicated that some CPs have sought to move all their DLE interconnects, but this is not technically possible due to capacity constraints at the NGS switches.
- 10.23 As the underlying components are based on the regulated interconnection circuits, Ofcom does not propose to regulate VICs at this time. Ofcom is currently of the view that the ongoing use of VICs should be agreed by BT with industry as part of the 21CN voice strategy discussions.

Next generation networks (NGNs)

- 10.24 Interconnection between NGNs is realised at the IP layer. BT has already launched an NGN interconnection product called Multi Service Interconnect Link (MSIL). The MSIL allows different services to be supported on the same physical interconnection link. Capacity on the link is segregated by service.

- 10.25 In Section 3 we have discussed some of the products proposed by BT on 21CN. These different products use the same MSILs. These MSILs may also be used by other products in markets where interconnection is not regulated.
- 10.26 However, as different products are supported within the MSIL on separate SVLANs, the capacity assigned to voice products can be determined. The underlying mechanism for delivery – In Span Handover or Customer Sited Handover – matches the ISI and CSI mechanisms used today.
- 10.27 Ofcom therefore proposes that interconnection to 21CN using In Span or Customer Sited handover for voice interconnection should be regulated.
- 10.28 Ofcom does not envisage there to be a 21CN equivalent of IECs, given the reduced number of points at which interconnection needs to be realised. Whilst CPs may request BT to provide a product that extends interconnection to the full 27 POSIs from a reduced number of these POSIs, Ofcom does not propose to place obligations on BT regarding the provision of such a service.

Summary

- 10.29 Interconnection circuits are required to allow CPs to effectively use the products that BT and KCOM are obliged to provide. Different mechanisms for delivering interconnection circuits allow CPs to use their own infrastructure deployment efficiently to reduce costs whilst also allowing interconnection at remote sites where own-build would be prohibitively expensive.
- 10.30 Without an obligation to provide these circuits, BT and KCOM would be in a position to restrict the effectiveness of the remedies implemented in various markets where they have been found to hold SMP.

Question 10.1: *Do you agree with Ofcom's assessment that BT and KCOM should be required to provide interconnection circuits? If not, please explain why.*

Remedies

- 10.31 Ofcom proposes to impose a number of remedies on BT and KCOM in relation to interconnection circuits. These are discussed in the following sections of this consultation as outlined below.
- 10.32 We propose the following general remedies should be imposed on BT and KCOM:
- requirement to provide network access on reasonable request;
 - requirement not to unduly discriminate;
 - requirement to publish a reference offer;
 - requirement to notify charges, terms and conditions;
 - requirement to notify technical information;
 - cost accounting; and
 - accounting separation.

10.33 These remedies are discussed in Section 11.

10.34 In addition, we propose the following remedies should be imposed on BT:

- transparency as to quality of service: we discuss this in Section 11;
- requests for new network access: we discuss this in Section 11;
- Charge control: we discuss the charge control to be imposed on BT for interconnection circuits in Section 16.

Product Management, Policy and Planning (PPP)

10.35 BT makes a product management, policy and planning (PPP) surcharge to cover its administrative costs in dealing with interconnection relationships in narrowband markets. The charge covers BT's internal costs in managing such relationships over and above the charges that it incurs for actually conveying and switching calls across its network. At present, the PPP charge is currently levied on a once per call minute basis in the following markets:

- call origination on fixed public narrowband networks;
- local-tandem conveyance and transit on fixed public narrowband networks;
- single transit on fixed public narrowband networks; and
- fixed geographic call termination.

10.36 Any competing provider purchasing any of the above services individually, or in any combination, is required to pay the PPP surcharge on a once per minute per call basis. In markets in which BT has SMP, the surcharge therefore covers one part of BT's costs (i.e. its administrative costs) in handling such calls, in the same way as the local exchange processor covers BT's costs in switching the call. Any competing provider wishing to offer retail services to BT's customers via carrier pre-selection or carrier selection or needing BT to terminate calls on its network is required to pay PPP. Therefore, to the extent that BT maintains SMP in these markets, the competing providers have little alternative but to pay BT to either originate or terminate, and to pay BT PPP. In competitive markets, competing providers could choose to purchase conveyance services from alternative providers and a portion of the charge they would pay would directly or indirectly be attributable to a function of a similar nature to BT's PPP activity.

10.37 Ofcom removed regulation in the inter-tandem conveyance and transit market in 2005. At that time we said, in relation to PPP:

“Ofcom is proposing that BT does not retain SMP in the market for inter-tandem conveyance and inter-tandem transit. With the consequent lifting of all SMP conditions in that market, BT would not therefore have to publish its charges for either service, nor would it be required to set out in its regulatory financial statements the costs associated with either of these products, including the PPP costs attributed to them. Therefore, for inter-tandem conveyance and transit services, the PPP cost would not need to be separately published. Nonetheless, in the absence of SMP in that market, Ofcom would expect competition to constrain BT's ability to price in

excess of costs - including any element of PPP-type costs incurred in selling ITT and ITC. Ofcom would continue to regard ITT and ITC charges as including an element to allow for PPP cost recovery for the purposes of setting the PPP charge.”

10.38 As explained in Section 8 and 9 above, Ofcom is proposing that BT does not retain SMP in the markets for local-tandem conveyance/local-tandem transit or single transit. With the consequent lifting of all SMP conditions in that market, BT would not therefore have to publish its charges for these services, nor would it be required to set out in its regulatory financial statements the costs associated with these products, including the PPP costs attributed to them. Nonetheless, in the absence of SMP in these markets, Ofcom would expect competition to constrain BT’s ability to price in excess of costs - including any element of PPP-type costs incurred in selling these services. Ofcom will continue to regard that the charges for these services include an element to allow for PPP cost recovery for the purposes of setting the PPP charge.

10.39 Therefore, Ofcom proposes to impose a charge control on the setting of the PPP charge that is currently levied on a once per call minute basis in the following markets:

- call origination on fixed public narrowband networks; and
- fixed geographic call termination.

10.40 This is discussed in Section 16.

Question 10.2: *Do you agree with Ofcom’s assessment that BT’s product management, policy and planning (PPP) charge incurred in markets where it has SMP and in the provision of interconnection circuits should be regulated? If not, please explain why.*

Section 11

General Remedies

Introduction

- 11.1 This is the first of eight sections that deal with our approach to remedies in the markets in which we propose to find SMP.
- 11.2 In this section we consider whether it is appropriate to apply the following general remedies to the exchange lines markets, call origination, interconnection circuits and PPP:
- Requirement to provide network access on reasonable request;
 - Requirement not to unduly discriminate;
 - Basis of charges;
 - Charge control;
 - Requirement to publish a reference offer;
 - Requirement to notify charges, terms and conditions;
 - Requirement to notify technical information;
 - Transparency as to quality of service;
 - Requests for new network access;
 - Cost accounting; and
 - Accounting separation.
- 11.3 We have chosen to discuss remedies proposed for the call termination market in a separate section. This is because call termination is the only market in which remedies are applied to operators other than BT and KCOM. We consider remedies for the call termination market in the next section (section 12).
- 11.4 We have separated out product-specific remedies:
- WLR is discussed in Section 13;
 - carrier selection (CS) and carrier pre-selection (CPS) are discussed in section 14;
 - NTS call origination is discussed in section 15;
 - charge controls for analogue exchange lines, call origination, call termination, interconnection circuits, PPP and the NTS retail uplift charge are discussed in section 16;
 - price regulation of wholesale ISDN30 exchange lines is discussed in section 17; and

- the revocation of existing regulation is discussed in section 18.

Approach to remedies

- 11.5 Annex 6 provides a detailed outline of the legal framework for this review and we summarise here our approach in considering each possible remedy and the legal tests we must demonstrate that each proposed condition has met.
- 11.6 Under section 45 of the Act, Ofcom is empowered generally to set SMP services conditions authorised or required by sections 87 to 92. As discussed in paragraph A6.7, Ofcom must have regard to the Community requirements set out in section 4 of the Act.
- 11.7 In paragraph A6.45, we detail the requirements under section 47(2) of the Act that each remedy must satisfy, which is that: it is objectively justifiable, does not unduly discriminate, is proportionate and transparent.
- 11.8 Ofcom must also consider the relevant tests from section 87(4) outlined in paragraphs A6.46 to A6.47 and, in relation to price controls, section 88 which is outlined and discussed at paragraphs A6.48 – A6.54.
- 11.9 Finally, as discussed in paragraphs A6.55 to A6.57, Ofcom must take into account the ‘Revised ERG common position on the approach to appropriate remedies in the new regulatory framework’ publication when considering remedies in response to SMP findings.
- 11.10 We have also covered in paragraphs 4.35 to 4.49 when we consider ex ante regulation is necessary, as opposed to a reliance on ex post competition law.

Existing regulation

- 11.11 Table 3.2 of this consultation document provide an overview of the existing regulation in relation to the markets considered by this review.

Requirement to provide network access on reasonable request

- 11.12 In sections 5 and 6, Ofcom proposes to find that BT and KCOM have SMP in the exchange lines and call origination markets. In section 10, we also propose that interconnection circuits are so closely associated with the call origination and call termination markets they require regulation as a technical area. We therefore propose to retain a remedy requiring BT and KCOM to meet reasonable requests for network access in the wholesale exchange lines and call origination markets and for interconnection circuits.
- 11.13 Section 87(3) of the Act authorises Ofcom to set SMP services conditions requiring the dominant provider to provide network access as it may, from time to time, direct. These conditions may, pursuant to section 87(5), include provision for securing fairness and reasonableness in the way in which requests for network access are made and responded to, and that conditions are complied with within the periods and at the times required.
- 11.14 When considering the imposition of such conditions, Ofcom must have regard to the six factors set out in section 87(4) of the Act, including, inter alia, the technical and economic viability of installing other competing facilities and the feasibility of the proposed network access.

Aim of regulation

11.15 This remedy is designed to promote competition in downstream markets by requiring providers with SMP to provide wholesale access to their network facilities. The level of investment required by a third party to replicate BT and KCOM's networks in order to compete at this level is a significant barrier to entry. Ofcom considers that in the absence of such a requirement, the dominant provider would have an incentive not to provide access. The ability of competing CPs to gain wholesale access will facilitate the development of competition in retail markets.

Proposed condition

11.16 The proposed condition will require requests made to BT and KCOM for network access to be 'reasonable' requests. The condition will also require BT and KCOM to provide network access in response to such a reasonable request and that access should be provided on fair and reasonable terms, conditions and charges.

Interconnection

11.17 As discussed in section 10, interconnection is not identified within the Commission's recommendation on product and services markets as a market that should be considered for ex ante regulation. However, the Commission identified the need, in certain circumstances, to impose adjacent or related regulation in 'technical areas' as part of the overall, effective obligation to address SMP on the analysed market.

Legal tests

11.18 Ofcom has considered the Community requirements as set out in section 4 of the Act. The proposed obligation would promote competition in relation to the provision of electronic communications networks and encourage the provision of network access for the purpose of securing efficient and sustainable competition in markets for electronic communications networks and services.

11.19 We consider that the proposed condition meets the criteria set out in section 47(2) of the Act. The proposed condition is:

- objectively justifiable as its intention is to promote retail competition by ensuring third parties are able to acquire wholesale access on fair and reasonable terms where they are unable to replicate the networks of BT or KCOM;
- non-discriminatory as it is only imposed on those providers who are found to have SMP and all providers are subject to the same obligation;
- proportionate since without such an obligation BT and KCOM could refuse to provide access and this would mean other CPs would not be able to effectively compete in markets where Ofcom proposes BT and KCOM hold SMP, but does not require BT and KCOM to provide access where it is not technically feasible or reasonable; and
- transparent as it is clear the intention is to ensure that BT and KCOM provide access to their networks in order to facilitate competition.

11.20 The proposed condition would apply to the following markets in which our preliminary conclusion is that BT and KCOM have SMP, and relevant technical area:

- Wholesale analogue exchange line services;
- Wholesale ISDN2 exchange line services;
- Wholesale ISDN30 exchange line services;
- Call origination on fixed public narrowband networks; and
- Interconnection circuits.

Question 11.1: *Do you agree that Ofcom should impose a requirement to provide network access on reasonable request on BT and KCOM in the markets and technical area discussed? If not, please explain why.*

Requirement not to unduly discriminate

- 11.21 Ofcom proposes to retain the condition on BT and KCOM not to unduly discriminate in relation to the provision of network access.
- 11.22 Section 87(6)(a) of the Act authorises the setting of an SMP services condition requiring the dominant provider not to unduly discriminate against particular persons, or against a particular description of persons, in relation to matters connected with the provision of Network Access.

Aim of regulation

- 11.23 Where dominant providers are vertically integrated, like BT and KCOM, they may have an incentive to provide wholesale services on terms and conditions that favour their own retail activities, in a way that would have a material adverse effect on competition. In particular, they may charge competing providers more than the amount charged to their own retail activities for wholesale services, thereby increasing the costs of competing providers and giving themselves an unfair competitive advantage. They might also provide services on different terms and conditions, for example with different delivery timescales, which would disadvantage their retail competitors and in turn consumers.
- 11.24 An obligation to provide network access on its own is not adequate to promote downstream competition. In the absence of a requirement not to unduly discriminate, BT and KCOM could favour their own downstream businesses, which would have the effect of restricting or distorting competition in the retail market.
- 11.25 We have considered whether allegations or evidence of discriminatory behaviour could be adequately addressed through competition law. However, Ofcom considers that in order to meet our objective to promote efficient and sustainable competition at the wholesale level, a non-discrimination condition is necessary. This condition ensures that all parties are treated on an equitable basis, thereby creating the right environment for competition to develop.

Legal tests

- 11.26 Ofcom has considered the Community requirements as set out in section 4 of the Act. The proposed condition encourages the provision of network access and service interoperability for the purpose of securing efficient and sustainable competition in the retail markets for access and calls, by ensuring BT and KCOM do not unfairly favour their own retail businesses and therefore distort competition.

11.27 We consider that the proposed condition meets the criteria set out in section 47(2) of the Act. We believe the proposed condition is:

- objectively justifiable, as it provides a safeguard to prevent BT and KCOM from favouring their own retail businesses, to the disadvantage of their competitors;
- not unduly discriminatory as it is only imposed on those providers who are found to have SMP and all providers are subject to the same obligation;
- proportionate as it is intended to prohibit only undue discrimination, that is discrimination that would materially affect the ability of BT and KCOM's competitors to compete on equal terms; and
- transparent, as it is clear that its intention is to prevent undue discrimination.

11.28 The proposed condition would apply to the following markets in which our preliminary conclusion is that BT and KCOM have SMP, and relevant technical area:

- Wholesale analogue exchange line services;
- Wholesale ISDN2 exchange line services;
- Wholesale ISDN30 exchange line services;
- Call origination on fixed public narrowband networks; and
- Interconnection circuits.

Question 11.2: *Do you agree that Ofcom should impose a requirement not to unduly discriminate on BT and KCOM in the markets and technical area discussed? If not, please explain why.*

Basis of charges

11.29 We propose to oblige BT and KCOM to comply with a cost orientation condition, whereby charges must be on the basis of long run incremental costs plus an appropriate mark-up for costs which are common across products, and for recovery of the cost of capital. BT and KCOM are currently subject to a basis of charges condition in all markets and interconnection circuits except, wholesale residential ISDN2 and wholesale ISDN30.⁷⁴

11.30 Section 87(9) of the Act authorises the setting of SMP services conditions imposing on the dominant provider rules concerning the recovery of costs and cost orientation.

Aim of regulation

11.31 In a competitive market, the pricing of services on the basis of the commercial judgements of individual companies could be expected to deliver cost reflective pricing. However, where competition cannot be expected to provide effective constraints, ex-ante regulation may be desirable to prevent excessive pricing. Such intervention could also have as its objectives the aim of promoting efficiency and of allowing the development of effective competition in downstream markets.

⁷⁴ See section 17 where we discuss different options regarding our proposal to introduce pricing regulation on ISDN30.

- 11.32 Without some intervention in pricing, dominant providers have the ability to charge excessive prices in order to maximise profits by increasing their revenues. A concern regarding the follow on effect is that this impacts the cost base of competing providers who purchase wholesale services from that dominant provider. It could make it difficult for third party CPs to compete at the retail level with the dominant provider and in the long term, may result in market exit. In terms of the effect on the retail market, unjustifiably high wholesale charges are also likely to mean high retail prices, which indicates that consumers may be paying more for a service than they should expect if wholesale prices were constrained by effective competition.
- 11.33 LRIC plus an appropriate mark up for common costs and for recovery of cost of capital is the preferred method for this type of regulation in communications markets. This is because communications markets experience economies of scale and high sunk costs, which can potentially cause competition problems. Pricing strategies which do not reflect the need to recover high fixed sunk costs could deter market entry and could therefore restrict or distort competition in the retail market.
- 11.34 Ofcom needs to take a consistent approach to assessing cost orientation. This issue has recently been the subject of consultation within the Leased Lines Charge Control (LLCC)⁷⁵. Our view with regard to cost orientation with respect to wholesale fixed narrowband markets will be informed by the responses to the LLCC consultations and decisions taken in that area. We will provide further clarity in our final statement, including any guidance on our approach to enforcement where appropriate.

Legal tests

- 11.35 Ofcom has considered the Community requirements set out in section 4 of the Act. In particular, the proposed condition promotes competition and secures efficient and sustainable competition by ensuring that charges for wholesale services are at a level that enables operators to compete.
- 11.36 We consider that the proposed condition meets the criteria set out in section 47(2) of the Act. Ofcom considers the proposed condition is:
- objectively justifiable as it enables competitors to purchase services at charges that will enable them to develop competitive services to the benefit of consumers, while also allowing BT and KCOM a return to recover common costs and cost of capital;
 - not unduly discriminatory, as it is only imposed on both BT and KCOM and no other operator has SMP in these markets and all providers are subject to the same obligation;
 - proportionate as without such an obligation the price-setting behaviour of BT and KCOM would not be constrained by competitive pressure, allowing them to set charges which restricted the ability of other CPs to buy wholesale products that allow them to provide competitive products to consumers; and
 - transparent as it is clear the intention is to ensure that BT and KCOM charge on a cost-oriented basis.
- 11.37 Ofcom has also considered the tests set out in section 88 and believes the proposed obligation is therefore appropriate. Further to the arguments outlined above, there is

⁷⁵ *Leased Lines Charge Control*, 8 Dec 2008 (<http://www.ofcom.org.uk/consult/condocs/llcc/>)

a risk that, in situations where SMP is persistent, pricing will be distorted and not at competitive levels, as dominant providers are likely to want to charge excessive prices in order to maximise profits by increasing their revenues and the costs of competing providers. The proposed condition promotes efficient and sustainable competition and provides the greatest possible benefits to consumers by enabling competing providers to buy wholesale services at levels that might be expected in a competitive market.

- 11.38 The extent of investment of the dominant operator has been taken into account as set out in section 88(2), as the obligation provides for a mark-up for an appropriate return on capital employed.
- 11.39 The proposed condition would apply to the following markets in which our preliminary conclusion is that BT has SMP, and relevant technical area:
- Wholesale analogue exchange line services;
 - Wholesale ISDN2 exchange line services;
 - Call origination on fixed public narrowband networks; and
 - Interconnection circuits.
- 11.40 In regard to the provision of WLR, we discuss the elements of the WLR product that should be subject to this condition in Section 13.
- 11.41 The proposed condition would apply to the following markets in which our preliminary conclusion is that KCOM has SMP, and relevant technical area:
- Wholesale analogue exchange line services;
 - Wholesale ISDN2 exchange line services;
 - Call origination on fixed public narrowband networks; and
 - Interconnection circuits.

Question 11.3: *Do you agree that Ofcom should impose a requirement that BT's charges and KCOM's charges should be subject to a cost orientation obligation in the markets and technical area discussed? If not, please explain why.*

Question 11.4: *Do you agree with our approach on cost orientation? If not, please explain why, indicating in particular the mechanism you consider to be appropriate.*

Charge control

- 11.42 We discuss charge controls in Section 16.

Transparency

- 11.43 Ofcom considers that it is appropriate to ensure that there is transparency of charges, terms and conditions in a market in which one operator is dominant. In the absence of requirements obliging an SMP operator to publish information, the dominant provider might offer differential charges, terms and conditions to both its downstream division and also between providers. Third party providers would not be

able to check that they were being charged an equitable rate, or that the terms and conditions that they were offered were also equitable.

11.44 Section 87(6)(b) of the Act authorises the setting of SMP services conditions which require a dominant provider to publish all such information, and in such manner as Ofcom may direct, for the purpose of securing transparency. Section 87(6)(c) of the Act authorises the setting of SMP services conditions requiring the dominant provider to publish, in such manner as Ofcom may direct, the terms and conditions on which it is willing to enter into an access contract. Section 87(6)(d) also permits the setting of SMP services conditions requiring the dominant provider to include specified terms and conditions in the reference offer. Finally, section 87(6)(e) permits the setting of SMP services conditions requiring the dominant provider to make such modifications to the reference offer as may be directed from time to time.

11.45 We propose to impose the following obligations to provide transparency:

- requirement to publish a reference offer;
- requirement to notify charges;
- requirement to notify technical information; and
- transparency as to quality of service.

Requirement to publish a reference offer

11.46 Ofcom proposes to require BT and KCOM to publish a reference offer (RO) for services and products offered in markets in which they hold SMP.

Aim of regulation

11.47 The main reasons for requiring the publication of a RO are to assist with transparency in monitoring for potential anti-competitive behaviour and to give visibility to the terms and conditions on which other providers would be able to purchase wholesale access services. The publication of a RO would therefore help to ensure stability in markets and that incentives to invest would not be undermined.

11.48 The publication of a RO would allow for speedier negotiations and might avoid possible disputes. Together with a non-discrimination requirement, the publication of a RO would give confidence to those purchasing wholesale services that they were being provided on non-discriminatory terms.

Proposed condition

11.49 Ofcom considers that it is appropriate for the published RO to include:

- a clear description of the services on offer;
- terms and conditions including charges and ordering, provisioning, billing and dispute resolution procedures. The RO should provide sufficient information to enable providers to make technical and commercial judgements such that there is no material adverse effect on competition;

- information relating to technical interfaces and points of interconnection. Such information should ensure that providers are able to make full and effective use of all the services provided;
- conditions relating to maintenance and quality (service level agreements and guarantees). The inclusion of service levels, as part of the contractual terms of the RO, that provides for a minimum acceptable level of service, will ensure that services are provided in a fair, reasonable, timely and non-discriminatory fashion;
- the amount applied to network components; and
- terms and conditions that are fair and reasonable. This will ensure that products are offered on terms and conditions as they would in a competitive market and that they are sensible, practical, and do not impose a margin squeeze on competitors.

11.50 The list of network components is contained within the 'The regulatory financial reporting obligations on BT and KCOM'.⁷⁶

11.51 In addition, BT and KCOM must include in the RO the amount charged to their own retail activities (transfer charge) and the underlying components from which the amount is derived, for the equivalent service that it provides to competing providers.

Legal tests

11.52 Ofcom considers that the proposed condition meets the Community requirements set out in section 4 of the Act. In particular, the proposed condition promotes competition and encourages the provision of Network Access and service interoperability for the purpose of securing efficient and sustainable competition for the maximum benefit for consumers. The publication of a RO would mean that other communications providers would have the necessary information readily available to allow them to make informed decisions about entry into the market.

11.53 We consider that the proposed condition meets the criteria set out in section 47(2) of the Act. The proposed obligation is:

- objectively justifiable in that it requires that terms and conditions are published allowing competing providers the ability to ensure they are receiving offers that do not unduly discriminate in favour of the dominant provider's own retail operations, therefore encouraging competition to the benefit of consumers;
- not unduly discriminatory as it is applied only to those operators who hold SMP and all providers are subject to the same obligation;
- proportionate in that only information that is necessary to ensure that there is no material adverse effect on competition is required to be provided; and
- transparent as it is clear the obligation is designed to ensure that potential competitors have sufficient information to make investment decisions about entry into this market.

⁷⁶ 'The regulatory financial reporting obligations on BT and Kingston Communications, Final Statement and notification: Accounting separation and cost accounting', 22 July 2004, http://www.ofcom.org.uk/consult/condocs/fin_reporting/fin_report_statement/

11.54 The proposed condition would apply to the following markets in which our preliminary conclusion is that BT and KCOM have SMP, and relevant technical area:

- Wholesale analogue exchange line services;
- Wholesale ISDN2 exchange line services;
- Wholesale ISDN30 exchange line services;
- Call origination on fixed public narrowband networks; and
- Interconnection circuits.

Question 11.5: *Do you agree that Ofcom should impose a requirement to publish a reference offer on BT and KCOM in the markets and technical area discussed? If not, please explain why.*

Requirement to notify charges

11.55 Ofcom considers it is appropriate to retain a requirement on BT and KCOM to publish any planned changes to charges in advance of those changes taking place.

Aim of regulation

- 11.56 Notification of changes to services at the wholesale level can further assist competition, as it means other CPs would have the opportunity to consider whether these changes require amendments to their own retail offerings.
- 11.57 The notification of charges, terms and conditions at the wholesale level has the joint purpose to assist transparency for the monitoring of potential anti-competitive behaviour and to give advanced warning of charge changes to competing providers who purchase wholesale access services. The latter purpose ensures that competing providers have sufficient time to plan for such changes. Notification of changes therefore helps to ensure stability in markets, without which, incentives to invest might be undermined and market entry made less likely.

Proposed condition

11.58 We consider that the notice should include:

- A description of the access service;
- The location of terms and conditions in the RO;
- The effective date or period from which the changes will have effect;
- The current and proposed charge and the relevant usage factors applied to each network component;
- Other charges for services that would be directly affected by the proposed change; and
- The network tariff gradient.

Proposed changes to existing condition

- 11.59 This remedy was imposed on BT and KCOM in the 2003 market review, with a 90 day notice period set for all markets except ISDN30 (which was 28 days) before any proposed changes would be effective.⁷⁷ The argument for setting a 28 day notice period for ISDN30 originally was that competition had started to develop and therefore 28 days was deemed sufficient.
- 11.60 We propose to retain this condition on ISDN30.
- 11.61 For all other markets, BT has indicated that it views a 90 day notice period unduly restrictive. It argues that the 90 day period restricts, for example, its ability to provide trial pricing, since for a three month trial it is required to notify the end of the trial period before the impact of the trial can be assessed. A reduction in notice period to 28 days would allow BT a greater degree of pricing flexibility, particularly around offers and promotions. It would also bring narrowband in line with other areas, such as LLU.
- 11.62 The prices for many services in SMP markets are also subject to additional regulation such as cost orientation and in some cases, charge controls. This means that the market already has some visibility of price ceilings and floors outside of the notification period.
- 11.63 However, we are concerned that the reduction in the notice period may create a tension for CPs if notification periods in their contracts with their customers would not allow them to respond promptly to changes with their customer base.
- 11.64 Ofcom proposes that it would be proportionate to set a notification period of 28 days as long as this provided sufficient notice for CPs to meet obligations in the contracts with their customers. This would be the minimum notification necessary to allow other providers to adjust for any pricing increases. However, since CPs have contracts in place that may have taken into account notice periods of longer than 28 days, we believe any reduction in the period should only take effect after sufficient time to renegotiate contractual terms.
- 11.65 Therefore, we propose that notification periods should be 90 days for all markets except ISDN30 for six months after the obligation takes effect, and thereafter will be 28 days for all markets.

Legal tests

- 11.66 Ofcom considers that the proposed condition meets the Community requirements set out in section 4 of the Act. In particular, the proposed condition promotes competition and secures efficient and sustainable competition for the maximum benefits of consumers by ensuring that providers have the necessary information to allow them to make informed decisions about competing in the relevant market.
- 11.67 We consider that the proposed condition meets the criteria set out in section 47(2) of the Act. It is:

⁷⁷ A 28 day notification period was also set for inter-tandem conveyance and transit. However, this market was found to be competitive by the 'Review of BT's network charge controls review' in 2005 and therefore, all regulation relating to this market was revoked.

http://www.ofcom.org.uk/consult/condocs/charge/statement/statement_ncc.pdf

- objectively justifiable, because general and reliable visibility of a dominant operator's prices is needed to enable competitors to set prices for their services that are based on purchasing the regulated inputs. It also allows Ofcom and other CPs to monitor BT and KCOM's prices for possible anti-competitive behaviour;
- not unduly discriminatory as it is only imposed on those providers who have SMP and all providers are subject to the same obligation;
- proportionate, in that only information that other network providers would need to know in order to adjust for any changes would have to be notified. Periods are proposed to be the minimum required to allow changes to be reflected in retail offers; and
- transparent as it is clear the intention is to ensure that BT and KCOM notify those who purchase wholesale access of changes to charges, terms and conditions.

11.68 The proposed condition would apply to the following markets in which our preliminary conclusion is that BT and KCOM have SMP, and relevant technical area:

- Wholesale analogue exchange line services;
- Wholesale ISDN2 exchange line services;
- Wholesale ISDN30 exchange line services;
- Call origination on fixed public narrowband networks; and
- Interconnection circuits.

Question 11.6: *Do you agree that Ofcom should impose a requirement to notify charges, terms and conditions on BT and KCOM in the markets and technical area discussed? If not, please explain why.*

Question 11.7: *Do you agree that BT and KCOM should provide 28 days notice of price changes and changes of terms and conditions following a six month transition period? If not, please explain why.*

Requirement to notify technical information

11.69 Ofcom considers it is appropriate to retain a requirement on BT and KCOM to notify technical information a minimum of 90 days in advance of providing new wholesale services or amending existing technical terms and conditions.

Aim of regulation

11.70 The aim of an obligation to provide advance notification of technical characteristics is to ensure that competing providers have sufficient time to respond to changes that may affect them. For example, a competing provider may need to introduce new equipment or modify existing equipment or systems to support a new or changed technical interface.

11.71 Technical information includes new or amended technical characteristics, including information on network configuration, locations of the points of network access and technical standards (including any usage restrictions and other security issues). Relevant information about network configuration is likely to include information

about the function and connectivity of points of access, for example, the connectivity of exchanges to end users and other exchanges.

Proposed condition

- 11.72 The existing condition requires the notification of new technical information 90 days in advance of providing new wholesale services or amending existing technical terms and conditions. Ofcom continues to believe that 90 days is the minimum time that competing providers would need to make modifications to their network to support changes.
- 11.73 This condition for 90 days notice relates to changes to technical information related to SMP services. All CPs are required to comply with General Condition 2⁷⁸, which obliges them to apply compulsory standards, or in the absence of these, voluntary standards. Such changes should be agreed through NICC. Therefore, agreement of such standards should normally have been agreed at NICC prior to this 90 day period.

Major changes and NGN

- 11.74 For major changes to the existing network and migration to NGNs, Ofcom considers that industry consultation (including through NICC) continues to be an appropriate way to progress modifications. This consultation and agreement phase would not fall within the notice period; therefore the formal 90 day notification period would follow the industry process. That is, the notification should be made only following the conclusion of the consultation process.

Legal tests

- 11.75 Ofcom considers that the proposed condition meets the Community requirements set out in section 4 of the Act. In particular, the proposed condition promotes competition and secures efficient and sustainable competition for the maximum benefits of consumers by ensuring that providers have sufficient notification of technical changes to the dominant provider's network to enable them to compete.
- 11.76 We consider that the proposed condition meets the criteria set out in section 47(2) of the Act. It is:
- objectively justifiable as it enables competing operators to make full and effective use of network access. The period allows CPs time to react to proposed changes without imposing an unnecessarily long notification period on BT and KCOM that may restrict their ability to develop and deploy new features or products;
 - not unduly discriminatory as it is only imposed on those providers who have SMP and all providers are subject to the same obligation;
 - proportionate in that 90 days is considered the minimum period necessary to allow competing providers to modify their networks; and
 - transparent in that it is clear in its intention that BT and KCOM notify technical information.

⁷⁸ The General Authorisation regime (http://www.ofcom.org.uk/telecoms/ioi/g_a_regime/)

11.77 The proposed condition would apply to the following markets in which our preliminary conclusion is that BT and KCOM have SMP, and relevant technical area:

- Wholesale analogue exchange line services;
- Wholesale ISDN2 exchange line services;
- Wholesale ISDN30 exchange line services;
- Call origination on fixed public narrowband networks; and
- Interconnection circuits.

Question 11.8: *Do you agree that Ofcom should impose a requirement to notify technical information on BT and KCOM in the markets and technical area discussed? If not, please explain why.*

Transparency as to quality of service

11.78 As discussed earlier in the section regarding the option to impose an obligation on dominant providers not to unduly discriminate, vertically integrated operators have the ability to favour their own downstream business over third party CPs, by differentiating on price or terms and conditions. This has the potential to distort competition at the retail level by placing third party CPs at a disadvantage in terms of the services they can offer consumers to compete with the downstream retail business of the vertically integrated operator.

Aim of regulation

11.79 The intention of the transparency of quality of service remedy is to monitor whether any undue discrimination is occurring by requiring the publication of data regarding the delivery of wholesale services by BT to downstream BT businesses versus other third party CPs. We believe that it is appropriate to retain this condition, however, we propose to refine the existing requirements.

Existing regulation

11.80 The previous market review imposed a requirement on BT to publish data on specified Key Performance Indicators (KPIs). The specific KPIs were devised through a separate consultation process, implemented in 2004 (see table 11.1 below) and relate to WLR and interconnection circuits. BT is required to split out within each KPI, service delivery levels by the 'Top 10' CPs. It was agreed during the 2004 consultation that KPIs were not required for CPS as BT was publishing this data voluntarily at the time. Also, no specific KPIs were set in relation to IA or NTS beyond those included for interconnection circuits, as there are no ordering processes associated with these products.

Table 11.1 – BT’s non-discrimination KPIs

KPI	WLR	Interconnection circuits (excluding FRIACO) including ATM Interconnect
<i>Frequency</i>	<i>Monthly</i>	<i>Quarterly</i>
% of orders rejected	✓	
% of orders provisioned on time	✓	✓
% of new provisions reported as faulty	✓	
% installed base reported as faulty	✓	
Average time to restore service	✓	✓
% of repeat faults	✓	
Gateway availability	✓	
% of DMAs provisioned within 30 days		✓

11.81 In addition to these KPIs, BT is also required to maintain 15 KPIs for WLR analogue which were originally used to perform the Fit-For-Purpose test and have been maintained as an obligation on BT. Ofcom concluded in December 2005 that WLR was Fit-For-Purpose. Therefore, it is appropriate to reconsider obligations to publish KPIs in order to monitor BT’s performance within SMP markets.

11.82 There are also separate reporting requirements related to the Equality of Access Board (EAB) and Office of Telecommunications Adjudicator (OTA2).

Proposed regulation

11.83 Ofcom’s continued belief is that service provision and fault repair remain critical areas in which to maintain transparency of BT’s service levels. These areas remain critical as they are where differentiated service levels could be key determinants of a positive customer experience and could cause switching away from a provider.

11.84 We believe there is scope to modify the existing requirements to remove duplicate reporting measures, but continue to track core processes, while taking into account the impact of Openreach’s new online KPI reporting tool. Ofcom needs to ensure that any proposed changes to the existing regime will meet the intended purpose of the transparency of quality of service remedy, which is to monitor for discrimination in service delivery by BT between its downstream businesses and third party CPs.

11.85 Outlined in table 11.2 below are the KPIs that Ofcom proposes are required to provide sufficient transparency of quality of service for WLR.

Figure 11.2: Proposed KPIs

Proposed KPIs to be reported
Volume of WA orders submitted
Volume of WA orders rejected
Volume of WA orders rejected broken down by order type
Aggregate % across all CPs of WA orders rejected broken down by order type
Average time between acceptance of a WA order and service activation
Average time between acceptance of a WA order and service activation date for orders requiring an engineering visit
% of WA lines subject to faults within a specified period
Average time between submission of a WA fault report and fault being cleared
% of times an engineering visit is missed
% of WA lines subject to a repeat fault
% of billable CDRs produced on time
Order gateway availability
DEDS availability
eCo repair availability

- 11.86 Openreach's online KPI reporting tool will provide CPs with instant access to KPIs that track performance against service levels guaranteed in standard contracts. The system details are currently being discussed with industry, however, the initial specification indicates that CPs will be able to view their own performance compared to 'industry average' and 'best in class'. The KPI Online tool will only report on WLR (not Interconnect).
- 11.87 Ofcom's continued view is that the existing voluntary reporting by BT in relation to the call origination market is sufficient to provide transparency of service in this market. We also propose to continue with the existing quarterly KPIs for interconnection circuits as we believe they provide a useful level of transparency without being overly burdensome on BT as they are only required quarterly. Annex 8 and 9 set out the proposed new directions. Annex 12 sets out the proposed revocation of the existing direction. We consider that it is appropriate to withdraw the existing directions in order to replace it with the new direction, and therefore the legal tests that justify the new directions apply equally to the withdrawal of the current direction. It would be the case that should our proposal to make the new KPI directions not be finalised, this would necessarily affect our proposal to withdraw the existing direction; the two proposals must be considered together

Legal tests

11.88 Ofcom has considered the Community requirements in section 4 of the Act and believes that the proposed condition promotes competition and secures efficient and sustainable competition by ensuring transparency through comparison of the service levels BT provides to itself versus third party CPs.

11.89 Ofcom considers that the proposed condition meets the requirements in section 47. The proposed condition is:

- objectively justifiable because in the absence of a requirement to publish specific KPIs, it would not be possible to monitor if there is any undue discrimination in the quality of service provided by BT;
- not unduly discriminatory as it only applies to providers with SMP. Ofcom does not propose to impose this obligation on KCOM as the information provided would not be statistically meaningful given the number of CPs active in the Hull area;
- proportionate as BT will only be required to publish data related to key business processes; and
- transparent as it is clear that its intention is to monitor for undue discrimination in the quality of service provided by BT.

11.90 The proposed condition would apply to the following markets in which our preliminary conclusion is that BT has SMP, and relevant technical area:

- Wholesale analogue exchange line services;
- Wholesale ISDN2 exchange line services;
- Wholesale ISDN30 exchange line services;
- Call origination on fixed public narrowband networks; and
- Interconnection circuits.

Question 11.9: *Do you agree that Ofcom should impose a requirement to provide transparency as to quality of service on BT in the markets and technical area discussed? If not, please explain why.*

Question 11.10: *Do you agree with Ofcom that service provision and fault repair remain critical areas for this remedy to monitor?*

Question 11.11: *Are the KPIs proposed above sufficient to provide industry with the necessary level of transparency? If not, what additional KPIs should be included?*

Question 11.12: *Is the reporting provided by the Openreach online KPI tool sufficient to provide the relevant KPI data?*

Requests for new network access

11.91 Ofcom considers that it is appropriate to retain an obligation on BT regarding its statement of requirements (SOR) process.

Aim of regulation

11.92 Regulation was considered appropriate in 2003 due to evidence suggesting that the industry negotiated process was not working sufficiently well. The process for making requests for new network access, and the way these were subsequently dealt with, was not effective in getting new products delivered in a timely fashion, and was not sufficiently transparent to allow CPs certainty in how requests were being treated. Therefore, Ofcom concluded there was a need to include timings in the process in order to reduce BT's incentives to delay and it was felt that a transparent process would provide clarity if a dispute arose.

Existing regulation

11.93 The existing SOR condition covers:

- the publication of reasonable guidelines on requesting a new product;
- the provision of information for the purpose of making a request for a new product; and
- a process for dealing with requests for new products.

Proposed changes to existing regulation

11.94 During the life of the previous remedies, the BT Undertakings (the Undertakings) were introduced and as such the SOR process is now applicable to two separate BT divisions: Openreach and BT Wholesale.⁷⁹

11.95 Whilst issues have occurred with the handling of SORs using the SOR process set in place by the previous regulation, there have not been significant or formal complaints to Ofcom regarding the process. In addition, there have been some developments to the process agreed by BT and industry in an attempt to improve the process. Openreach has and is undertaking an improvement programme based on discussions through industry working groups. This means the process in place may not be in line with that set out in the previous condition, but is more likely to meet the needs of industry.

11.96 The condition has acted primarily as a safety-net by providing regulated timeframes for the completion of each step of the process. While we are aware of existing deficiencies in the current process, we do not believe that to make the condition more prescriptive would necessarily be beneficial in aiding the long term, ongoing development of the process. We consider that including more detail in the condition will not allow sufficient scope for ongoing improvements to be implemented during the life of the remedy.

11.97 Ofcom thinks that there are certain key principles that a SOR process should meet. Therefore, the condition we propose to impose will require BT to have in place, and follow for each SOR, an SOR process which:

- is documented end-to-end and this documentation is available to CPs;
- has reasonable timescales for each stage of the process;

⁷⁹ *Undertakings given to Ofcom by BT pursuant to The Enterprise Act 2002*, consolidated version published 19 December 2008 <http://www.ofcom.org.uk/telecoms/btundertakings/consolidated.pdf>

- clearly identifies the criteria by which a SOR will be judged;
- sets out the information that should be provided in order for an SOR to be accepted; and
- should be agreed between BT and industry.

11.98 Ofcom is of the opinion that the SOR process as documented in the previous condition meets these criteria, but that changes to the existing process that better meet the requirements of industry should be made if agreed by industry and BT.

Legal tests

11.99 Section 87(3) of the Act authorises the setting of SMP services conditions in relation to the provision of network services. We consider that that under section 87(5)(a), the proposed condition will assist in securing fairness and reasonableness in the way in which requests for network access are made and responded to. The condition provides a framework for agreeing and implementing improvements to the existing system, while retaining a 'safety-net'.

11.100 Ofcom has considered the Community requirements set out in section 4 of the Act and believes that the proposed condition meets the requirements. Specifically, section 4(8), as the proposed condition has the purpose of securing efficient and sustainable competition in the markets reviewed.

11.101 Ofcom deems that the proposed condition meets the criteria set out in section 47(2) of the Act. The proposed condition is:

- objectively justifiable as it recognises that a process for handling new requests is needed but that the condition should be flexible to allow for process improvements;
- not unduly discriminatory as it only applies to providers with SMP. Ofcom does not propose to impose this obligation on KCOM as the different market conditions in the Hull area mean that there is not the same level of demand for network access;
- proportionate as it continues to provide a SOR process based on the currently implemented process while allowing scope for industry to be involved in agreeing process improvements; and
- transparent as its intention is to ensure that changes to BT's SOR process are reflective of industry feedback.

11.102 The proposed condition would apply to the following markets in which our preliminary conclusion is that BT has SMP, and relevant technical area:

- Wholesale analogue exchange line services;
- Wholesale ISDN2 exchange line services;
- Wholesale ISDN30 exchange line services;
- Call origination on fixed public narrowband networks; and

- Interconnection circuits.

Question 11.13: *Do you agree that Ofcom should impose an obligation on BT to follow a statement of requirements process to handle new requests for network access in the markets and technical area discussed? If not, please explain why.*

Question 11.14: *Do you agree that the condition should allow changes to be made to the current SOR process if agreed by BT with industry? If not, please explain why.*

Cost accounting

11.103 Ofcom considers that it is appropriate to retain a cost accounting obligation on BT and KCOM in relation to the markets and technical area where they have been found to hold SMP. The cost accounting obligation will require BT and KCOM to demonstrate that their charges are cost orientated on the basis of LRIC with an appropriate mark-up for the recovery of common costs, and therefore meet the cost orientation obligation. It will also provide information necessary for Ofcom to set, monitor and review charge control obligations for BT.

11.104 Under sections 87(9) to 87(11) and 88 of the Act, appropriate cost accounting obligations may be imposed on dominant providers in respect of the provision of network access, the use of the relevant network and the availability of relevant facilities. Cost accounting rules may be made in relation to charge controls, the recovery of costs and cost orientation.

11.105 Paragraphs 11.29 to 11.41 in section 11, and paragraphs 16.2 to 16.7 in section 16, outline our arguments for why and in which markets we propose to impose a cost orientation and/or a charge control.

11.106 BT and KCOM are required to comply with obligations governing cost accounting systems and processes as set out in an Ofcom statement published in 2004.⁸⁰ The outputs include:

- Generic cost orientation and non-discrimination requirements:
 - Preparation of a variety of financial statements;
 - Preparation of extensive supporting documentation explaining how the financial statements have been put together;
 - Provision of an independent assurance statement;
 - Publication of most of the information; and
 - Preparation of reconciliation statements;
- Cost orientation specific requirements:
 - Preparation of service level cost data (LRIC and FAC) compared to average charges;

⁸⁰ 'The regulatory financial reporting obligations on BT and Kingston Communications, Final Statement and notification: Accounting separation and cost accounting', 22 July 2004, http://www.ofcom.org.uk/consult/condocs/fin_reporting/fin_report_statement/

- Preparation of costs of network components used to deliver services; and
- Analysis of service cost stack by component;
- Non-discrimination specific requirements:
 - Analysis of internal and external sales including volume data.

11.107 Ofcom considers that it is appropriate to continue with the existing condition in markets where BT and KCOM retain SMP.

Legal tests

11.108 Ofcom has considered the Community requirements set out in section 4 of the Act and believes that the proposed condition meets the requirements. Specifically, Section 4(8), where the obligation has the purpose of securing efficient and sustainable competition in the markets for electronic communications networks and services, by ensuring dominant providers comply with cost orientation and charge control remedies implemented to promote competition.

11.109 Ofcom deems the proposed condition meets the criteria set out in section 47(2) of the Act. The obligation is:

- objectively justifiable as it relates to the need to ensure competition develops fairly, to the benefit of consumers;
- non-discriminatory as BT and KCOM are the only providers to hold SMP in the relevant markets;
- proportionate as it is necessary as a mechanism to allow third parties sight of regulatory accounts to ensure compliance with cost orientation and charge control remedies; and
- transparent as it is clear the intention is to monitor compliance with specific remedies and the particular cost accounting requirements of BT and KCOM are clearly documented.

11.110 The cost accounting condition would apply to the following markets in which our preliminary conclusion is that BT and KCOM have SMP, and relevant technical area:

- Wholesale analogue exchange line services;
- Wholesale ISDN2 exchange line services;
- Wholesale ISDN30 exchange line services;
- Call origination on fixed public narrowband networks; and
- Interconnection circuits.

Question 11.15: *Do you agree that Ofcom should impose an obligation on BT and KCOM to comply with obligations governing cost accounting systems and processes as set out by Ofcom in the markets and technical area discussed? If not, please explain why.*

Accounting Separation

11.111 Ofcom considers that it is appropriate to retain an accounting separation obligation on BT and KCOM in relation to the markets and technical area where they have been found to hold SMP. The accounting separation obligation will require BT and KCOM to account separately for internal and external 'sales', which will allow Ofcom and third party CPs to monitor the activities of dominant providers to ensure that they do not discriminate in favour of its own downstream business.

11.112 Under section 87(7) and 87(8) of the Act, appropriate accounting separation obligations may be imposed on the dominant provider in respect of the provision of network access, the use of the relevant network and the availability of relevant facilities. This means that the dominant provider may be required to maintain a separation for accounting purposes between such different matters relating to network access or the availability of relevant facilities.

11.113 Paragraphs 11.21 to 11.28 in section 11 outline our arguments for why and which markets we propose to impose a non-discrimination remedy.

11.114 As discussed above, BT and KCOM are required to produce a range of outputs, which support compliance with a no undue discrimination remedy, according to requirements set out in an Ofcom statement published in 2004 and these are summarised in paragraph 11.106.

11.115 Ofcom considers that it is appropriate to continue with the existing condition in markets where BT and KCOM retain SMP.

Legal tests

11.116 Ofcom has considered the Community requirements set out in section 4 of the Act and believes that the proposed condition meets the requirements. Specifically, section 4(8), where the obligation has the purpose of securing efficient and sustainable competition in the markets for electronic communications networks and services, by ensuring dominant providers do not favour their own downstream businesses, thereby disadvantaging third party CPs.

11.117 Ofcom considers the proposed condition meets the criteria set out in section 47(2) of the Act. The obligation is:

- objectively justifiable as it relates to the need to ensure competition develops fairly, to the benefit of consumers;
- non-discriminatory as BT and KCOM are the only providers to hold SMP in the relevant markets;
- proportionate as it is necessary as a mechanism to allow Ofcom and third parties to monitor for discriminatory behaviour by dominant providers; and

- transparent as it is clear the intention is to monitor compliance with specific remedies and the particular accounting separation requirements of BT and KCOM are clearly documented⁸¹.

11.118 The accounting separation condition would apply to the following markets in which our preliminary conclusion is that BT and KCOM have SMP, and relevant technical area:

- Wholesale analogue exchange line services;
- Wholesale ISDN2 exchange line services;
- Wholesale ISDN30 exchange line services;
- Call origination on fixed public narrowband networks; and
- Interconnection circuits.

Question 11.16: *Do you agree that Ofcom should impose an obligation on BT and KCOM to comply with obligations governing accounting separation as set out by Ofcom in the markets and technical area discussed? If not, please explain why.*

⁸¹ 'The regulatory financial reporting obligations on BT and Kingston Communications, Final Statement and notification: Accounting separation and cost accounting', 22 July 2004, http://www.ofcom.org.uk/consult/condocs/fin_reporting/fin_report_statement/

Section 12

Call termination remedies

Introduction

- 12.1 In this section we consider whether it is appropriate to apply the following remedies to operators in the call termination market where our preliminary conclusion is that they have SMP:
- Requirement to provide network access;
 - Requirement not to unduly discriminate;
 - Basis of charges;
 - Charge control;
 - Requirement to publish a reference offer; and
 - Requirement to notify charges, terms and conditions
- 12.2 As outlined in section 7, Ofcom's preliminary conclusion is that all CPs who terminate fixed geographic calls have SMP in the provision of such services on their networks. Therefore, this section will consider the appropriateness of remedies in relation to three groups: BT, KCOM and then all other CPs.
- 12.3 Paragraphs 11.5 to 11.10 in section 11 outline our approach to considering the appropriateness of remedies in relation to a finding of SMP.

Aim of regulation in the call termination market

- 12.4 The intention of remedies in the call termination market is to ensure that CP's can purchase call termination services from other CP's on a fair and reasonable basis. Call termination needs to be purchased by all CP's from all other CP's, either directly or indirectly, to ensure that customers can call anyone on any network. In the absence of wholesale call termination, the extent of a network would also be the limit of its reach and any customers connected to such a network would only be able to speak, or send data to, other customers connected to that same network.

Proposed remedies in relation to BT

Requirement to provide network access

Aim of regulation

- 12.5 In the absence of an obligation on BT to provide fixed geographic call termination services on fair and reasonable terms, BT could severely impede competition in downstream markets as it could refuse to supply call termination services or supply such services on unreasonable terms. As a result, retail customers could, for example, find that if they were connected to an alternative network they could not call customers connected to BT's network. As BT has the largest fixed access network, this would be likely to have a material effect on its competitors, and therefore

consumer choice. In the long term, this would be likely to result in fewer competitors and reduced choice.

- 12.6 Therefore, Ofcom believes that BT should be required to meet all reasonable requests to provide fixed geographic call termination services on its network and it should be required to do so on reasonable terms.

Proposed condition

- 12.7 The proposed condition will remain unchanged from the existing obligation. The proposed condition requires BT to provide network access (that is, fixed geographic call termination services) and to do so on fair and reasonable terms. It also requires BT to provide such network access as Ofcom may from time to time direct, and allows us to make a direction under the condition.

Legal tests

- 12.8 Ofcom has considered the Community requirements as set out in section 4 of the Act. The proposed obligation would promote competition in relation to the provision of electronic communications networks and encourage the provision of network access for the purpose of securing efficient and sustainable competition in markets for electronic communications networks.

- 12.9 We consider that the proposed condition meets the criteria set out in section 47(2) of the Act because it is:

- objectively justifiable in that it relates to the need to ensure that competition develops to the benefit of consumers. Without this obligation BT would be able to restrict consumers on other CPs' networks from calling consumers on its network, and this is likely to mean the services supplied by these other CPs are not viable;
- not unduly discriminatory as it is imposed on BT and, as discussed later in this section, all other fixed CP's who terminate fixed geographic calls;
- proportionate, since it does not require BT to provide access if the request is unreasonable, and it only requires access to be provided to public communications networks providers; and
- transparent as it is clear in its intention to ensure that BT provides access to its network in order to facilitate competition.

- 12.10 The tests set out in section 87(4) of the Act have been met in that it is feasible for BT to provide network access and the absence of call termination on its network would undermine competition. The condition should also help to secure effective competition in the long term.

Requirement not to unduly discriminate

Aim of regulation

- 12.11 In the absence of an obligation not to unduly discriminate, BT would have a strong incentive to discriminate in favour of its own retail businesses, by offering more favourable terms which would give them a competitive advantage over third party CP's.

Proposed condition

12.12 The proposed condition will remain unchanged from the existing obligation. The proposed condition prohibits BT from unduly discriminating in the provision of network access. It also sets out that 'undue' discrimination may be deemed to have occurred where BT favours its own business to a material extent so as to disadvantage competitors.

Legal tests

12.13 Ofcom has considered the Community requirements as set out in section 4 of the Act. The proposed condition encourages the provision of network access and service interoperability for the purpose of securing efficient and sustainable competition in the retail markets for access and calls, by ensuring that BT does not unfairly favour its own retail businesses and therefore distort competition.

12.14 We consider that the proposed condition meets the criteria set out in section 47(2) of the Act because it is:

- objectively justifiable as it provides safeguards to ensure that competitors, and hence consumers, are not disadvantaged by BT discriminating in favour of its own retail business or between its own different activities;
- is not unduly discriminatory against BT, in that it reflects the circumstances of BT (in particular, its level of vertical integration), and its potential for using market power in termination to distort competition in other markets. It also reflects the fact that BT is a vertically integrated provider;
- proportionate in that discrimination is only prohibited if it is 'undue'; and
- transparent as it is clear the intention is to prevent undue discrimination.

Basis of chargesLegal tests

12.15 Ofcom has considered the Community requirements set out in section 4 of the Act. In particular, the proposed condition promotes competition and secures efficient and sustainable competition by ensuring that charges for wholesale services are at a level that enables operators to compete.

Aim of regulation

12.16 In the absence of this obligation there is a risk that, given BT's persistent SMP in the market, BT might fix or maintain its prices for call termination at an excessively high level, which in turn would be passed on to calling end users at the retail level. The proposed requirement to set cost-oriented charges is also necessary in order to enable competing providers to buy call termination services at pricing levels that might be expected in competitive markets. It therefore appears to Ofcom that this condition is appropriate in accordance with section 88 of the Act.

Proposed condition

12.17 The proposed condition will remain unchanged from the existing obligation. The proposed condition requires BT to set charges on the basis of its forward-looking

long-run incremental costs. It also clarifies that any charges for services subject to a price control must also be cost-oriented in terms of this condition, and allows for Ofcom to make a direction under the condition.

- 12.18 LRIC plus an appropriate mark up for common costs and for recovery of cost of capital is the preferred method for this type of regulation in communications markets. This is because communications markets experience economies of scale and high sunk costs, which can potentially cause competition problems. Pricing strategies which do not reflect the need to recover high fixed sunk costs could deter market entry and could therefore restrict or distort competition in the retail market.

Legal tests

- 12.19 We consider that the proposed condition meets the criteria set out in section 47(2) of the Act. It is:

- objectively justifiable as it will allow competitors to purchase services at charges that will enable them to develop competitive retail services to the benefit of consumers whilst allowing BT a return to recover common costs and cost of capital;
- not unduly discriminatory against BT, in that it reflects the circumstances of BT (in particular, its level of vertical integration), and its potential for using market power in termination to distort competition in other markets;
- proportionate as without such an obligation the price-setting behaviour of BT would not be constrained by competitive pressure allowing it to set charges that restricted the ability of other CPs to buy call termination at a rate that allows it to provide commercially attractive retail products. It is also proportionate as it allows BT to make returns commensurate with those expected in a competitive market; and
- transparent as it is clear the intention is to ensure that BT charges on a cost-oriented basis.

- 12.20 Ofcom has also considered the tests set out in section 88 and believe the proposed obligation is therefore appropriate. Further to the arguments outlined above, there is a risk that, in situations where SMP is persistent, pricing will be distorted and not at competitive levels, as dominant providers are likely to want to charge excessive prices in order to maximise profits by increasing their revenues and the costs of competing providers. The proposed condition promotes efficient and sustainable competition and provides the greatest possible benefits to consumers by enabling competing providers to buy wholesale services at levels that might be expected in a competitive market.

Charge control

- 12.21 We discuss Ofcom's proposal in relation to a charge control on BT's prices in call termination in Section 16.

Requirement to publish a reference offer

Aim of regulation

12.22 The main reasons for requiring the publication of a RO are to assist with transparency in monitoring for potential anti-competitive behaviour and to give visibility to the terms and conditions on which other providers would be able to purchase wholesale access services. The absence of a published RO, market entry might be deterred to the detriment of long-term development of competition. Publication of a RO is particularly important in BT's case, as all CP's, either directly or indirectly, have to buy call termination services from BT.

Proposed regulation

12.23 The proposed regulation will remain unchanged from the existing obligation. The proposed condition will require BT to publish a reference offer setting out the terms, conditions and other provisioning procedures upon which it is willing to provide fixed geographic call termination services, and requires BT not to depart from these terms and conditions. It also requires BT to publish an additional reference offer detailing the terms and conditions upon which BT provides network access to its own business, should those terms and conditions differ from the standard reference offer. The condition sets out requirements for publication of the reference offer and its provision to Ofcom, and allows Ofcom to make directions under the condition (including requirements to modify a reference offer).

Legal tests

12.24 Ofcom considers that the proposed condition meets the Community requirements set out in section 4 of the Act. In particular, the proposed condition promotes competition and encourages the provision of network access and service interoperability for the purpose of securing efficient and sustainable competition for the maximum benefit for consumers.

12.25 We consider that the proposed condition meets the criteria set out in section 47(2) of the Act. The proposed condition is:

- objectively justifiable in that it requires that terms and conditions are published allowing competing providers the ability to ensure they are receiving offers that do not unduly discriminate in favour of the dominant provider's own retail operations, therefore encouraging competition to the benefit of consumers and provide stability in markets;
- It does not unduly discriminate as reflects the scale of BT's access network and thus its role as a provider of fixed geographic call termination services to other providers;
- proportionate in that only information that is necessary to ensure that that there is no material adverse effect on competition would be published; and
- transparent as it is clear the obligation is designed to ensure that potential competitors have sufficient information to make investment decisions about entry into the market.

Requirement to notify charges

Aim of regulation

12.26 In the absence of an obligation to provide advance notification of charge changes, providers of retail services would have insufficient time to restructure their retail prices as a result of a change in costs at the wholesale level. This could result in retail prices being either too high if the wholesale costs decreased or too low if the wholesale costs increased. This would therefore lead to the over recovery or under-recovery of cost and potentially cause competitive concerns.

Proposed regulation

12.27 The proposed condition requires BT to notify Ofcom and every CP with which it has a contract to provide fixed geographic call termination services, of any proposed changes to its call termination charges before those changes can take place. It also requires certain information to be included with that notification, and requires BT to notify Ofcom of any proposed changes to charges for network access provided to itself which differs from that provided to others. As discussed in paragraph 11.59 to 11.65 in section 11, we are currently consulting on whether a 28 day notification period is sufficient in exchange lines, call origination and interconnection circuits markets. We believe the arguments in favour of, and against, reducing notification periods apply equally to wholesale fixed geographic call termination. Therefore we propose that the notification period for changes to BT's charges, terms and conditions for call termination will be 90 days for six months after the implementation of this condition and thereafter 28 days.

Legal tests

12.28 Ofcom considers that the proposed condition meets the Community requirements set out in section 4 of the Act. In particular, the proposed condition promotes competition and secures efficient and sustainable competition for the maximum benefits of consumers by ensuring that providers have the necessary information to allow them to make informed decisions about competing in the relevant market.

12.29 We consider that the proposed condition meets the criteria set out in section 47(2) of the Act because it is:

- objectively justifiable, because general and reliable visibility of a dominant operator's prices is needed to enable competitors to set prices for its services that are based on purchasing the regulated inputs. It also allows Ofcom and other CPs to monitor BT prices for possible anti-competitive behaviour;
- not unduly discriminatory against BT, in that it reflects BT's scale as a provider of fixed geographic call termination services to other providers;
- proportionate, in that only information that other network providers would need to know in order to adjust for any changes would have to be notified; and
- transparent as it is clear the intention is to ensure that BT notify those who purchase call termination of changes to charges, terms and conditions.

Cost accounting

- 12.30 Ofcom considers that it is appropriate to retain a cost accounting obligation on BT. The cost accounting obligation will require BT to demonstrate that their charges are cost orientated on the basis of LRIC with an appropriate mark-up for the recovery of common costs, and therefore meet the cost orientation obligation. It will also provide information necessary for Ofcom to set, monitor and review charge control obligations.
- 12.31 Under sections 87(9) to 87(11) and 88 of the Act, appropriate cost accounting obligations may be imposed on dominant providers in respect of the provision of network access, the use of the relevant network and the availability of relevant facilities. Cost accounting rules may be made in relation to charge controls, the recovery of costs and cost orientation.
- 12.32 Paragraphs 12.15 to 12.20 in section 12, and paragraphs 16.2 to 16.7 in section 16, outline our arguments for why we propose to impose a cost orientation and/or a charge control.
- 12.33 BT is required to comply with obligations governing cost accounting systems and processes as set out in an Ofcom statement published in 2004.⁸² The outputs include:
- Generic cost orientation and non-discrimination requirements:
 - Preparation of a variety of financial statements;
 - Preparation of extensive supporting documentation explaining how the financial statements have been put together;
 - Provision of an independent assurance statement;
 - Publication of most of the information; and
 - Preparation of reconciliation statements;
 - Cost orientation specific requirements:
 - Preparation of service level cost data (LRIC and FAC) compared to average charges;
 - Preparation of costs of network components used to deliver services; and
 - Analysis of service cost stack by component;
 - Non-discrimination specific requirements:
 - Analysis of internal and external sales including volume data.
- 12.34 Ofcom considers that it is appropriate to continue with the existing condition in which BT retain SMP.

⁸² *The regulatory financial reporting obligations on BT and Kingston Communications, Final Statement and notification: Accounting separation and cost accounting*, 22 July 2004, http://www.ofcom.org.uk/consult/condocs/fin_reporting/fin_report_statement/

Legal tests

- 12.35 Ofcom has considered the Community requirements set out in section 4 of the Act and believes that the proposed condition meets the requirements. Specifically, Section 4(8), where the obligation has the purpose of securing efficient and sustainable competition in the markets for electronic communications networks and services, by ensuring dominant providers comply with cost orientation and charge control remedies implemented to promote competition.
- 12.36 Ofcom deems the proposed condition meets the criteria set out in section 47(2) of the Act. The obligation is:
- objectively justifiable as it relates to the need to ensure competition develops fairly, to the benefit of consumers;
 - non-discriminatory as BT is the only provider to hold SMP in the relevant market;
 - proportionate as it is necessary as a mechanism to allow third parties sight of regulatory accounts to ensure compliance with cost orientation and charge control remedies; and
 - transparent as it is clear the intention is to monitor compliance with specific remedies and the particular cost accounting requirements of BT are clearly documented.

Accounting Separation

- 12.37 Ofcom considers that it is appropriate to retain an accounting separation obligation on BT. The accounting separation obligation will require BT to account separately for internal and external 'sales', which will allow Ofcom and third party CPs to monitor the activities of BT to ensure that they do not discriminate in favour of its own downstream business.
- 12.38 Under section 87(7) and 87(8) of the Act, appropriate accounting separation obligations may be imposed on the dominant provider in respect of the provision of network access, the use of the relevant network and the availability of relevant facilities. This means that the dominant provider may be required to maintain a separation for accounting purposes between such different matters relating to network access or the availability of relevant facilities.
- 12.39 Paragraphs 12.11 to 12.14 in section 12 outline our arguments for imposing a non-discrimination remedy.
- 12.40 As discussed above, BT is required to produce a range of outputs, which support compliance with a no undue discrimination remedy, according to requirements set out in an Ofcom statement published in 2004 and these are summarised in paragraph 12.33.
- 12.41 Ofcom considers that it is appropriate to continue with the existing condition in markets where BT retains SMP.

Legal tests

- 12.42 Ofcom has considered the Community requirements set out in section 4 of the Act and believes that the proposed condition meets the requirements. Specifically,

section 4(8), where the obligation has the purpose of securing efficient and sustainable competition in the markets for electronic communications networks and services, by ensuring dominant providers do not favour their own downstream businesses, thereby disadvantaging third party CPs.

12.43 Ofcom considers the proposed condition meets the criteria set out in section 47(2) of the Act. The obligation is:

- objectively justifiable as it relates to the need to ensure competition develops fairly, to the benefit of consumers;
- non-discriminatory as BT is the only providers to hold SMP in the relevant markets;
- proportionate as it is necessary as a mechanism to allow Ofcom and third parties to monitor for discriminatory behaviour by dominant providers; and
- transparent as it is clear the intention is to monitor compliance with specific remedies and the particular accounting separation requirements of BT are clearly documented⁸³.

Proposed remedies in relation to KCOM

Requirement to provide network access

Aim of regulation

12.44 In the absence of an obligation to provide network access on fair and reasonable terms, KCOM would have an incentive to offer call termination on unreasonable terms and this might lead to higher retail prices. For providers competing in the Hull area, KCOM might refuse to offer call termination altogether. Competition would not therefore be sustainable, as the majority of customers in the Hull area would be connected to KCOM's network.

Proposed regulation

12.45 The proposed condition remains unchanged from the existing obligation. The proposed condition requires KCOM to provide network access (that is, fixed geographic call termination services) and to do so on fair and reasonable terms. It also requires KCOM to provide such network access as Ofcom may from time to time direct, and allows Ofcom to make a direction under the condition. This obligation applies to KCOM's call termination services throughout the UK.

Legal tests

12.46 Ofcom has considered the Community requirements as set out in section 4 of the Act. The proposed obligation would promote competition in relation to the provision of electronic communications networks and encourage the provision of network access for the purpose of securing efficient and sustainable competition in markets for electronic communications networks.

⁸³ *The regulatory financial reporting obligations on BT and Kingston Communications, Final Statement and notification: Accounting separation and cost accounting*, 22 July 2004, http://www.ofcom.org.uk/consult/condocs/fin_reporting/fin_report_statement/

12.47 We consider that the proposed condition meets the criteria set out in section 47(2) of the Act. It is:

- objectively justifiable in that it relates to the need to ensure that competition develops to the benefit of consumers. Without this obligation KCOM would be able to restrict consumers on other CPs' networks from calling consumers on its network;
- not unduly discriminatory as it is also imposed on BT and, as discussed later in this section, all other fixed CP's who terminate fixed geographic calls;
- proportionate, since it does not require KCOM to provide access if the request is unreasonable, and it only requires access to be provided to public communications networks providers; and
- transparent as it is clear in its intention to ensure that KCOM provides access to its network in order to facilitate competition.

12.48 The tests set out in section 87(4) of the Act have been met in that it is feasible for KCOM to provide network access and the absence of call termination on its network would undermine competition. The condition should also help to secure effective competition in the long term.

Requirement not to unduly discriminate

Aim of regulation

12.49 In the absence of an obligation not to unduly discriminate, KCOM would have a strong incentive to discriminate in favour of its own retail businesses, by offering more favourable terms which would give them a competitive advantage over third party CPs.

Proposed regulation

12.50 The proposed condition would prohibit KCOM from unduly discriminating in the provision of network access. It also sets out that 'undue' discrimination may be deemed to have occurred where KCOM favours its own business to a material extent so as to disadvantage competitors. This condition would apply to KCOM's call termination activities inside the Hull area only.

Legal tests

12.51 Ofcom has considered the Community requirements as set out in section 4 of the Act. The proposed condition encourages the provision of network access and service interoperability for the purpose of securing efficient and sustainable competition in the retail markets for access and calls, by ensuring that KCOM does not unfairly favour its own retail businesses and therefore distort competition.

12.52 We consider that the proposed condition meets the criteria set out in section 47(2) of the Act to be:

- objectively justifiable, in that it provides safeguards to ensure that competitors, and hence consumers, are not disadvantaged by KCOM discriminating in favour of its own retail business or between its own different activities inside the Hull area;

- not unduly discriminatory against KCOM, in that it reflects KCOM's position in SMP in fixed geographic call termination markets, and therefore its potential for using SMP to distort competition in other markets
- proportionate, in that discrimination is only prohibited if it is 'undue', and because the scope of the proposed condition is limited to the Hull area; and
- transparent, as it is clear the intention is to prevent KCOM unduly favouring its own retail business.

Basis of charges

Aim of regulation

12.53 In the absence of this obligation, there is a risk that, given KCOM's persistent SMP in the market, KCOM might fix or maintain its prices for call termination at an excessively high level, which in turn would be passed on to calling end users at the retail level. The proposed requirement to set cost-oriented charges is also necessary in order to enable competing providers to buy call termination services at pricing levels that might be expected in competitive markets. It therefore appears to Ofcom that this condition is appropriate in accordance with section 88 of the Act. Ofcom has taken the extent of KCOM's investment into account as the condition provides for a mark-up relating to an appropriate return on capital employed.

Proposed regulation

12.54 The proposed condition remains unchanged from the existing obligation. The proposed condition would require KCOM to set charges on the basis of its forward looking long-run incremental costs. This condition would apply to the Hull area only.

Legal tests

12.55 Ofcom has considered the Community requirements set out in section 4 of the Act. In particular, the proposed condition promotes competition and secures efficient and sustainable competition by ensuring that charges for wholesale services are a level that enables CPs to compete.

12.56 We consider that the proposed condition meets the criteria set out in section 47(2) of the Act because it is:

- objectively justifiable as it will allow competitors of KCOM inside the Hull area to purchase services at charges that would provide them with an opportunity to develop competitive retail services to the benefit of consumers. Also, the condition allows KCOM to make a rate of return commensurate with that which it might expect in competitive markets;
- not unduly discriminatory against KCOM, in that it reflects the circumstances of KCOM inside the Hull Area, and its potential for using market power in termination to distort competition in other markets;
- proportionate as without such an obligation the price-setting behaviour of KCOM would not be constrained by competitive pressure allowing it to set charges that restricted the ability of other CPs to buy call termination at a rate that allows it to provide commercially attractive retail products. It is also proportionate as it allows

BT to make returns commensurate with those expected in a competitive market; and

- transparent as it is clear the intention is to ensure that KCOM charge on a LRIC plus mark-up basis.

12.57 Ofcom has also considered the tests set out in section 88 and believe the proposed obligation is therefore appropriate. Further to the arguments outlined above, there is a risk that, in situations where SMP is persistent, pricing will be distorted and not at competitive levels, as dominant providers are likely to want to charge excessive prices in order to maximise profits by increasing their revenues and the costs of competing providers. The proposed condition promotes efficient and sustainable competition and provides the greatest possible benefits to consumers by enabling competing providers to buy wholesale services at levels that might be expected in a competitive market.

Requirement to publish a reference offer

Aim of regulation

12.58 The main reasons for requiring the publication of a RO are to assist with transparency in monitoring for potential anti-competitive behaviour and to give visibility to the terms and conditions on which other providers would be able to purchase wholesale access services. The absence of a published RO, market entry might be deterred to the detriment of long-term development of competition. Publication of a RO is particularly important in KCOM's case, as all CP's, either directly or indirectly, have to buy call termination services from KCOM for call bound for the Hull area.

Proposed regulation

12.59 The proposed condition remains unchanged from the existing obligation. The proposed condition would require KCOM to publish a reference offer setting out the terms, conditions and other provisioning procedures upon which it is willing to provide fixed geographic call termination services, and requires KCOM not to depart from these terms and conditions. It also requires KCOM to publish an additional reference offer detailing the terms and conditions upon which KCOM provides network access to its own business, should those terms and conditions differ from the standard reference offer. The condition sets out requirements for publication of the reference offer and its provision to Ofcom, and allows Ofcom to make directions under the condition (including requirements to modify a reference offer). This condition applies to KCOM's call termination activities inside the Hull Area only.

Legal tests

12.60 Ofcom considers that the proposed condition meets the Community requirements set out in section 4 of the Act. In particular, the proposed condition promotes competition and encourages the provision of network access and service interoperability for the purpose of securing efficient and sustainable competition for the maximum benefit for consumers.

12.61 We consider that the proposed condition meets the criteria set out in section 47(2) of the Act because it is:

- objectively justifiable in that it requires that terms and conditions are published allowing competing providers the ability to ensure they are receiving offers that do not unduly discriminate in favour of the dominant provider's own retail operations, therefore encouraging competition to the benefit of consumers and provide stability in markets;
- not unduly discriminatory in that it reflects the scale of KCOM's access network inside the Hull area and thus its role as a provider of fixed geographic call termination services to other providers;
- proportionate in that only information that is necessary to ensure that there is no material adverse effect on competition would have to be published; and
- transparent as it is clear the obligation is designed to ensure that potential competitors have sufficient information to make investment decisions about market entry.

Requirement to notify charges

Aim of regulation

12.62 In the absence of an obligation to provide advance notification of charge changes, providers of retail services would have insufficient time to restructure their retail prices as a result of a change in costs at the wholesale level. This could result in retail prices being either too high if the wholesale costs decreased or too low if the wholesale costs increased. This would therefore lead to the over recovery or under-recovery of cost and potentially cause competitive concerns.

Proposed regulation

12.63 The proposed condition requires KCOM to notify Ofcom and every CP with which it has a contract to provide fixed geographic call termination services, of any proposed changes to its call termination charges before those changes can take place. It also requires KCOM to notify Ofcom of any proposed changes to charges for network access provided to itself which differs from that provided to others. As discussed in paragraphs 11.59 to 11.65 in section 11, we are currently consulting on whether a 28 day notification period is sufficient in exchange lines, call origination and interconnection circuits markets. We believe the arguments in favour of, and against, reducing notification periods apply equally to wholesale fixed geographic call termination. Therefore we propose that the notification period for changes to KCOM's charges, terms and conditions for call termination will be 90 days for six months after the implementation of this condition and thereafter 28 days.

Legal tests

12.64 Ofcom considers that the proposed condition meets the Community requirements set out in section 4 of the Act. In particular, the proposed condition promotes competition and secures efficient and sustainable competition for the maximum benefits of consumers by ensuring that providers have the necessary information to allow them to make informed decisions about competing in the relevant market.

12.65 We consider that the proposed condition meets the criteria set out in section 47(2) of the Act. It is:

- objectively justifiable, because general and reliable visibility of a dominant operator's prices is needed to enable competitors to set prices for its services that are based on purchasing the regulated inputs. It also allows Ofcom and other CPs to monitor KCOM prices for possible anti-competitive behaviour;
- not unduly discriminatory against KCOM, in that it reflects KCOM's scale as a provider of fixed geographic call termination services to other providers;
- proportionate, in that only information that other network providers would need to know in order to adjust for any changes would have to be notified; and
- transparent as it is clear the intention is to ensure that KCOM notify those who purchase call termination of changes to charges, terms and conditions.

Cost accounting

12.66 Ofcom considers that it is appropriate to retain a cost accounting obligation on KCOM. The cost accounting obligation will require KCOM to demonstrate that their charges are cost orientated on the basis of LRIC with an appropriate mark-up for the recovery of common costs, and therefore meet the cost orientation obligation. It will also provide information necessary for Ofcom to set, monitor and review charge control obligations.

12.67 Under sections 87(9) to 87(11) and 88 of the Act, appropriate cost accounting obligations may be imposed on dominant providers in respect of the provision of network access, the use of the relevant network and the availability of relevant facilities. Cost accounting rules may be made in relation to charge controls, the recovery of costs and cost orientation.

12.68 Paragraphs 12.53 to 12.57 in section 12 outline our arguments for why we propose to impose cost orientation.

12.69 KCOM is required to comply with obligations governing cost accounting systems and processes as set out in an Ofcom statement published in 2004.⁸⁴ The outputs include:

- Generic cost orientation and non-discrimination requirements:
 - Preparation of a variety of financial statements;
 - Preparation of extensive supporting documentation explaining how the financial statements have been put together;
 - Provision of an independent assurance statement;
 - Publication of most of the information; and
 - Preparation of reconciliation statements;
- Cost orientation specific requirements:

⁸⁴ *The regulatory financial reporting obligations on BT and Kingston Communications, Final Statement and notification: Accounting separation and cost accounting*, 22 July 2004, http://www.ofcom.org.uk/consult/condocs/fin_reporting/fin_report_statement/

- Preparation of service level cost data (LRIC and FAC) compared to average charges;
- Preparation of costs of network components used to deliver services; and
- Analysis of service cost stack by component;
- Non-discrimination specific requirements:
 - Analysis of internal and external sales including volume data.

12.70 Ofcom considers that it is appropriate to continue with the existing condition in which KCOM retains SMP.

Legal tests

12.71 Ofcom has considered the Community requirements set out in section 4 of the Act and believes that the proposed condition meets the requirements. Specifically, Section 4(8), where the obligation has the purpose of securing efficient and sustainable competition in the markets for electronic communications networks and services, by ensuring dominant providers comply with cost orientation and charge control remedies implemented to promote competition.

12.72 Ofcom deems the proposed condition meets the criteria set out in section 47(2) of the Act. The obligation is:

- objectively justifiable as it relates to the need to ensure competition develops fairly, to the benefit of consumers;
- non-discriminatory as KCOM is the only provider to hold SMP in the relevant market;
- proportionate as it is necessary as a mechanism to allow third parties sight of regulatory accounts to ensure compliance with cost orientation and charge control remedies; and
- transparent as it is clear the intention is to monitor compliance with specific remedies and the particular cost accounting requirements of KCOM are clearly documented.

Accounting Separation

12.73 Ofcom considers that it is appropriate to retain an accounting separation obligation on KCOM. The accounting separation obligation will require KCOM to account separately for internal and external 'sales', which will allow Ofcom and third party CPs to monitor the activities of KCOM to ensure that they do not discriminate in favour of its own downstream business.

12.74 Under section 87(7) and 87(8) of the Act, appropriate accounting separation obligations may be imposed on the dominant provider in respect of the provision of network access, the use of the relevant network and the availability of relevant facilities. This means that the dominant provider may be required to maintain a separation for accounting purposes between such different matters relating to network access or the availability of relevant facilities.

- 12.75 Paragraphs 12.49 to 12.52 in section 12 outline our arguments for imposing a non-discrimination remedy.
- 12.76 As discussed above, KCOM is required to produce a range of outputs, which support compliance with a no undue discrimination remedy, according to requirements set out in an Ofcom statement published in 2004 and these are summarised in paragraph 12.69.
- 12.77 Ofcom considers that it is appropriate to continue with the existing condition in markets where KCOM retain SMP.

Legal tests

- 12.78 Ofcom has considered the Community requirements set out in section 4 of the Act and believes that the proposed condition meets the requirements. Specifically, section 4(8), where the obligation has the purpose of securing efficient and sustainable competition in the markets for electronic communications networks and services, by ensuring dominant providers do not favour their own downstream businesses, thereby disadvantaging third party CPs.
- 12.79 Ofcom considers the proposed condition meets the criteria set out in section 47(2) of the Act. The obligation is:
- objectively justifiable as it relates to the need to ensure competition develops fairly, to the benefit of consumers;
 - non-discriminatory as KCOM is the only providers to hold SMP in the relevant markets;
 - proportionate as it is necessary as a mechanism to allow Ofcom and third parties to monitor for discriminatory behaviour by dominant providers; and
 - transparent as it is clear the intention is to monitor compliance with specific remedies and the particular accounting separation requirements of KCOM are clearly documented⁸⁵.

Proposed remedies in relation to all other CPs

Requirement to provide network access

Aim of regulation

- 12.80 As discussed previously in Section 7, call termination needs to be purchased by all CPs from all other CPs either directly or indirectly, to ensure that customers can call anyone on any network. In the absence of an obligation to provide network access on fair and reasonable terms, CPs would have an incentive to offer call termination on unreasonable terms and this might lead to higher retail prices.

⁸⁵ 'The regulatory financial reporting obligations on BT and Kingston Communications, Final Statement and notification: Accounting separation and cost accounting', 22 July 2004, http://www.ofcom.org.uk/consult/condocs/fin_reporting/fin_report_statement/

Proposed regulation

- 12.81 The proposed condition remains unchanged from the existing obligation. The proposed condition would require fixed CPs (other than BT and KCOM) to provide network access and to do so on fair and reasonable terms. It also requires relevant fixed CPs to provide such network access as Ofcom may from time to time direct, and allows Ofcom to make a direction under the condition.

Reciprocity

- 12.82 In a statement issued by Oftel in July 1997, *Network Charges from 1997* (“the 1997 Statement”), the Director General supported the principle of reciprocal charging for Operators’ call termination charges. This principle required that Operators’ charges were calculated on a reciprocal basis to BT’s own call termination charges, taking into account the different network topologies. BT’s own charges were regulated under the Network Charge Controls from 1997. The aim of reciprocity was to ensure competitive neutrality between BT and OCPs and to remove the distortive effects of the call termination externality.
- 12.83 In the 2003 Market Review, Oftel stated at paragraph 4.15 “Condition BC1 requires charges to be ‘fair and reasonable’. It did not mandate that charges should be based on BT’s charges. Any PECN could therefore set other charges if it believed that they were ‘fair and reasonable’. However, Oftel’s view was that charges that were not based on BT’s were unlikely to be ‘fair and reasonable’, as BT’s network costs are taken as a proxy for an efficient network. Nevertheless, the Director considered any dispute would need to be reviewed on its relative merits. In any case, Oftel was of the view that charges would have to be competitively neutral.
- 12.84 Ofcom continues to be of the view that “fair and reasonable” should include the principle of reciprocity, take into account differences in networks, and that BT’s costs are likely to be close to those of an efficient network. As BT and other terminating CPs progress in their migration from legacy networks to NGNs, the question of what constitutes an efficient cost base and how differences in networks should be taken into account under various migration scenarios will need to be addressed.
- 12.85 In the past, Industry has used the Reciprocity Agreement as the mechanism for setting termination charges. The current Reciprocity Agreement is due for re-negotiation. We would expect that this negotiation will address the migration between legacy networks and NGNs in such a way that CPs who migrate at different speeds are not unduly penalised. We continue to be of the view that it is appropriate for industry to establish this agreement rather than Ofcom imposing it as a regulatory requirement.

Legal tests

- 12.86 Ofcom has considered the Community requirements as set out in section 4 of the Act. The proposed obligation would promote competition in relation to the provision of electronic communications networks and encourage the provision of network access for the purpose of securing efficient and sustainable competition in markets for electronic communications networks.
- 12.87 We consider that the proposed condition meets the criteria set out in section 47(2) of the Act to be:

- objectively justifiable, as in its absence CP's might choose to set excessive prices for call termination given the 'monopoly' nature of the service;
- non-discriminatory in that all CP's who terminate fixed geographic traffic are required to meet reasonable requests do so on fair and reasonable terms;
- proportionate, as it represents the minimum obligation on regulators where there is evidence of SMP in a market; and
- transparent in that it is clear its intention is to ensure that all CPs provide access to their networks in order to facilitate competition.

12.88 In terms of section 87(4), Ofcom believe this proposal would help secure effective competition in the long term and that it is technically and economically viable to provide such network access.

Requirement to notify charges

12.89 Several CPs have indicated to Ofcom that deregulation of BT in certain markets (in particular LTC/LTT and ST) may have a knock-on effect in the call termination market. This arises since, in order to meet certain obligations previously imposed in these markets, BT published the call termination rates it had agreed with other CPs. This could then be used as a basis for commercial negotiations by other CPs looking to establish a direct interconnection.

12.90 Removal of regulation on BT may result in these rates no longer being published. Ofcom has therefore considered whether new regulation is required to provide notification of each CPs' rates.

12.91 We have considered whether to impose additional regulation, in particular an obligation for all providers to publish prices. Without such an obligation providers of call termination may attempt to set different prices for some CPs. Without an obligation to publish prices, CPs will not know what rates are being charged to other CPs for the same service.

12.92 Ofcom has proposed to impose obligations on BT and KCOM to notify charges. However, we do not propose to impose a similar obligation on other CPs at this time. In particular, in considering the criteria set out in section 47(2) of the Act we propose it would not be proportionate to impose additional regulation on all other CPs requiring notification of charges. Ofcom considers that the obligations under General Condition 1 relating to interconnection together with the obligation to provide call termination on fair and reasonable terms are sufficient to ensure prices set for fixed geographic call termination are not excessive.

Question 12.1: *Do you agree with the obligations Ofcom proposes to impose on BT in the wholesale fixed geographic call termination markets? If not, please explain why.*

Question 12.2: *Do you agree with the obligations Ofcom proposes to impose on KCOM in the wholesale fixed geographic call termination markets? If not, please explain why.*

Question 12.3: *Do you agree that BT and KCOM should provide 28 days notice of price changes following a six month transition period? If not, please explain why.*

Question 12.4: *Do you agree that all other providers of fixed geographic call termination should be required to provide this on fair and reasonable terms? If not, please explain why.*

Question 12.5: *Do you agree that it would be disproportionate to require all other providers of fixed geographic call termination to notify charges? If not, please explain why.*

Section 13

Wholesale Line Rental

Introduction

13.1 In addition to the general remedies set out in section 11, this section considers the appropriateness of imposing specific remedies further to our preliminary conclusion that BT has SMP in the exchange line markets.

Requirement to provide Wholesale Line Rental (WLR)

13.2 WLR is a service whereby competing providers lease an exchange line and decide how best to route the customer's calls. Providers therefore take on the full retail relationship with the customer and can offer a 'single bill' to end-users for all basic telecommunications services.

Aim of regulation

13.3 The aim of the WLR remedy is to directly address BT's SMP in access markets by requiring it to make available a product which allows third party CPs to compete with BT's downstream businesses on an equivalent basis. This remedy also has the ability to enhance the CPS and IA remedies, by exposing a greater part of the value chain to competition.

Existing regulation

13.4 The 2003 market review imposed an obligation on BT to provide WLR in response to SMP findings in the following markets:

- Wholesale residential analogue exchange line services;
- Wholesale business analogue exchange line services;
- Wholesale business ISDN2 exchange line services; and
- Wholesale ISDN30 exchange line services.

Proposed regulation

13.5 As discussed in section 5, our preliminary conclusion is that BT still has SMP in the following markets, and we propose to retain the requirement to provide WLR:

- Wholesale analogue exchange line services,⁸⁶
- Wholesale ISDN2 exchange line services; and
- Wholesale ISDN30 exchange line services.

13.6 The proposed WLR condition will be different from the existing condition. We propose to retain the core function of the condition which requires BT to provide WLR

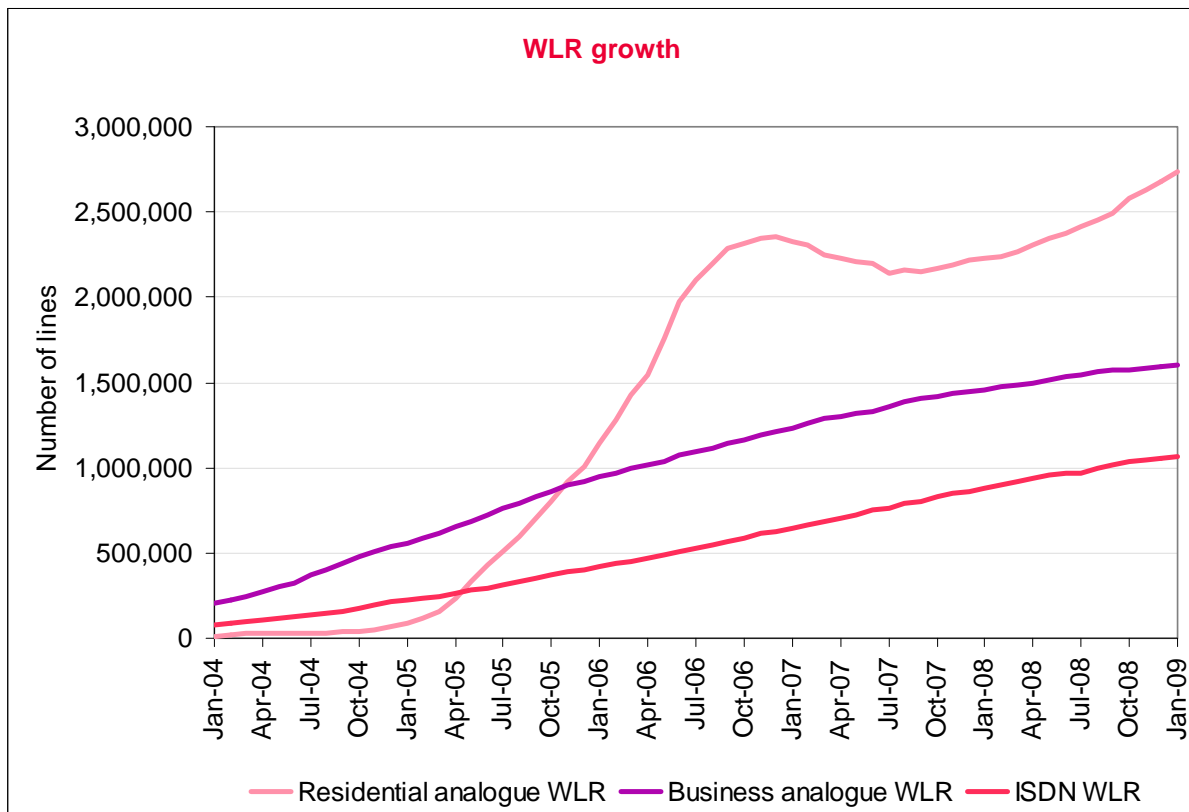
⁸⁶ Section 16 outlines Ofcom's proposals in relation to the application of charge controls in several markets and products, one of which is wholesale analogue exchange line services.

products to third party CPs, however, consider there is scope to remove other elements, such as detailed cost allocation and recovery methods. We consider WLR to be a mature product with embedded systems and processes, which make it unnecessary to include this level of detail going forward. This is consistent with our proposed approach to remove the WLR Functional Specification as discussed in paragraphs 13.17 to 13.18.

13.7 In 2003 Ofcom expressed concerns that BT’s SMP in access markets could allow it to leverage its dominance into the downstream markets for calls. Analysis conducted for the 2009 retail narrowband market review⁸⁷, proposes that BT no longer has SMP in the retail market for calls. This strong retail environment has been driven by WLR creating competition at the wholesale level. This remedy provides an environment where existing competitors, and new entrants, can access a service that facilitates retail competition and provides consumers with greater choice.

13.8 Figure 13.1 below shows the growth in WLR lines.

Figure 13.1: WLR growth



Source: Ofcom

Hull area / KCOM

13.9 A WLR product is currently not available in the Hull area. Although the arguments for such a product to be available in the Hull area are likely to be similar to those detailed for BT, in 2003 Ofcom concluded it would not be reasonable to require KCOM to supply wholesale line rental without reasonable demand first having been demonstrated and that the requirement to provide network access condition imposed

⁸⁷ Fixed Narrowband Retail Services Markets - Consultation on the identification of markets, determination of market power, 19 March 2009 (http://www.ofcom.org.uk/consult/condocs/retail_markets/)

on KCOM covered requests for a WLR product upon request from third party CPs in the exchange lines market.

- 13.10 Since the review in 2003, KCOM did not receive any such requests until very recently. Whilst this may be indicative that there was no demand for such a product, it may also be argued that the absence of a working WLR product may have deterred market entry. However, Ofcom is aware that KCOM has recently received a request for network access in the exchange lines market. KCOM is in discussion with the requesting party as to what solution would be appropriate. Although Ofcom cannot prejudice its future actions in the event that it is required to intervene, Ofcom is of the opinion that if a requesting party requires a product similar to the WLR product supplied by BT, this is likely to be a reasonable request for network access, subject to the specific technical and commercial requirements of the requesting party.
- 13.11 As discussions are currently ongoing between KCOM and another provider we do not currently propose to impose a WLR obligation on KCOM.

Legal tests

- 13.12 Ofcom considers that the proposed condition meets the requirements set out in Section 4 of the Act. In particular, the condition promotes competition and secures efficient and sustainable competition for the maximum benefit of consumers by enabling providers to compete in downstream access markets.
- 13.13 We consider the proposed condition meets the criteria set out in section 47(2) of the Act. The condition is:
- objectively justifiable in that it relates to the need to ensure that competition develops to the benefit of consumers. The growth of competition based on WLR has delivered benefits to consumers in terms of competition. Removing the obligation to provide WLR may result in BT withdrawing the product or otherwise changing it to the detriment of the competition that has developed;
 - not unduly discriminatory as the obligation on KCOM to provide network access on reasonable request is sufficient based on the market conditions of the Hull area;
 - proportionate in that it is necessary to enable competition but is not unduly burdensome on BT; and
 - transparent in that it is clear in its intention to ensure that BT provides WLR products.
- 13.14 In addition, we have taken into account the factors set out in section 87(4) and, in particular, the economic viability of service providers building an alternative direct access network and the feasibility of providing WLR.
- 13.15 Finally, we consider that the tests in section 88 have been met. There is risk that in situations where SMP is persistent, pricing will be distorted and not at competitive levels as dominant providers are likely to want to charge excessive prices in order to maximise profits by increasing their revenues and the costs of competing providers. The proposed condition is appropriate in order to promote efficiency and sustainable competition and provide the greatest possible benefits to end users by enabling competing providers to buy wholesale services at levels that might be expected in a competitive market.

- 13.16 The proposed condition would apply to the following markets in which our preliminary conclusion is that BT has SMP:
- Wholesale analogue exchange line services;
 - Wholesale ISDN2 exchange line services; and
 - Wholesale ISDN30 exchange line services.

WLR Functional Specification

- 13.17 BT is currently required to provide wholesale business ISDN2 and ISDN30 according to the specifications set out in the WLR functional specification, imposed under the 2003 market review. Analogue WLR is required to be provided in line with a functional specification published in 2003, and was the subject of a Fit For Purpose test in 2005, which deemed the product was being delivered in line with the functional specification. It is our intention not to impose the ISDN functional specification as a result of this market review.
- 13.18 In 2003 a detailed specification was deemed necessary to ensure that third parties could compete effectively with BT by accessing an equivalent service to that which BT's downstream businesses could offer customers. In relation to business ISDN2, there were no other means with which competitors might deliver an equivalent service. With ISDN30, the potential alternatives to using this product were only likely to be cost-effective for a limited part of the relevant market. Therefore, it was critical to ensure a suitable product would be available to CPs.

Proposed change to existing regulation

- 13.19 Ofcom believes that the consideration of a number of factors means a detailed functional specification for ISDN is no longer required. Firstly, and most significantly, the Undertakings came into effect on 22 September 2005, which requires BT to provide wholesale service on an 'Equivalence of Inputs' (EOI) basis (i.e. the same service it makes available to its retail businesses should also be available to competitors). Large sections of the functional specification covered requirements regarding the provision of services on an equivalent basis and are therefore no longer necessary.
- 13.20 Secondly, after five years in operation, we now consider the WLR products to be mature, with accepted standards and processes, which make the requirement for a detailed functional specification less essential. The growth of WLR lines suggests that the products generally meet the requirements of third party providers and customers alike.
- 13.21 Finally, improvements to WLR products are agreed and implemented through industry working groups and the OTA framework. We consider that the existing accepted product specifications provide a base from which changes in the future should be based on agreement between BT and industry. Collaboration can be seen in a variety of other areas (i.e. improvements to the SOR process, KPI online system), and we are keen to ensure that, while regulation requires the provision of specific products, there is sufficient flexibility in the remedy for the life of the review period, to allow BT and industry to discuss, agree and implement improvements as required.

Basis of charges obligation in regard to WLR

- 13.22 In Section 11 we have proposed to oblige BT to provide products in the wholesale analogue and ISDN2 ISDN30 markets on the basis of long run incremental costs plus an appropriate return.
- 13.23 Ofcom considers that this obligation should apply to all the elements required to provide the basic level of service required by consumers. These are:
- rental charges;
 - connection, rearrangement and termination charges; and
 - network features that comprise the basic service. Ofcom is of the view that these features are largely those agreed by industry as the parity feature set for the deployment of WLR3.
- 13.24 The WLR product provided by Openreach offers additional features such as, for example, expedited repair. These features are not necessarily required in order to provide the basic service. The price of these services may be constrained to some extent by the market, since if they are priced higher than the perceived value of the service, demand will fall. This does not, necessarily, drive down demand for the basic WLR service. However, where such a service is required, a CP has no choice but to purchase this from Openreach.
- 13.25 Ofcom is concerned that if the basis of charges obligation is extended to include value-added services such as expedited repair, it may act to inhibit Openreach from providing additional services in the future as it may consider it will not be able to make a return on its innovation. Conversely demand for new features may be inhibited if Openreach is able to set prices freely.
- 13.26 We therefore invite views from CPs on the most appropriate way to treat value-added features on the WLR product.

Next generation networks (21CN)

- 13.27 The obligation to provide WLR is technology neutral to the extent that the determination of BT's and KCOM's SMP in the exchange lines market is not dependent on the specific technology used to deliver exchange lines. The market definition in section 5 specifically allows for the move to next generation networks in the case of BT's 21CN, although it is again noted that the voice products provided on 21CN are subject to change.
- 13.28 Based on this, Ofcom proposes that the above remedies apply also to exchange lines on next generation networks.
- 13.29 Ofcom is not aware of any plans announced by KCOM to migrate to an NGN.
- 13.30 Ofcom considers that replication of the current WLR product supplied by BT would meet this obligation. However, given the new functionality available on 21CN, it may be more appropriate for industry to consider if other capabilities or features should be supported or if the current functionality is still required. In particular, Ofcom understand it may not be technically possible to replicate all features supported on the PSTN on 21CN. Therefore, Ofcom is currently of the view that that a reasonable interpretation of the obligation is that BT will provide a WLR product on 21CN that

replicates, wherever technically possible, the current WLR products unless agreed otherwise with industry.

- 13.31 In section 3 we outline the Wholesale Voice Connect (WVC) product. Some interest has been demonstrated by CPs in this product. The WVC product provides the exchange line, call origination and call termination in a single product. WVC may become the predominant product used by other CPs (and potentially BT's downstream divisions) for supply of services, rather than WLR plus CPS (or other wholesale calls offer).
- 13.32 However, the future deployment of this product is still under consideration within BT's review of its 21CN voice strategy.

Question 13.1: *Do you agree that Ofcom should impose an obligation on BT to provide WLR products in the wholesale analogue, ISDN2 and ISDN30 exchange lines markets? If not, please explain why.*

Question 13.2: *Do you agree that the maturity of the WLR products plus BT's obligations under its Undertakings means that Ofcom does not need to impose an obligation on BT to comply with a functional specification for ISDN2 and ISDN30 WLR products? If not, please explain why.*

Question 13.3: *Is it appropriate for the pricing of value-added features to be subject to a basis of charges obligation? Do you think Openreach would have the correct incentives to develop new features in a regime where these may become subject to basis of charges obligations?*

Section 14

Carrier Selection and Carrier Pre-Selection

Introduction

- 14.1 In addition to the general remedies set out in section 11, this section considers imposing a requirement to provide carrier-pre selection (CPS) and carrier selection (CS) (referred to in the UK market 'Indirect Access' or "IA") as a result of the preliminary conclusion that BT and KCOM have SMP in the call origination market.
- 14.2 Section 90 of the Act authorises the setting of SMP conditions in relation to CPS and CS/IA as Ofcom deems appropriate. Such conditions can include requiring the dominant provider to make relevant interconnection facilities available, cost recovery provisions and the manner in which CS/IA and CPS is to be made available.

CPS description

- 14.3 CPS is a mechanism that allows users to select, in advance, alternative communications providers to carry their calls without having to dial a prefix. The customer subscribes to the services of one or more CPS operators (CPSOs) and chooses the type of calls (e.g. all national calls) to be routed through the network of the alternative provider. A customer can over-ride the CPS service at any time by dialling a prefix before the number they wish to dial, as long as they have an agreement with the operator to whom the prefix code belongs.

CS/IA description

- 14.4 CS/IA is a mechanism that allows users to select alternative CPs to their access line provider on a call-by-call basis by dialling a short prefix before each number they wish to dial. While CPS offers 'dialling parity' with the access provider, in the sense that the customer does not need to dial a pre-fix or install an auto-dialler, CS/IA provides the opportunity for customers to more narrowly select alternative call providers, particularly on the basis of price.
- 14.5 The ability to make cost minimising carrier selection for every call is particularly relevant for some business and residential customers who make use of 'least-cost routing'. Least-cost routing usually involves the use of auto-diallers (and in some cases associated software) which can be programmed to select the cheapest CS/IA supplier for particular calls at particular times of day. This is possible even for CPS customers as CPS includes a facility for customers to over-ride their pre-selected provider on a call-by-call basis.

Aim of regulation

- 14.6 The aim of CPS and CS/IA is to stimulate competition in the calls markets in the absence of direct access network build and enhance competition in areas with only limited direct access competition.

Universal Service Directive

- 14.7 The Universal Service Directive⁸⁸ requires Ofcom to impose an obligation on providers with SMP in markets relating to the provision of fixed services that obliges them to enable their subscribers to access the services of any interconnected provider of publicly available telephone services:
- on a call-by-call basis by dialling a carrier selection code; and
 - by means of pre-selection, with a facility to override any pre-selected choice on a call-by-call basis by dialling a carrier selection code.
- 14.8 As we propose that BT and KCOM have SMP in the call origination market, we would retain the condition requiring them to provide CPS and CS/IA products.

CPS Condition

- 14.9 The existing condition requires CPS to be provided at the request of any customer and that relevant wholesale interconnection facilities are provided to CPSOs on reasonable terms. It further provides that the charges for such interconnection facilities are reasonably derived from the costs of providing those services and that the costs must be calculated on a forward looking long run incremental cost approach. The CPS condition also sets out the principles for recovery of costs incurred in the provision of CPS.
- 14.10 We propose to retain the essence of the CPS condition which requires BT and KCOM to provide CPS upon request and to ensure that charges are based on a forward looking long run incremental cost basis, which can be agreed otherwise between BT and the CP. However, there will be differences in the level of detail regarding cost allocation and recovery retained in the separate conditions applicable to BT and KCOM.
- 14.11 In relation to BT, we propose to remove the comprehensive detail relating to cost allocation and recovery methods. In line with our approach to WLR, we believe that BT's CPS product should also be considered mature and with embedded systems and processes, making the necessity for the inclusion of this information less critical than it was previously.
- 14.12 In relation to KCOM, we propose to retain within the condition the cost allocation and recovery methods. In contrast to BT's situation, KCOM does not currently have a fit-for-purpose CPS product in place. We therefore believe it is appropriate to define how these costs should be established in the event a CPS product is required to ensure cost are appropriately recovered.

Legal tests

- 14.13 Ofcom has considered the Community requirements set out in section 4 of the Act and believes that the proposed condition meets the requirements. Specifically, section 4(8), as the proposed condition has the purpose of securing efficient and sustainable competition for the benefit of consumers, by enabling providers to compete in downstream markets.

⁸⁸ http://ec.europa.eu/information_society/topics/telecoms/regulatory/new_rf/documents/03673en1.pdf

- 14.14 Section 47 of the Act requires conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. The proposed condition is:
- objectively justifiable, in that it relates to the need to ensure competition continues to the benefit of consumers;
 - not unduly discriminatory, as it is imposed equally on both BT and KCOM and no other operator has SMP in the relevant markets and both providers are subject to the same obligation. The specific conditions vary only to the extent that market conditions differ between the two markets;
 - proportionate as it only requires BT and KCOM to provide access on reasonable terms; and
 - transparent in that it is clear in its intention to ensure that BT and KCOM allow their customers access to CPS services.
- 14.15 The proposed condition would apply to both BT and KCOM based on our preliminary conclusion that they have SMP in the call origination market.

CPS Functional Specification

- 14.16 BT and KCOM are currently required to comply with the CPS functional specification which outlines the manner in which CPS and relevant wholesale interconnection facilities are made available. It is our intention not to impose the CPS functional specification as a result of this review. The functional specification was established to ensure a product that met customer requirements was available. Since BT's CPS product is mature and has been used by many CPs to supply millions of customers, the original requirement for the functional specification is no longer relevant. Ofcom is also concerned that requiring BT to adhere to the specification may act to inhibit product development, in particular in relation to 21CN products.
- 14.17 Further to the discussion in paragraph 14.12 in relation to the current absence of a CPS product provided by KCOM, Ofcom does not intend to require continued adherence to the existing CPS functional specification by KCOM in the future. We consider that the UK market has a functioning CPS product provided by BT and this should be considered the default structure for a similar service. We accept that there may be technical differences in how KCOM could provide a CPS product in comparison to BT, however, we would not expect these to materially effect its ability to provide a like service if required.

Proposed revocation of existing regulation

- 14.18 The current specification implemented as a result of the 2003 review was amended in 2004 to incorporate the Same/Adjacent-DLE⁸⁹ requirement, but otherwise has remained unchanged. In line with our proposed decision to remove the specification for WLR, we believe that the CPS functional specification is no longer required. Our reasoning is similar to that suggesting the removal of the WLR specification. As the product is mature and therefore the need for a prescriptive product outline is no longer necessary, the current product provides a baseline from which necessary changes should be agreed through industry working groups.

⁸⁹ Same/Adjacent-DLE (or SAD) is where third party CP calls are routed end-to-end on BT's network where they originate and terminate on the same DLE or originated on one DLE and terminated on an adjacent directly-connected DLE.

CS/IA Condition

- 14.19 The proposed CS/IA condition will remain broadly unchanged from the existing text. It requires that CS/IA is provided on reasonable terms at the request of any customer and that relevant wholesale interconnection facilities are provided that will allow an alternative communications provider to provide CS/IA services to its customer. It further provides that the charges for such interconnection facilities are reasonably derived from the costs of providing those services and this must be calculated on a forward looking long run incremental cost approach.
- 14.20 The only change to the conditions for both BT and KCOM is the inclusion of the scope for charges to deviate from a forward looking long run incremental approach if agreed between BT or KCOM and the provider. This scope was and is present in the CPS condition and we feel it should also be present in the CS/IA condition for consistency in approach.

Legal tests

- 14.21 Ofcom has considered the Community requirements set out in section 4 of the Act and believes that the proposed condition meets the requirements. Specifically, section 4(8), as the proposed condition has the purpose of securing efficient and sustainable competition for the benefit of consumers by enabling providers to compete in downstream markets.
- 14.22 Section 47 of the Act requires conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. The proposed condition is:
- objectively justifiable, in that it relates to the need to ensure that competition develops to the benefit of consumers;
 - not unduly discriminatory as it is imposed only on those providers with SMP in the call origination market and both providers are subject to the same obligation;
 - proportionate as it only requires BT and KCOM to provide CS/IA on reasonable terms; and
 - transparent in that it is clear in its intention to ensure that BT and KCOM provide CS/IA services.
- 14.23 The proposed CS/IA condition would apply to both BT and KCOM based on our preliminary conclusion that they have SMP in the call origination market.

Next generation networks (21CN)

- 14.24 The obligation to provide carrier pre-selection and carrier selection (Indirect Access) services are technology neutral to the extent that the determination of BT's and KCOM's SMP in the call origination market is not dependent on the specific technology used to deliver call origination. The market definition in section 6 specifically allows for the move to next generation networks in the case of BT's 21CN, although it is again noted that the voice products provided on 21CN are subject to change.
- 14.25 Based on this, Ofcom proposes that the above remedies apply also to call origination on next generation networks. Specifically, the obligation requires BT and KCOM to

provide, irrespective of underlying network technology, services as defined within the Universal Service Directive:

- on a call-by-call basis by dialling a carrier selection code (Indirect Access is covered in the next subsection); and
- by means of pre-selection, with a facility to override any pre-selected choice on a call-by-call basis by dialling a carrier selection code.

14.26 Ofcom is not aware of any plans announced by KCOM to migrate to an NGN.

14.27 Ofcom considers that replication of the current CPS and CS/IA products supplied by BT would meet this obligation. Ofcom considers that the NGN call conveyance product, together with functionality provided by the BT call server, could deliver these products. However, given the new functionality available on 21CN, it may be more appropriate for industry to consider if other capabilities or features should be supported on CPS and/or CS/IA. Therefore, Ofcom is currently of the view that a reasonable interpretation of the obligation is that BT will provide CPS and CS/IA products on 21CN that replicate the current CPS and CS/IA products unless agreed otherwise with industry. If BT provides a 21CN variant of WLR it must provide these products, since the WLR product will tie the line in to using service provided on the BT call server.

14.28 In section 3 we outline the Wholesale Voice Connect (WVC) product. Some interest has been demonstrated by CPs in this product. The WVC product provides the exchange line, call origination and call termination in a single product. WVC may become the predominant product used by other CPs (and potentially BT's downstream divisions) for supply of services, rather than WLR plus CPS (or other wholesale calls offer). The WVC product may be considered to meet the obligation to provide carrier pre-selection as defined by the Universal Service Directive. WVC may not be capable of supporting carrier selection (IA functionality).

14.29 However, the future deployment of this product is still under consideration within BT's review of its 21CN voice strategy.

Question 14.1: *Do you agree that Ofcom should impose an obligation on BT and KCOM to provide CPS? If not, please explain why.*

Question 14.2: *Do you agree that Ofcom does not need to impose an obligation on BT and KCOM to comply with a functional specification for CPS? If not, please explain why.*

Question 14.3: *Do you agree that Ofcom should impose an obligation on BT and KCOM to provide carrier selection (Indirect Access)? If not, please explain why.*

Section 15

Number Translation Services Call Origination

Introduction

- 15.1 In addition to the general remedies set out in section 11, we consider here a specific remedy in relation to our preliminary conclusion that BT has SMP in the call origination market.
- 15.2 Number Translation Services (NTS) calls enable the provision of a variety of value-added services, for example to provide access to information services and helplines. NTS calls discussed in this sub-section refer to calls to the following numbers: Special Service numbers (including freephone, special services basic rate and special services higher rate) and Premium Rate Services (PRS) (services currently provided under 090 and 091 number ranges). NTS does not include calls to directory enquiries 118, 05X corporate numbers and VoIP or 070 personal numbering services and Flat Rate Internet Access Call Origination.

Existing regulation

- 15.3 An NTS call origination condition was imposed on BT as a result of the 2003 fixed narrowband market review. It requires BT to provide NTS call origination with a regulated retention and a retail uplift charge control. The specific form of the charge control was set through a separate consultation⁹⁰ and, subject to Ofcom retaining this condition, is due to be reviewed before it expires in September 2009. This document only deals with the requirement on BT to provide NTS call origination and the principle of applying a charge control to the retail uplift. It is our proposal to retain this condition in its existing form.

Aim of regulation

- 15.4 The aim of this regulation is to promote competition in the provision of downstream services such as call centres and technical helplines. Section 11 discusses a number of proposed remedies to address SMP in call origination. However, the requirements of operators purchasing non-geographic call origination, and in particular NTS call origination, differ from those purchasing geographic call origination. This is because the model of competition for the provision of NTS services differs from the model of competition for other retail calls. For other call types, operators and other providers (e.g. CPS providers) compete to provide retail calls for individual end users. In contrast, for NTS services, service providers compete to provide a particular service (e.g. traffic information) to a wide range of end users who are not directly known to them. In the absence of demand side substitutability between the two call types, regulating call origination for one call type is unlikely to limit the potential for BT to raise the prices of call origination for the other type. It is for these reasons, that Ofcom considers it necessary to consider a separate remedy for non-geographic calls.

⁹⁰ *Charge between providers: Number Translation Services, Retail Uplift charge control and Premium Rate Services bad debt surcharge*, 28 September 2005
http://www.ofcom.org.uk/consult/condocs/NTSfin/statement_nts_uplift/statement_nts_uplift.pdf

- 15.5 The requirements for NTS call origination arise because NTS terminating operators do not have a commercial retailing relationship with the caller. Therefore, operators purchasing NTS call origination will require the retail operator (i.e. the operator that has the retail relationship with the end-user) to undertake the retailing of these calls on their behalf.

Current condition

- 15.6 The current condition requires BT to undertake the retailing of NTS calls on behalf of the terminating operator. It allows BT to retain charges that relate to call origination and conveyance and a retail uplift designed to recover BT's reasonable costs for marketing NTS calls and for wholesale billing and bad debt recovery, plus for PRS calls, an additional PRS bad debt surcharge to reflect the higher value of these calls. The existing charge control is based on an RPI+/-X basis. As discussed under the charge control section 16, RPI+/-X is the preferred method of control as it provides BT with incentives to minimise costs.

Retail uplift charge

- 15.7 The retailing activity undertaken by BT (including billing and revenue collection from the customer, on behalf of the terminating operators purchasing NTS call origination) is necessary to enable the terminating operators to make effective use of the call origination service. It would be impractical and costly for each terminating operator to establish a billing relationship with each calling party. Hence, this retailing activity undertaken by BT is a critical element of the service and terminating providers are reliant on BT to provide this function as this is the most efficient and economically viable way to provide a service to consumers.

Current market conditions

- 15.8 There has been limited change in the NTS market structure during the life of the existing remedy, however, in line with other fixed calls, NTS volumes have seen a decline overall. This decline is driven by a combination of the switch from narrowband internet to broadband, some mobile substitution including the use of mobile short codes and some increased awareness of the higher costs of making NTS/PRS calls. We notice that BT recently announced that calls to 0845 and 0870 would be included in its retail call bundles, which may have the potential to reverse the current trend.⁹¹

Proposal to retain existing condition

- 15.9 Ofcom continues to believe that this condition is appropriate as it has been effective to date in enabling Ofcom to ensure that BT is not pricing above the costs involved to convey and retail NTS calls. As discussed in section 6, we propose to find that BT still has SMP in call origination, therefore, NTS service providers are in general only able to access a viable number of customers if they have access to BT's customers. In the absence of regulation, BT would have the incentive to set high retail uplift charges due the terminating providers' reliance on access to BT's customer base. This could result in increased investigations or disputes from service providers and/or terminating operators regarding BT's prices.

⁹¹ <http://www.productsandservices.bt.com/consumerProducts/displayTopic.do?topicId=25502>

NTS policy

15.10 Ofcom has addressed a number of live issues in relation to NTS policy more generally (e.g. the need to improve retail price transparency, inappropriate use of lower cost numbers by services with sexual or gambling content and the need to increase regulation of the provision of services using higher cost 087 numbers). We do not propose to address these issues in this document as they fall outside of the remit of the wholesale narrowband market review.

Hull area / KCOM

15.11 No NTS call origination regulation was imposed on KCOM in 2003. This was because the existing regulated arrangements appeared to be satisfactory for consumers and operators and there would likely be costs in introducing specific regulation. Therefore, the introduction of specific regulation on KCOM would be unlikely to meet the proportionality test in section 47 of the Act. It was considered that more general conditions, including the condition relating to the basis of charges, would still be relevant for NTS calls originating on KCOM's network. For clarity, it was confirmed that the absence of specific regulation did not preclude KCOM from making a retention for call origination that is different from BT's equivalent retention. KCOM and operators were urged to negotiate constructively, taking account of this regulatory framework.

Legal tests

15.12 Ofcom has considered the Community requirements set out in section 4 of the Act and believes that the proposed condition meets the requirements. Specifically, section 4(8), as the proposed condition has the purpose of securing efficient and sustainable competition for the benefit of consumers by enabling providers to compete in downstream markets.

15.13 Section 47 of the Act requires conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. We believe the proposed condition is:

- objectively justifiable because it is necessary to promote competition and innovation in downstream markets to the benefit of consumers;
- not unduly discriminatory, in that while it is not imposed on KCOM, our view remains that regulation would not be proportionate in respect of the Hull market;
- proportionate because it is necessary for BT to provide retailing services to third parties using NTS call origination, in order for this service to be effective to promote competition and innovation in the downstream markets; and
- transparent as it is clear that the intention is to ensure that the charges paid by third parties are fair and reasonable, while at the same time, representative of BT's costs involved in providing the service.

15.14 In addition, we have considered the tests in section 88 of Act which authorises Ofcom to implement regulation where there is a risk that, in situations where SMP is persistent, pricing will be distorted and not at competitive levels. As discussed, we continue to believe that it is necessary to control the charge for wholesale input to retail services where the absence of competition will mean there is no other pressure on pricing.

- 15.15 The proposed condition would apply to BT based on our preliminary conclusion that it has SMP in the call origination market.

Question 15.1: *Do you agree that Ofcom should impose an obligation on BT in relation to NTS call origination? If not, please explain why.*

Section 16

Charge controls

Introduction

16.1 In addition to the general remedies set out in section 11, in this section we propose continuing with charge control regulation in SMP markets.

Aim of regulation

16.2 Where there is a risk of a firm setting excessive prices due to a lack of competition in the market, a charge control with transparent, easy to monitor compliance conditions can help ensure that firms do not abuse their dominant position and that competition develops to the benefit of consumers.

16.3 While a cost orientation obligation constrains the incumbent from charging its competitors prices that are either too high, or too low, compared with a level reflective of competitive market conditions, it does not by itself, encourage the incumbent to reduce its costs over time by becoming more efficient in the provision of such services. Under Ofcom's preferred method of charge control regulation, RPI+/-X, incentives are created on the dominant provider to increase its efficiency, thereby imitating the effect of a competitive market. If the firm can reduce its costs below the level expected when the cap was set, then the firm retains the increased profits, at least for the period the control is in place.

16.4 Communications markets experience significant economies of scope. This means that it is more efficient for the same operator to supply a number of different services rather than for each to be provided by a different operator. It also means that there are likely to be significant common costs that cannot be attributed to the provision of any one service. In these cases it may be difficult to determine if prices are excessive in one market, without understanding the recovery of costs from related markets. A charge control will include the allocation of common costs to the provision of certain services.

16.5 Section 87(9)(a) of the Act authorises the setting of SMP services conditions imposing charge controls in relation to matters connected with the provision of network access.

Existing regulation

16.6 Charge controls are currently imposed on BT in the following markets:

- Wholesale business analogue exchange line services;
- Wholesale residential analogue exchange line services;
- Call origination on fixed public narrowband networks;
- Call termination on fixed public narrowband networks;
- Local-tandem conveyance and transit on fixed public narrowband networks;
- Single transit on fixed public narrowband networks;

- NTS retail uplift charge;
- Interconnection circuits; and
- PPP.

Proposed regulation

16.7 Below we consider whether a charge control should be applied to the following markets in which our preliminary conclusion is that BT has SMP, and associated areas:

- Wholesale analogue exchange line services;
- Call origination on fixed public narrowband networks;
- Call termination on fixed public narrowband networks;
- NTS retail uplift charge;
- Interconnection circuits; and
- PPP.

WLR analogue exchange lines

16.8 Ofcom believes that in the absence of regulation, BT has incentives to set prices for WLR analogue services higher than could be expected in a competitive market. As discussed in Sections 5 and 13, BT retains a very high market share in the provision of exchange lines and the use of analogue WLR has been central to promoting competition in the retail narrowband markets. Barriers to entry in exchange lines mean that even CPs that have self-supplied in some cases remain dependent on a WLR product from BT if they are able to supply service on a national basis.

16.9 Without a charge control, the cost orientation obligation is likely to constrain prices to be based on BT's costs. The obligation not to unduly discriminate may also restrict BT's ability to price WLR in such a way as to provide competitive advantage to its retail divisions. However, without a charge control in place, BT does not necessarily have incentives to improve its efficiency as would be expected if the market was competitive so retail consumers would not receive the benefits a competitive market would produce. We believe that a charge control is therefore necessary to ensure CPs are able to purchase WLR at the prices that would be expected in a competitive market to continue to promote this competition in the retail markets.

16.10 We will consult separately on the WLR charge control. This will cover the elements of the WLR analogue service to be covered by the charge control and the basket design. Our current intention is to finalise this process by October 2009.

Call origination

16.11 BT continues to retain a high market share of the call origination market. BT's market share in call origination is linked to its high market share in exchange lines, since only the network to which a consumer is connected can provide call origination. The entry barriers for exchange lines explained above are also relevant for call origination.

16.12 Therefore, for the same reasons as for exchange lines, we believe a charge control is required on call origination.

Call termination

16.13 As discussed in section 7, Ofcom's preliminary conclusion is that BT has SMP in the termination market. In the absence of a charge control, prices for call termination over BT's network are likely to be excessively high. Call termination is a 'bottleneck' service, as explained in Section 7. Given the scale of the BT network, a CP must be able to terminate traffic to BT in order for its service to be viable.

16.14 As for exchange lines and call origination, without a charge control we do not believe BT has incentives to increase its efficiency in providing call termination.

16.15 Therefore, for the same reasons as for exchange lines and call origination, we believe a charge control is required on call termination.

Interconnection circuits

16.16 As discussed in section 10 interconnection circuits are required to support the effective functioning of remedies in markets where BT has SMP. Due to the nature of interconnection there is no constraint on the prices of these circuits. Since, by definition, interconnection circuits connect the BT network to another CPs' network, there may be incentive on BT to price interconnection as high as possible to limit competition in markets where its own retail divisions are active (and which would not be subject to such charges).

16.17 Whilst a cost orientation obligation may limit BT's ability to price interconnection circuits, the allocation of common costs to interconnection may act to raise the costs upon which prices are based. In addition, a cost orientation obligation would not provide BT with an incentive to increase its efficiency since CPs have to buy interconnection circuits in order to access the remedies in the call origination and call termination markets.

16.18 Therefore, we are of the opinion that a charge control is required.

PPP

16.19 PPP is generated by BT's activities in providing products in markets where it has SMP. As for interconnection circuits, there is no competitive market for the provision of these services to constrain the cost. Given the nature of PPP, it is likely that the precise allocation of costs will be complex for other CPs to accurately interpret.

16.20 Because of this, we believe that in the absence of a charge control BT will be able to recover, through PPP, costs not directly related to the provision of products that meet BT's obligations in markets where it has SMP or technical areas associated with these markets.

16.21 Therefore, we propose to impose a charge control on PPP.

NTS retail uplift

16.22 The NTS retail uplift charge (and the additional bad debt surcharge related to PRS services) reflects BT's costs in retailing NTS services and is necessary to allow CPs providing NTS services to make effective use of the NTS call origination remedy BT

is obliged to provide. There is no competitive market for the provision of these services to constrain the cost. Because of this, we believe that in the absence of a charge control BT will be able to set excessive charges for the NTS retail uplift which may inhibit the CPs ability to effectively provide NTS services for the benefits of consumers.

16.23 Therefore, we propose to impose a charge control on the NTS retail uplift.

Structure of charge controls

16.24 The above charge controls will be implemented as follows:

- Wholesale analogue exchange line services: Ofcom will publish a separate consultation regarding this charge control.
- Network Charge Control: Ofcom has published a consultation on the Network Charge Control including charge controls for call origination, call termination, interconnection circuits and PPP⁹².
- NTS retail uplift charge: Ofcom will consult separately on the NTS retail uplift charge control.

Hull area / KCOM

16.25 A charge control remedy was not imposed on KCOM as a result of the 2003 review. It is Ofcom's opinion that, based on our analysis for the 2009 review, this continues to be an appropriate position based on the market conditions in which KCOM operates. KCOM has been subject to, and we propose to retain, a number of other remedies, including a requirement to provide network access on reasonable request, not to unduly discriminate and to provide services on a LRIC plus mark-up basis. During the life of the existing remedies, there has been no significant entry into the Hull market.

16.26 We do not believe that increased regulation would prompt rapid entry into this market. The existing (and proposed) suite of regulation outlined above provides a framework that should support entry, in the event a CP approaches KCOM with a request for wholesale access. The addition of increased regulatory obligations on KCOM, without sufficient demand to justify this, would increase KCOM's cost base for the existing products and services it does supply. Any increase in costs would need to be recovered from its retail base, which would increase prices without necessarily influencing market entry.

16.27 Therefore, we do not believe that it would currently be a proportionate response to the market conditions to propose charge control regulation on KCOM.

16.28 However, Ofcom is aware that KCOM has been approached to provide access in markets where it has previously been found to hold SMP and where we propose it retains SMP. If in the course of these negotiations it proves that KCOM's obligations such as the requirement to provide access on reasonable request, not to unduly discriminate, and to base charges on LRIC plus mark-up are insufficient to support the provision of products that promote competition, Ofcom may review its decision not to impose a charge control obligation.

⁹² *Review of BT network charge controls – consultation on proposed charge controls in narrowband wholesale markets*, 19 Mar 2009 (http://www.ofcom.org.uk/consult/condocs/review_bt_ncc/)

Legal tests

16.29 Ofcom has considered the Community requirements set out in Section 4 of the Act. In particular, the proposed condition promotes competition and secures efficient and sustainable competition by ensuring that charges for wholesale services are at a level that enables operators to compete.

16.30 We consider that the proposed condition meets the criteria set out in Section 47(2) of the Act. It is:

- objectively justifiable. As explained in paragraphs 16.7 to 16.25 above, without the proposed charge controls, BT may price excessively. The benefits expected of a competitive market would not be available to consumers without the imposition of RPI+/-X price controls.
- not unduly discriminatory. While it does not apply to KCOM, we consider that it would not be proportionate based on market conditions to do so.
- proportionate. As it requires BT to meet an RPI+/-X control which includes allocating common costs to the provision of relevant services, BT has the correct incentives to improve efficiency which leads to benefits that would be expected in a competitive market, but allows BT to benefit from any further improvement in its efficiency.
- transparent. It is clear in its intention to control BT's charges while creating efficiency incentives.

16.31 As discussed at paragraphs A6.48 to A6.54 where we propose charge controls as a remedy we have to ensure that the proposed condition satisfies the tests set out in section 88 of the Act.

16.32 We describe at paragraphs 16.7 to 16.25 that we consider that in the absence of charge controls BT may price excessively, therefore there is a risk of adverse effects arising from price distortion.

Section 88(1)(b) of the Act requires that charges should be appropriate for the purposes of

- i) promoting efficiency;
- ii) promoting sustainable competition; and
- iii) conferring the greatest possible benefits on the end users of public electronic communications services.

16.33 We consider at paragraph 16.3 the general aim of the proposed conditions to create incentives to increase efficiency, which would not be present if BT was only regulated through a cost orientation condition.

16.34 We discuss the individual markets, but note that WLR has been central to promoting competition, through, in part price controls. Call origination and termination are both bottlenecks which require a charge control to ensure that CPs are not charged excessively high prices. PPP and Interconnect Circuits are both areas where there are no constraints on the price that BT could set, and therefore they need to be regulated by a charge control to allow effective competition in the relevant associated

market. For all of the above reasons we are of the view that the proposed condition promotes sustainable competition.

16.35 We consider that at paragraph 16.30 above, without the proposed charge controls the benefits expected of a competitive market would not be available to consumers.

16.36 Section 88(2) requires us to take account of the extent of the investment when setting this type of condition. We consider that the design of the RPI +/- X control allows both common costs to be taken into account and for the incentive of a Dominant Provider being able to retain any increased profits should it be able to reduce its costs (through increased efficiency) below the level expected when the cap was set. The proposed condition will apply to the following markets in which our preliminary conclusion is that BT has SMP: and relevant technical area:

- Wholesale analogue exchange line services;
- Call origination on fixed public narrowband networks;
- Call termination on fixed public narrowband networks;
- Interconnection circuits; and
- PPP.

16.37 It will also apply to:

- NTS retail uplift.

Question 16.1: *Do you agree that Ofcom should impose charge controls on BT in wholesale analogue exchange lines, wholesale call origination, wholesale fixed geographic call termination, interconnection circuits, PPP and the NTS retail uplift charge? If not, please explain why.*

Question 16.2: *Do you agree that it would be disproportionate to impose charge controls on KCOM? If not, please explain why.*

Section 17

Price regulation of wholesale ISDN30 exchange lines

Introduction

17.1 In addition to the general remedies set out in section 11, this section considers the appropriateness of imposing price regulation on BT, further to our preliminary conclusion that it has SMP in the provision of ISDN30 exchange lines.

Background

17.2 While BT was found to have SMP in ISDN30 exchange lines as a result of the 2003 market review, a basis of charges condition or charge control were not imposed. A cost orientation obligation was not imposed due to the existence of supply-side substitutes (such as the use of PPCs), and the expectation of downward pressure on pricing during the review period from the supply of business ISDN2, which was subject to a basis of charges of obligation. Based on the analysis conducted for this review, we believe that it is now appropriate to impose a basis of charges obligation on ISDN30.

17.3 In 2003 it was argued that the market conditions for ISDN30 were different from other markets and that potential supply side substitutes existed, such as ISDN30 over a 2Mbit/s leased line (which may be cost effective as long as utilisation is high). This form of competition is deemed preferable to simple resale of BT's ISDN30 service, as it exposes a greater part of the value chain to competition.

17.4 It was also argued that there was further downward pressure on ISDN30 prices from regulation of ISDN2 and the potential substitution between the two services. It may be possible to substitute multiple ISDN2 lines for a low-utilisation ISDN30 line. This may have made it difficult to sustain a price per channel for ISDN30 that is significantly higher than the price per channel for ISDN2. Therefore, it was felt that setting the condition in relation to ISDN2 only, which would operate in conjunction with a requirement not to discriminate on both services, would be sufficient. The available evidence that we discuss below shows that in fact these potential supply side substitutes played a much more limited role.

Market analysis

17.5 In section 5 we provide data on BT's market share and a profitability analysis based on its regulatory accounts. BT's market share has remained high. Openreach recently provided Ofcom with a forecast for ISDN30 lines, which illustrated that demand will continue to remain relatively flat during the life of this review (the next four years).

17.6 The profitability analysis for ISDN30 also provides us with some concern. As the table below shows, the profits for the service seem to be on a path that diverges further and further away from the underlying cost base.

Figure 17.1 – ISDN30: BT profitability analysis based on its regulatory accounts

	2004	2005	2006	2007	2008
Sales (£m)	281	325	325	334	339
Sales (internal volume, 000s) ⁹³			1,997	1,938	1,846
Sales (external volume, 000s)			181	312	458
Operating costs (£m)	206	180	191	156	149
Operating profit (£m)	75	145	134	178	190
Capital employed (£m)	566	473	398	336	295
Return on sales	27%	45%	41%	53%	56%
Return on capital employed	13%	31%	34%	53%	64%

Source: BT Regulatory Accounts

- 17.7 In assessing whether regulation is appropriate we have considered a number of potential counter arguments. We acknowledge that ISDN30 is a mature product and assets have been fully depreciated, which reduces the costs shown in the accounts. We also note that the price for the product has remained flat, which means that in real terms the price has been falling by RPI. Additionally, there is potentially a concern that any reduction in the price may stimulate the market and as the equipment is no longer produced for new supply, this may cause supply problems. Any equipment that could be sourced would add new assets to the accounts, and subsequently reduce returns. While the market has endured longer than expected, it is considered that new supply is being met using IP based services rather than ISDN, so this should therefore be considered a declining product.
- 17.8 While we accept there may be some merit in these arguments, we believe that on balance, due to the limited restraint that supply side substitutes apply to this product, the increasing returns BT is able to generate and the forecast of a flat market over the next four years, we need to consider some form of regulation to prevent the exploitation of final consumers of the product.
- 17.9 We seek comments from stakeholders in relation to the options outlined below.

Option 1: No ex ante regulation imposed on BT

- 17.10 A retention of the status quo would continue to allow opportunities for infrastructure-based providers to compete using their own facilities, or possibly PPC's, to exert pricing pressure on BT.
- 17.11 However, the evidence of BT's high, and possibly increasing returns, in a market where it has SMP and where constraints have not proved as strong as expected, coupled with the stable demand forecast for the service, means that it is very difficult for Ofcom to justify no action in this market.
- 17.12 The retail price of an ISDN30 exchange line is dependent on the length of the contract and the extent to which it is part of a wider solution (including calls and/or other service such as CPE). BT's prices are around £45 per quarter per channel excluding VAT⁹⁴. Other CPs are more likely to customise offers but are unlikely to be able to charge higher prices than BT. The wholesale price is £33 per quarter per channel, accounting for around 70 to 75% of the retail price. Therefore, if wholesale

⁹³ BT's regulated accounts do not show volume of channels prior to 2006

⁹⁴ *Fixed Narrowband Retail Services Markets - Consultation on the identification of markets, determination of market power*, 19 Mar 2009 (http://www.ofcom.org.uk/consult/condocs/retail_markets/)

products are priced higher than the expected competitive level, there may be a resultant increase in the retail price paid by consumers.

Option 2: Impose a basis of charges condition on BT

- 17.13 If Ofcom imposed a basis of charges condition on BT it would immediately impact BT's ability to price at current levels, while still allowing some pricing flexibility in the future. We would expect that this would therefore impact the pricing strategies of other providers active in this market and, coupled with the proposed removal of retail price notification by BT⁹⁵, should stimulate greater competition in the ISDN30 market.
- 17.14 A potential implication of the introduction of this option would be a not insignificant impact on Openreach's revenue. We estimate that this would be a reduction in revenue of approximately £80 million per annum.
- 17.15 There is also the potential for disputes to be raised in this area. Complainants might argue that BT's prices do not meet the cost orientation obligation (i.e. prices are higher than they should be) or alternatively that a reduction in prices might impact the ability of CPs with their own networks to compete (i.e. BT's cost-orientated price impacts CPs' ability to make a margin on the supply of their own product).

Option 3: Impose a basis of charges condition and charge control on BT

- 17.16 This option would create a floor and ceiling in which BT's prices for ISDN30 could fluctuate. The imposition of a charge control is a more direct control of prices than a basis of charges condition and therefore reduces the likelihood of disputes, as common costs would be allocated as part of the process for establishing the control.
- 17.17 However, to move from the existing arrangements where BT has no price regulation to a situation where it is subject to both a basis of charges condition and charge control may be considered a strong response. Ofcom also needs to take into consideration the additional regulatory burden in terms of the resources required to consult on, set and monitor a charge control, and in terms of BT commitment to meet the obligation.

Legal tests

- 17.18 Ofcom has considered the Community requirements set out in section 4 of the Act. In particular, the proposed price regulation has the purpose of securing efficient and sustainable competition for the maximum benefit of consumers as it will reduce BT's ability to price independently of the underlying costs for the ISDN30 product.
- 17.19 We consider that a condition requiring BT to apply a basis of charges obligation to ISDN30 meets the criteria set out in section 47(2) of the Act, to be objectively justifiable, non-discriminatory and transparent. The key question is the proportionality of Ofcom's response to the competition problem identified.
- 17.20 A basis of charges condition would be objectively justifiable based on the evidence outlined in this section that BT's revenue is high based on the underlying cost base. As discussed, it would be difficult for Ofcom to propose no action in response to this evidence since the higher prices charged by BT are likely to be reflected in higher prices for end consumers.

⁹⁵ *Narrowband Retail Services Markets - Consultation on the identification of markets, determination of market power*, 19 Mar 2009 (http://www.ofcom.org.uk/consult/condocs/retail_markets/)

- 17.21 This condition would not unduly discriminate as while we do not propose to extend regulation to KCOM, this is consistent with the way we treat KCOM in relation to other remedies and it reflects the different market conditions in that no other CP has yet requested KCOM to provide an ISDN30 wholesale product.
- 17.22 The proposed condition is transparent as it is clear the intention is to constrain BT's ability to price excessively in relation to ISDN30.

Proportionality

- 17.23 The test under section 47(2)(c) requiring any condition to be proportionate to what it is intended to achieve is discussed in the ERG Common Position on the Approach to Appropriate Remedies, which provides additional guidance. The Common Position sets out that, in order for a remedy to be proportional it will be necessary to show that it addresses the underlying competition problem identified during the analysis and that '*alternative remedies have been considered, where possible, so that the least burdensome effective remedy can be selected*'.⁹⁶ In assessing the test under section 47, we have taken due account of the ERG guidance.
- 17.24 The evidence presented in this section clearly demonstrates that expected competitive constraints on ISDN30 are not placing pressure on BT to reduce prices in line with reductions in the costs of providing the service. Therefore, we feel that it is appropriate to consider the imposition of pricing regulation based on the identification of this issue.
- 17.25 The scale of responses available to Ofcom in relation to price regulation are: an obligation that prices are reasonable; an obligation that prices are cost orientated; and/or a price control. There is existing regulation on BT in relation to all markets in which it has SMP under the requirement to provide network access, which requires BT to provide access on 'fair and reasonable terms, conditions and charges'. While it might have been appropriate to rely on this obligation in conjunction with the supply side substitutes that we expected to exert pressure on prices, it is clear we need to consider a stronger response as a result of the analysis in the 2009 review.
- 17.26 Therefore, we consider that an obligation requiring BT to apply cost orientation to ISDN30 would be a proportionate response, as it would impact BT's existing pricing strategy, while still allowing for some pricing flexibility, which should stimulate competition to the benefit of end users.
- 17.27 The absence of a charge control may lead to disputes being raised to Ofcom if the prices offered by BT are not considered to be based on costs by other CPs. A charge control would mitigate this potential concern. However, we consider that the appropriate resolution processes are in place to resolve any such disputes. We are therefore proposing that it would not be proportionate to also impose a charge control.

Question 17.1: *Do you agree that, based on BT's reported returns, Ofcom should impose additional obligations on BT in relation to wholesale ISDN30 exchange lines? If not, please explain why.*

Question 17.2: *Would a cost orientation obligation be sufficient to address the concerns raised by Ofcom in relation to BT's returns?*

⁹⁶ http://www.erg.eu.int/doc/whatsnew/erg_0330rev1_remedies_common_position.pdf, page 12

Question 17.3: *Would a charge control be a proportionate response to the concerns raised by Ofcom in relation to BT's returns?*

Section 18

Revocation and amendment of regulation

Introduction

18.1 Our general approach to implementing the remedies proposed in this review is, to revoke the existing obligations and impose new ones. The existing obligations have developed over the past five years and as such the original notifications setting the conditions are spread through different statements. For clarity, we propose therefore to replace these conditions with new conditions within this review. We intend to use the same numbers for the conditions for the purposes of clarity and continuity.

Revocation required by the Act

18.2 Where we are proposing that a Dominant Provider no longer has SMP in a market, then we are required by section 84(4) of the Act to revoke every SMP service condition that applies to that person by reference to the earlier SMP determination. This will affect SMP service conditions in the following markets where it is proposed that BT no longer has SMP:

- Local-Tandem Conveyance / Local-Tandem Transit
- Wholesale Transit Services (in relation to SMP conditions applied to the previously defined Single Transit market)

18.3 Such conditions will be revoked upon the publication of a final statement.

18.4 The reasoning for our proposals that BT no longer has SMP in these markets are discussed in the relevant Sections dealing with those specific markets.

Remedies/conditions to be revoked and not re-applied

18.5 We are proposing the revocation of certain conditions and directions completely, in markets where we are proposing that SMP is still held. These are discussed below.

18.6 As a result of the previous review, Ofcom imposed a number of remedies and Directions, which we do not intend to consider retaining based on analysis conducted for the 2009 market review. This is either because the consumer demand for a product has disappeared; the Direction was revoked and replaced as part of another consultation; or the issue has been addressed during the course of the Direction.

18.7 The sections below set out our reasoning for considering it not necessary to retain particular remedies or Directions.

Legal Tests

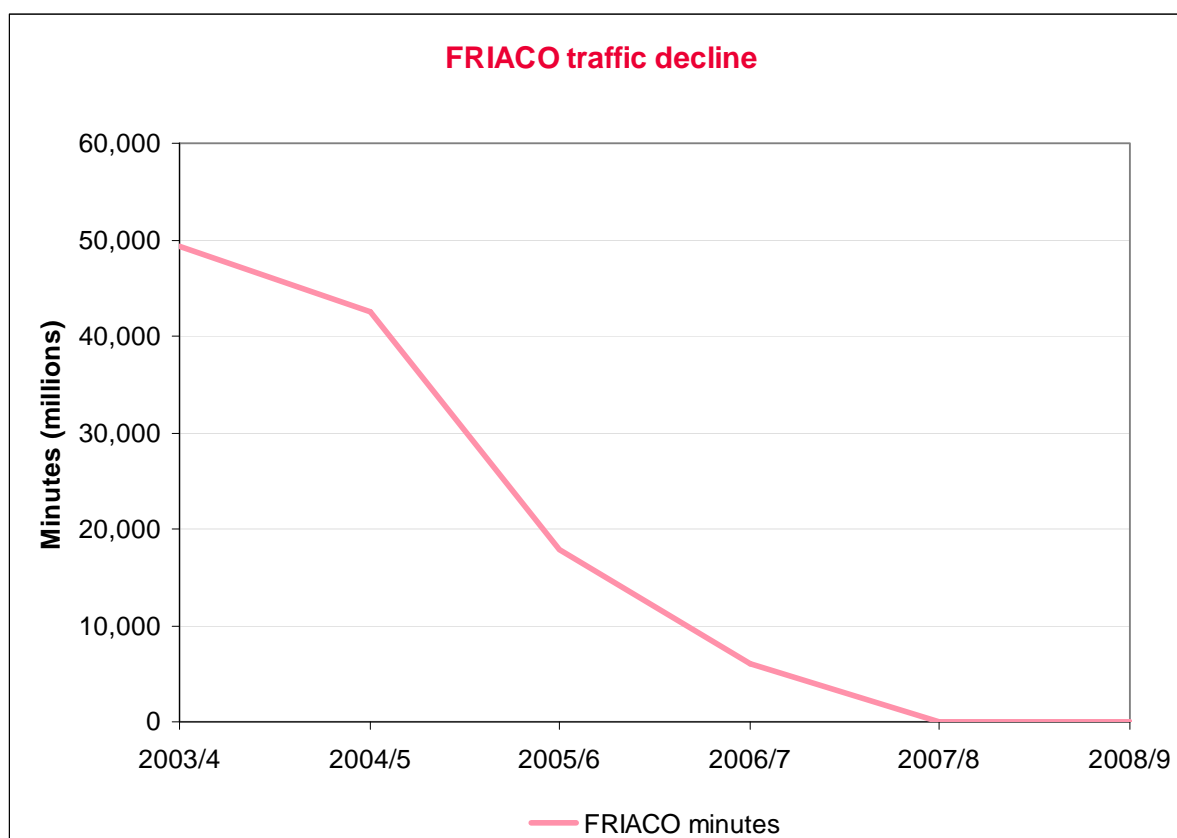
18.8 Section 48 of the Act sets out the procedure for the revocation of conditions. Ofcom is required to publish a Notification specifying the conditions proposed to be revoked, setting out the effect of those conditions and giving reasons for making the proposal. This Section seeks to identify the conditions that we consider are no longer appropriate in markets where we propose that an operator has SMP.

- 18.9 In proposing the revocation of a condition we are mindful of the tests set out in section 47 in relation to setting or modifying a condition. If those tests can no longer be satisfied, this would provide a justification for proposing revocation.
- 18.10 Section 49 of the Act sets out a similar procedure for directions. S49(2) requires that a direction must not be withdrawn unless the withdrawal it is:
- objectively justifiable;
 - does not unduly discriminate;
 - proportionate;
 - transparent.
- 18.11 Under section 49(3) we must act in accordance with our section 4 duties.
- 18.12 In addition Notification requirements in section 49(4) require us to identify our proposal, set out the relevant direction and set out the effect of the proposed withdrawal with reasons for making the proposal.

Requirement to provide Flat Rate Internet Access Call Origination (FRIACO)

- 18.13 The 2003 market review found that BT had SMP in the call origination market and the local-tandem conveyance and transit market and imposed a requirement on BT to provide DLE FRIACO and ST FRIACO. The aim of this regulation was to promote competition in the provision of wholesale and retail unmetered narrowband internet termination services. The supply of these products was closely linked to the development of competition in the downstream markets.
- 18.14 Analysis conducted for the 2009 market review indicates that demand for this product in the retail market and subsequently at the wholesale level, has virtually disappeared, as shown in the graph below.

Figure 18.1 – FRIACO minutes, 2003 to present



Source: BT

18.15 Due to this decline in the market, we do not believe that the legal tests would be met to impose regulation. Specifically, it would not be proportionate, given the lack of demand for this product, for Ofcom to retain a condition on BT to supply this service. Should there be a severe reversal of demand for this product, Ofcom may reconsider if specific regulation is necessary.

Question 18.1: Do you agree that Ofcom should revoke the obligation on BT to provide FRIACO? If not, please explain why.

BT's use of Cancel Other

18.16 'Cancel Other' is a functionality that allows CPs to cancel a customer's order for CPS during the 10 day period between the confirmation of an order for CPS and the switchover date of this service. The Direction outlines the instances where it is acceptable for BT to use Cancel Other (in the case of 'slamming' or 'line cease') and what information BT must provide to its competitors about its use.⁹⁷ At the time of the original Direction, this functionality was predominantly used by BT. The aim of the Direction was to ensure effective competition through the use of CPS by increasing transparency and limiting the scope for the use of the CPS process in a way that may reduce confidence in this process, and affect the development of competition in retail markets.

⁹⁷ 'Slamming' is where a request for CPS and/or WLR has been made without the Customer's express knowledge and consent. 'Line Cease' is where a telephone line is ceased during the transfer period.

- 18.17 During 2004 Ofcom was asked to resolve a dispute after negotiations between BT and the rest of the industry failed to lead to agreement of a new process for managing customer complaints and cancellations when alternative providers attempted to transfer a customer away from BT. Ofcom published a Direction on 21 January 2005⁹⁸, as amended on 28 July 2005.⁹⁹ The effect of the Direction was to introduce stricter rules on when BT is permitted to use Cancel Other and what information it must provide to its competitors about its use of Cancel Other. The July 2005 Direction revoked the Direction effective under the 2003 review.
- 18.18 In conjunction with complaints data and other measures, Ofcom monitors the use of Cancel Other by CPs as a barometer of potential slamming activity. It is possible that high recorded instances of Cancel Other mean that CPs are responding to claims of slamming by their customers, or potentially mis-using the Cancel Other function themselves to prevent customers switching to an alternative provider.
- 18.19 The current Direction does not apply to CPs other than BT. However, Ofcom has found it necessary to take enforcement action under General Condition 1.2 against other CPs found to have mis-used the Cancel Other function.¹⁰⁰
- 18.20 In order to address the issue in the longer term Ofcom is currently assessing the effectiveness of the existing Cancel Other rules and, in particular, whether it is appropriate that these rules should continue to only apply to BT. This is set out in Ofcom's consultation document, Protecting consumers from mis-selling of fixed-line telecommunications services, which was published on 16 March 2009.¹⁰¹
- 18.21 Ofcom is proposing to extend Cancel Other rules to all Providers of fixed-line voice services as part of a General Condition, and are considering the necessity for the current Direction, in light of those proposed changes.
- 18.22 As the issue of the appropriateness of the current Direction is necessarily linked Ofcom's review into mis-selling of fixed-line telecommunications services, then we do not propose to review it as part of this review, notwithstanding the fact that it derives its authority from Condition AA1(a), which we are, implicitly, reviewing. We are proposing that there is a continuing need for substantive condition AA1(a) to be imposed upon BT.
- 18.23 We do not, of course, seek to prejudge what the outcome of any consultation will be, and therefore, in order to allow Ofcom's review into mis-selling of fixed-line telecommunications services to deal with the specific "cancel other" issue, we are proposing to maintain the current Direction¹⁰² solely for the purpose of allowing it to be so considered. Should Ofcom's review into mis-selling of fixed-line telecommunications services publish its Final Statement before this review, and

⁹⁸ BT's use of 'cancel other' 21 Jan 2005 (<http://www.ofcom.org.uk/consult/condocs/cancel-other/codir/codir.pdf>)

⁹⁹ use of Cancel Other: Direction concerning BT's use of Cancel Other and Determination to resolve a dispute between BT and various communications providers concerning BT's use of Cancel Other, 28 July 2005 (<http://www.ofcom.org.uk/consult/condocs/cancel-other/amendment2direction/>)

¹⁰⁰ For examples of enforcement action in relation to potential abuse of the Cancel Other function and guidance on the correct application of the Cancel Other function visit:

http://www.ofcom.org.uk/bulletins/comp_bull_index/comp_bull_ocases/open_all/cw_960/#_Guidance_on_the_correct_application

¹⁰¹ Protecting consumers from mis-selling of fixed-line telecommunications services, 17 Mar 2009

(http://www.ofcom.org.uk/consult/condocs/protecting_consumers/)

¹⁰² BT's use of Cancel Other: Direction concerning BT's use of Cancel Other and Determination to resolve a dispute between BT and various communications providers concerning BT's use of Cancel Other, 28 July 2005, <http://www.ofcom.org.uk/consult/condocs/cancel-other/direction/direction>

conclude that the Direction be revoked, then any direction we propose in relation to its continued existence would be superseded, and would have no effect.

Local-tandem transit and inter-tandem transit for Indirect Access traffic

- 18.24 In July 2003, a Direction was imposed on BT in resolution of a dispute, which required BT to provide a facility to Cable and Wireless, whereby it could host IA codes on its network and compete with BT in the provision of local-tandem transit and inter-tandem transit services.¹⁰³
- 18.25 In section 8 we outline our preliminary findings that BT does not have SMP in the LTC/LTT market (and ITC/ITT was found competitive in 2005). However, our consideration of whether it is necessary to retain this Direction centres on the necessity to require BT to provide this facility. Since this Direction was imposed, other CP's have commenced offering various network based services to communications or service providers, such as hosted CPS and IA services. For example, Cable and Wireless and other providers have built a business based on the opportunity to provide infrastructure services.
- 18.26 Therefore, with these changed market conditions and the existence of other remedies (such as requirement to provide network access on reasonable request), we do not believe that it would be objectively justifiable to continue with this Direction. The proposed revocation is set out in Annex 10.

Question 18.2: *Do you agree that Ofcom should revoke the direction requiring BT to provide local-tandem transit and inter-tandem transit for Indirect Access traffic? If not, please explain why.*

BT's Credit Vetting Supplemental Agreement

- 18.27 In February 2003, a Direction was imposed on BT in resolution of a dispute which required BT to modify its credit vetting supplemental agreement¹⁰⁴. Further changes were made in June 2004 following a dispute between BT and Apple regarding the level of a security deposit required by BT in advance of the provision of nominated services¹⁰⁵. The February 2003 Direction did not specify how a reasonable level of security deposit should be determined. The June 2004 Direction stated that BT and Apple should refer the dispute to an independent expert to determine the appropriate level of security deposit and that this finding should be binding.
- 18.28 BT's credit vetting supplemental agreement now forms part of the standard interconnect contracts that BT agrees with industry. Changes to this contract are implemented after BT consults industry and this may mean that changes are modified based on CP feedback. Should negotiations reach a point where changes instigated by BT cannot be agreed through a consultation process with industry, then disputes may be referred to Ofcom for resolution

¹⁰³ *Indirect access dispute between BT and Cable and Wireless*, 15 July 2003

<http://www.ofcom.org.uk/static/archive/Oftel/publications/licensing/2003/indirect0703.pdf>

¹⁰⁴ *Dispute between BT and the Operators listed in schedule 2 regarding BT's credit vetting supplemental agreement*, 20 February 2003

<http://www.ofcom.org.uk/static/archive/oftel/publications/licensing/2003/credit0203.pdf>

¹⁰⁵ *Resolution of a dispute between Apple and BT about the level of deposit required in advance of interconnection services*, 3 June 2004

http://www.ofcom.org.uk/bulletins/comp_bull_index/comp_bull_ccases/closed_all/cw_745/resolution.pdf

18.29 Due to the implementation of this consultation process for agreeing core contract terms, we do not believe that it is necessary to retain a Direction specifically in relation to credit vetting. The proposed revocation of the existing direction is set out in Annex 11.

Question 18.3: *Do you agree that Ofcom should revoke the direction relating to BT's credit vetting supplemental agreement? If not, please explain why.*

Charge Controls

18.30 A different approach is needed for charge controls. Charge controls are currently set in the following markets and associated areas:

- a) Call Origination (Condition AA4(a))
- b) Single Transit (Condition AA4(b))
- c) Local-Tandem Conveyance / Transit (Condition AA4(c))
- d) LECO / FRIACO (Condition AA4(d))
- e) FRIACO (Condition AA4(e))
- f) Call Termination (Condition BA4(a))
- g) PPP / Interconnect Circuits (Condition PA1(a))
- h) NTS Call Origination (Condition AA4(f)).

18.31 In addition, the charge controls set under 2003 notification (as amended), Conditions AA4, BA4 and PA1, have not been formally revoked, although they no longer have any effect, as they were time limited in their application. We are proposing that these conditions are formally revoked.

18.32 Conditions AA4(a) to (e) and PA1(a) were imposed in Annex 3 to the August 2005 Review of BT's Network Charge Controls. Condition AA4(f) was imposed separately in August 2005¹⁰⁶.

18.33 Condition AA4 also imposed a charge control on WLR, however this was disapplied by the Direction in the January 2006 statement *WLR: Reviewing and Setting charge ceilings for WLR services*.

18.34 We have, in this review, proposed that charge controls are an appropriate remedy to findings of that BT holds SMP, in the following markets / technical areas:

- a) call origination;
- b) call termination;
- c) PPP;

¹⁰⁶ *Charges between communications providers: Number Translation Services Retail Uplift and Premium rate Services Bad Debt surcharge*, 28 Sep 2005
http://www.ofcom.org.uk/consult/condocs/NTSfin/statement_nts_uplift/statement_nts_uplift.pdf

- d) interconnection circuits;
 - e) WLR.
- 18.35 Ofcom intend to consult on how to implement our proposals for charge controls in separate documents to the statement that follows this consultation. One such consultation document, the *Review of BT network charge controls*, has been published today¹⁰⁷. This document covers charge controls to be implemented for call origination (excluding NTS call origination), call termination, PPP and interconnection circuits. Separate consultations on the charge controls for NTS call origination and WLR will be published in due course.
- 18.36 We do not therefore, propose to immediately revoke any of the current SMP service conditions relating to charge controls. Such an approach may be problematic if the date on which we invoke the new control does not align with the date we revoke the old control in this review.
- 18.37 Further existing charge control conditions impose an obligation upon BT to supply data to Ofcom in relation to performing the Percentage Change calculation (see, for example Condition AA4(a).8). Such data is required to be provided within three months of the end of the Relevant Year, therefore obligations under current charge control conditions may remain live after the substantive obligations under each control cease at the end of the defined period.
- 18.38 It is important that such obligations continue in order that we can effectively monitor compliance with the Conditions during their life.
- 18.39 We have, in this review, proposed that some of the markets to which a charge control condition currently applies, should now be regarded as effectively competitive. This includes the LTC/LTT and the Single Transit markets. As discussed at paragraph 18.2 above, s84(4) requires us to revoke conditions where a market is found to be effectively competitive. In relation to these conditions (AA4(b) and AA4(c)), because of the ongoing requirement for BT to provide data in relation to periods when SMP was still held, it would not be appropriate for the condition to be revoked immediately, and therefore, we are proposing that the conditions relating to these two markets be revoked with effect from 1 January 2010, three months after the end of the Relevant Year as defined in those conditions, and therefore after the period for the obligation to supply data expires. We consider this period is necessary in the circumstances, and, by setting a definitive date for revocation we are compliant with our statutory duty under s84(4) of the Act.
- 18.40 In relation to the remaining charge controls that exist in markets where we are proposing that BT still has SMP, we propose to not to revoke the existing conditions. This will allow the obligations that continue to provide data relating to the period when the substantive control was operational to remain effective and is also consistent with the approach adopted in the August 2005 *Review of BT's Network Charge Controls*. This does not impose any additional requirements upon BT, as the conditions themselves are time limited and will cease to have effect from the end of the last Relevant Year, 30 September 2009, with only the reporting conditions continuing beyond this time.

¹⁰⁷ *Review of BT network charge controls – consultation on proposed charge controls in narrowband wholesale markets*, 19 Mar 2009 (http://www.ofcom.org.uk/consult/condocs/review_bt_ncc/)

Amendment of Associated Regulation

- 18.41 In proposing that the LTC / LTT and Single Transit markets are now competitive, and proposing changes to the market definitions for access and call origination and termination, we are mindful that associated regulation needs to be amended to reflect our proposals.
- 18.42 On 22 July 2004, Ofcom published *The regulatory financial reporting obligations on BT and Kingston Communications Final statement and notification (Accounting separation and cost accounting: Final statement and notification)*, which set additional SMP conditions in relation to fixed wholesale narrowband markets in relation to accounting separation and cost accounting obligations.
- 18.43 The July 2004 statement will continue in force, by virtue of the continuation of SMP in those markets to which it applies. It is therefore important to ensure that we propose amendments to the July 2004 statement in order to update the market definitions it relies upon, and to remove any obligation in relation to markets where we are proposing that SMP is no longer held by a communications provider.
- 18.44 The July 2004 statement contains two Notifications, one to BT produced at Annex 2 and one to Kingston (now KCOM) produced at Annex 3. Although the required amendments are similar we will deal with each CP in turn.
- 18.45 It should be noted that, in parallel with this consultation, Ofcom is reviewing separately these obligations.

BT

- 18.46 The July 2004 statement sets out a table at Schedule 1 of Annex 2 detailing the relevant SMP markets to which the conditions are then applied. We propose to amend the table to read, in relation to markets 1 to 10 as follows (the table has not been reproduced beyond market 10);

Part 1: Wholesale Markets

Market identified and in which BT found to have SMP in previous Notification pursuant to section 79 of the Act	Date
1. Wholesale analogue exchange line services in the UK excluding the Hull Area [as defined in the Final Statement]	[date of final statement]
2. removed	
3. removed	
4. Wholesale ISDN2 exchange line services in the UK excluding the Hull Area [as defined in the Final Statement]	As above
5. Wholesale ISDN30 exchange line services in the UK excluding the Hull Area	As above
6. Call origination – the conveyance of all signals (including relevant control signals) originating on a customer’s exchange line to the first point in the network where those signals can be accessed by another communications provider, in the UK excluding the Hull Area [as defined in the Final Statement]	As above
7. removed	
8. removed	
9. removed	
10. Call termination - the conveyance of all signals (including relevant control signals) originating on a customer’s exchange line to the first point in the network where those signals can be accessed by another communications provider, provided by BT [as defined in the Final Statement]	As above

18.34 Additionally we propose to amend paragraph 4 of the Notification to refer only to markets where we propose SMP continues, namely, markets 1, 4, 5, 6 and 10.

KCOM

18.35 The July 2004 statement sets out a table at Schedule 1 of Annex 3 detailing the relevant SMP markets to which the conditions are then applied. We propose to amend the table to read, in relation to markets 1 to 7 as follows (the table has not been reproduced beyond market 7);

Part 1: Wholesale Markets

Market identified and in which Kingston found to have SMP in previous Notification pursuant to section 79 of the Act	Date
1. Wholesale analogue exchange line services in the Hull Area [as defined in the Final Statement]	date of final statement
2. removed	
3. removed	
4. Wholesale ISDN2 exchange line services in the Hull Area [as defined in the Final Statement]"	As above
5. Wholesale ISDN30 exchange line services in the Hull Area	As above
6. Call origination – the conveyance of all signals (including relevant control signals) originating on a customer’s exchange line to the first point in the network where those signals can be accessed by another communications provider, in Hull Area [as defined in the Final Statement]	As above
7. Call termination - the conveyance of all signals (including relevant control signals) originating on a customer’s exchange line to the first point in the network where those signals can be accessed by another communications provider, provided by KCOM	As above

18.36 Additionally we propose to amend paragraph 4 of the Notification to refer only to markets where we propose SMP continues, namely, markets 1, 4, 5, 6 and 7.

Legal Tests

18.37 The legal justification for the modifications are the same for the proposals for both BT and KCOM.

18.38 Where an SMP service condition is modified s48 of the Act requires that we set out the effect of the modification and give our reasons for making the proposal.

18.39 We have considered that in each of the markets where we are proposing SMP that appropriate remedies to address the identified market failure include accounting separation and cost accounting. This is discussed within the Section relating to each individual market.

18.40 Detailed conditions are already provided by the 2004 statement. We consider that they are the appropriate conditions to apply in this case. The conditions in the 2004 statement apply to markets that were previously defined in 2003, therefore, it is necessary for us to make amendments to the 2004 statement to reflect the our proposed market definitions and to remove any obligation to report on a market which we propose to be effectively competitive.

18.41 We consider that the proposed modification set out above to the 2004 statement are necessary and appropriate in the circumstances.

Annex 1

Responding to this consultation

How to respond

- A1.1 Ofcom invites written views and comments on the issues raised in this document, to be made **by 5pm on Thursday 28 May 2009**.
- A1.2 Ofcom strongly prefers to receive responses using the online web form at http://www.ofcom.org.uk/consult/condocs/review_wholesale/howtorespond/form, as this helps us to process the responses quickly and efficiently. We would also be grateful if you could assist us by completing a response cover sheet (see Annex 3), to indicate whether or not there are confidentiality issues. This response coversheet is incorporated into the online web form questionnaire.
- A1.3 For larger consultation responses - particularly those with supporting charts, tables or other data - please email steve.perry@ofcom.org.uk attaching your response in Microsoft Word format, together with a consultation response coversheet.
- A1.4 Responses may alternatively be posted or faxed to the address below, marked with the title of the consultation.
- Steve Perry
Floor 4
Competition Group
Riverside House
2A Southwark Bridge Road
London SE1 9HA
- Fax: 020 7783 4109
- A1.5 Note that we do not need a hard copy in addition to an electronic version. Ofcom will acknowledge receipt of responses if they are submitted using the online web form but not otherwise.
- A1.6 It would be helpful if your response could include direct answers to the questions asked in this document, which are listed together at Annex 4. It would also help if you can explain why you hold your views and how Ofcom's proposals would impact on you.

Further information

- A1.7 If you want to discuss the issues and questions raised in this consultation, or need advice on the appropriate form of response, please contact Steve Perry on 020 7783 4151.

Confidentiality

- A1.8 We believe it is important for everyone interested in an issue to see the views expressed by consultation respondents. We will therefore usually publish all responses on our website, www.ofcom.org.uk, ideally on receipt. If you think your response should be kept confidential, can you please specify what part or whether

all of your response should be kept confidential, and specify why. Please also place such parts in a separate annex.

- A1.9 If someone asks us to keep part or all of a response confidential, we will treat this request seriously and will try to respect this. But sometimes we will need to publish all responses, including those that are marked as confidential, in order to meet legal obligations.
- A1.10 Please also note that copyright and all other intellectual property in responses will be assumed to be licensed to Ofcom to use. Ofcom's approach on intellectual property rights is explained further on its website at <http://www.ofcom.org.uk/about/accoun/disclaimer/>

Next steps

- A1.11 Following the end of the consultation period, Ofcom intends to publish a statement in July 2009.
- A1.12 Please note that you can register to receive free mail Updates alerting you to the publications of relevant Ofcom documents. For more details please see: http://www.ofcom.org.uk/static/subscribe/select_list.htm

Ofcom's consultation processes

- A1.13 Ofcom seeks to ensure that responding to a consultation is easy as possible. For more information please see our consultation principles in Annex 2.
- A1.14 If you have any comments or suggestions on how Ofcom conducts its consultations, please call our consultation helpdesk on 020 7981 3003 or e-mail us at consult@ofcom.org.uk . We would particularly welcome thoughts on how Ofcom could more effectively seek the views of those groups or individuals, such as small businesses or particular types of residential consumers, who are less likely to give their opinions through a formal consultation.
- A1.15 If you would like to discuss these issues or Ofcom's consultation processes more generally you can alternatively contact Vicki Nash, Director Scotland, who is Ofcom's consultation champion:

Vicki Nash
Ofcom
Sutherland House
149 St. Vincent Street
Glasgow G2 5NW

Tel: 0141 229 7401
Fax: 0141 229 7433

Email vicki.nash@ofcom.org.uk

Annex 2

Ofcom's consultation principles

A2.1 Ofcom has published the following seven principles that it will follow for each public written consultation:

Before the consultation

A2.2 Where possible, we will hold informal talks with people and organisations before announcing a big consultation to find out whether we are thinking in the right direction. If we do not have enough time to do this, we will hold an open meeting to explain our proposals shortly after announcing the consultation.

During the consultation

A2.3 We will be clear about who we are consulting, why, on what questions and for how long.

A2.4 We will make the consultation document as short and simple as possible with a summary of no more than two pages. We will try to make it as easy as possible to give us a written response. If the consultation is complicated, we may provide a shortened Plain English Guide for smaller organisations or individuals who would otherwise not be able to spare the time to share their views.

A2.5 We will consult for up to 10 weeks depending on the potential impact of our proposals.

A2.6 A person within Ofcom will be in charge of making sure we follow our own guidelines and reach out to the largest number of people and organisations interested in the outcome of our decisions. Ofcom's 'Consultation Champion' will also be the main person to contact with views on the way we run our consultations.

A2.7 If we are not able to follow one of these principles, we will explain why.

After the consultation

A2.8 We think it is important for everyone interested in an issue to see the views of others during a consultation. We would usually publish all the responses we have received on our website. In our statement, we will give reasons for our decisions and will give an account of how the views of those concerned helped shape those decisions.

Annex 3

Consultation response cover sheet

- A3.1 In the interests of transparency and good regulatory practice, we will publish all consultation responses in full on our website, www.ofcom.org.uk.
- A3.2 We have produced a coversheet for responses (see below) and would be very grateful if you could send one with your response (this is incorporated into the online web form if you respond in this way). This will speed up our processing of responses, and help to maintain confidentiality where appropriate.
- A3.3 The quality of consultation can be enhanced by publishing responses before the consultation period closes. In particular, this can help those individuals and organisations with limited resources or familiarity with the issues to respond in a more informed way. Therefore Ofcom would encourage respondents to complete their coversheet in a way that allows Ofcom to publish their responses upon receipt, rather than waiting until the consultation period has ended.
- A3.4 We strongly prefer to receive responses via the online web form which incorporates the coversheet. If you are responding via email, post or fax you can download an electronic copy of this coversheet in Word or RTF format from the 'Consultations' section of our website at www.ofcom.org.uk/consult/.
- A3.5 Please put any parts of your response you consider should be kept confidential in a separate annex to your response and include your reasons why this part of your response should not be published. This can include information such as your personal background and experience. If you want your name, address, other contact details, or job title to remain confidential, please provide them in your cover sheet only, so that we don't have to edit your response.

Cover sheet for response to an Ofcom consultation

BASIC DETAILS

Consultation title:

To (Ofcom contact):

Name of respondent:

Representing (self or organisation/s):

Address (if not received by email):

CONFIDENTIALITY

Please tick below what part of your response you consider is confidential, giving your reasons why

Nothing Name/contact details/job title

Whole response Organisation

Part of the response If there is no separate annex, which parts?

If you want part of your response, your name or your organisation not to be published, can Ofcom still publish a reference to the contents of your response (including, for any confidential parts, a general summary that does not disclose the specific information or enable you to be identified)?

DECLARATION

I confirm that the correspondence supplied with this cover sheet is a formal consultation response that Ofcom can publish. However, in supplying this response, I understand that Ofcom may need to publish all responses, including those which are marked as confidential, in order to meet legal obligations. If I have sent my response by email, Ofcom can disregard any standard e-mail text about not disclosing email contents and attachments.

Ofcom seeks to publish responses on receipt. If your response is non-confidential (in whole or in part), and you would prefer us to publish your response only once the consultation has ended, please tick here.

Name

Signed (if hard copy)

Annex 4

Consultation questions

Sub heading

A4.1 Below we list all the questions we ask in this consultation. Respondents are advised to consider the analysis included in this consultation in answering these questions.

Question 5.1: Do you agree with Ofcom's assessment that there are separate markets for analogue, ISDN2 and ISDN30 wholesale exchange lines and that there are separate geographic markets for the UK excluding the Hull Area and the Hull Area? If not, please explain why.

Question 5.2: Do you agree with Ofcom's assessment that BT has SMP in analogue, ISDN2 and ISDN30 wholesale exchange lines in the UK excluding the Hull Area? If not, please explain why.

Question 5.3: Do you agree with Ofcom's assessment that KCOM has SMP in analogue, ISDN2 and ISDN30 wholesale exchange lines in the Hull Area? If not, please explain why.

Question 5.4: Do you agree with Ofcom's analysis of future developments that may affect these assessments? If not, please explain why.

Question 6.1: Do you agree with Ofcom's assessment that the relevant call origination market is wholesale call origination on fixed narrowband networks and that there are separate geographic markets for the UK excluding the Hull Area and the Hull Area? If not, please explain why.

Question 6.2: Do you agree with Ofcom's assessment that BT has SMP in wholesale call origination on fixed narrowband networks in the UK excluding the Hull Area? If not, please explain why.

Question 6.3: Do you agree with Ofcom's assessment that KCOM has SMP in wholesale call origination on fixed narrowband networks in the Hull Area? If not, please explain why.

Question 6.4: Do you agree with Ofcom's analysis of future developments that may affect these assessments? If not, please explain why.

Question 7.1: Do you agree with Ofcom's assessment that there is a separate market for wholesale fixed geographic call termination for each provider of fixed geographic call termination? If not, please explain why.

Question 7.2: Do you agree with Ofcom's assessment that each provider of wholesale fixed geographic call termination has SMP? If not, please explain why.

Question 7.3: Do you agree with Ofcom's analysis of future developments that may affect these assessments? If not, please explain why.

Question 8.1: Do you agree with Ofcom's assessment that there is a single LTC/LTT market in the UK excluding the Hull Area? If not, please explain why.

Question 8.2: Do you agree with Ofcom's assessment that BT does not have SMP in the LTC/LTT market? If not, please explain why.

Question 9.1: Do you agree with Ofcom's assessment that there is a single market for conveyance and transit services at the tandem layer in the UK excluding the Hull Area? If not, please explain why.

Question 9.2: Do you agree with Ofcom's assessment that BT does not have SMP in the market for conveyance and transit services at the tandem layer? If not, please explain why.

Question 10.1: Do you agree with Ofcom's assessment that BT and KCOM should be required to provide interconnection circuits? If not, please explain why.

Question 10.2: Do you agree with Ofcom's assessment that BT's product management, policy and planning (PPP) charge incurred in markets where it has SMP and in the provision of interconnection circuits should be regulated? If not, please explain why.

Question 11.1: Do you agree that Ofcom should impose a requirement to provide network access on reasonable request on BT and KCOM in the markets and technical area discussed? If not, please explain why.

Question 11.2: Do you agree that Ofcom should impose a requirement not to unduly discriminate on BT and KCOM in the markets and technical area discussed? If not, please explain why.

Question 11.3: Do you agree that Ofcom should impose a requirement that BT's charges and KCOM's charges should be subject to a cost orientation obligation in the markets and technical area discussed? If not, please explain why.

Question 11.4: Do you agree with our approach on cost orientation? If not, please explain why, indicating in particular the mechanism you consider to be appropriate.

Question 11.5: Do you agree that Ofcom should impose a requirement to publish a reference offer on BT and KCOM in the markets and technical area discussed? If not, please explain why.

Question 11.6: Do you agree that Ofcom should impose a requirement to notify charges, terms and conditions on BT and KCOM in the markets and technical area discussed? If not, please explain why.

Question 11.7: Do you agree that BT and KCOM should provide 28 days notice of price changes following a six month transition period? If not, please explain why.

Question 11.8: Do you agree that Ofcom should impose a requirement to notify technical information on BT and KCOM in the markets and technical area discussed? If not, please explain why.

Question 11.9: Do you agree that Ofcom should impose a requirement to provide transparency as to quality of service on BT in the markets and technical area discussed? If not, please explain why.

Question 11.10: Do you agree with Ofcom that service provision and fault repair remain critical areas for this remedy to monitor?

Question 11.11: Are the KPIs proposed above sufficient to provide industry with the necessary level of transparency? If not, what additional KPIs should be included?

Question 11.12: Is the reporting provided by the Openreach online KPI tool sufficient to provide the relevant KPI data?

Question 11.13: Do you agree that Ofcom should impose an obligation on BT to follow a statement of requirements process to handle new requests for network access in the markets and technical area discussed? If not, please explain why.

Question 11.14: Do you agree that the condition should allow changes to be made to the current SOR process if agreed by BT with industry? If not, please explain why.

Question 11.15: Do you agree that Ofcom should impose an obligation on BT and KCOM to comply with obligations governing cost accounting systems and processes as set out by Ofcom in the markets and technical area discussed? If not, please explain why.

Question 11.16: Do you agree that Ofcom should impose an obligation on BT and KCOM to comply with obligations governing accounting separation as set out by Ofcom in the markets and technical area discussed? If not, please explain why.

Question 12.1: Do you agree with the obligations Ofcom proposes to impose on BT in the wholesale fixed geographic call termination markets? If not, please explain why.

Question 12.2: Do you agree with the obligations Ofcom proposes to impose on KCOM in the wholesale fixed geographic call termination markets? If not, please explain why.

Question 12.3: Do you agree that BT and KCOM should provide 28 days notice of price changes following a six month transition period? If not, please explain why.

Question 12.4: Do you agree that all other providers of fixed geographic call termination should be required to provide this on fair and reasonable terms? If not, please explain why.

Question 12.5: Do you agree that it would be disproportionate to require all other providers of fixed geographic call termination to notify charges? If not, please explain why.

Question 13.1: Do you agree that Ofcom should impose an obligation on BT to provide WLR products in the wholesale analogue, ISDN2 and ISDN30 exchange lines markets? If not, please explain why.

Question 13.2: Do you agree that the maturity of the WLR products plus BT's obligations under its Undertakings means that Ofcom does not need to impose an obligation on BT to comply with a functional specification for ISDN2 and ISDN30 WLR products? If not, please explain why.

Question 13.3: Is it appropriate for the pricing of value-added features to be subject to a basis of charges obligation? Do you think Openreach would have the correct

incentives to develop new features in a regime where these may become subject to basis of charges obligations?

Question 14.1: *Do you agree that Ofcom should impose an obligation on BT and KCOM to provide CPS? If not, please explain why.*

Question 14.2: *Do you agree that Ofcom does not need to impose an obligation on BT and KCOM to comply with a functional specification for CPS? If not, please explain why.*

Question 14.3: *Do you agree that Ofcom should impose an obligation on BT and KCOM to provide carrier selection (Indirect Access)? If not, please explain why.*

Question 15.1: *Do you agree that Ofcom should impose an obligation on BT in relation to NTS call origination? If not, please explain why.*

Question 16.1: *Do you agree that Ofcom should impose charge controls on BT in wholesale analogue exchange lines, wholesale call origination, wholesale fixed geographic call termination, interconnection circuits, PPP and the NTS retail uplift charge? If not, please explain why.*

Question 16.2: *Do you agree that it would be disproportionate to impose charge controls on KCOM? If not, please explain why.*

Question 17.1: *Do you agree that, based on BT's reported returns, Ofcom should impose additional obligations on BT in relation to wholesale ISDN30 exchange lines? If not, please explain why.*

Question 17.2: *Would a cost orientation obligation be sufficient to address the concerns raised by Ofcom in relation to BT's returns?*

Question 17.3: *Would a charge control be a proportionate response to the concerns raised by Ofcom in relation to BT's returns?*

Question 18.1: *Do you agree that Ofcom should revoke the obligation on BT to provide FRIACO? If not, please explain why.*

Question 18.2: *Do you agree that Ofcom should revoke the direction requiring BT to provide local-tandem transit and inter-tandem transit for Indirect Access traffic? If not, please explain why.*

Question 18.3: *Do you agree that Ofcom should revoke the direction relating to BT's credit vetting supplemental agreement? If not, please explain why.*

Annex 5

Impact Assessment

Introduction

- A5.1 The analysis presented in this annex represents an impact assessment, as defined in section 7 of the Communications Act 2003 (the Act).
- A5.2 You should send any comments on this impact assessment to us by the closing date for this consultation. We will consider all comments before deciding whether to implement our proposals.
- A5.3 Impact assessments provide a valuable way of assessing different options for regulation and showing why the preferred option was chosen. They form part of best practice policy-making. This is reflected in section 7 of the Act, which means that generally we have to carry out impact assessments where our proposals would be likely to have a significant effect on businesses or the general public, or when there is a major change in Ofcom's activities. However, as a matter of policy Ofcom is committed to carrying out and publishing impact assessments in relation to the great majority of our policy decisions. For further information about our approach to impact assessments, see the guidelines, Better policy-making: Ofcom's approach to impact assessment, which are on our website:
http://www.ofcom.org.uk/consult/policy_making/guidelines.pdf
- A5.4 We have discussed the markets and our proposals for finding SMP in Sections 5 – 9 and we have discussed related areas such as interconnection circuits and PPP in Section 10. We have then set out our proposals for remedies in each market where we have proposed to find SMP in Sections 11 to 18 of this consultation, along with our reasoning as to why each of these remedies is required. The analysis presented in this Annex, when read in conjunction with the rest of this document, represents an Impact Assessment ("IA"), as defined by section 7 of the Act.

The citizen and/or consumer interest

- A5.5 For the markets reviewed in this consultation we have focused in particular in assessing which options will most effectively promote competition between providers of narrowband services, since we believe that citizens and consumers will gain the most benefit from competition in the retail market.

Ofcom's policy objective

- A5.6 Ofcom's overarching aim in these markets is to further the interests of citizens and consumers whilst also minimising the burden of regulation. This objective is derived from Ofcom's statutory duties as set out in the Act. Under Section 3 of the Act, Ofcom's principal duties are:
- Section 3(1)(a): to further the interests of citizens in relation to communications matters; and
 - Section 3(1)(b): to further the interests of consumers in relevant markets, where appropriate by promoting competition.

- A5.7 We have placed particular emphasis on the promotion of competition, which we consider is likely to be the most effective way of furthering citizen and consumer interests in the markets under review.
- A5.8 Ofcom will always seek the least intrusive regulatory measures to achieve its policy objectives. This principle is derived from Ofcom's duty under Section 6 of the Act to minimise the burden of regulation.
- A5.9 In addressing these policy objectives, we have taken account of the following issues, which we believe are important in delivering the appropriate wholesale products in order to promote the competition at the retail level that we consider will deliver the most benefit to consumers:
- service availability: to promote the availability of services throughout the UK;
 - choice: to ensure that wherever possible consumers have a choice of supplier;
 - prices: to ensure that services are available at prices that are reasonably related to the efficient costs of supply, preferably as a result of effective competition;
 - service quality: to promote the availability of high quality services which are designed to meet consumer requirements;
 - investment and innovation: to promote efficient investment in the development of new and innovative services; and
 - access to bottleneck facilities: to ensure that bottleneck facilities and services are made available to competing service providers in a manner that is not unduly discriminatory.

Analysis of the different options

- A5.10 For each of the markets where we are proposing to SMP, the options considered are broadly as follows:
- no regulation;
 - continue with existing regulation; or;
 - variations and additional measures, including, where relevant, removing existing regulation.
- A5.11 These options have been assessed in terms of their impact on the objectives set out above. Although the markets reviewed related to the provision of wholesale services, particular emphasis has been placed on the extent to which they are likely to promote effective competition, and thereby further the interests of citizens and consumers, whilst minimising the burden of regulation.
- A5.12 Our assessment of the various options has been informed by the findings of our market analysis and SMP analysis, as set out in Section 5 to 10.

Markets where we are proposing no SMP

A5.13 For those markets where we are not proposing to find SMP, we are obliged under the Communications Act to remove any existing remedies and impose no new ones. These markets are:

- Local-tandem conveyance and local-tandem transit; and
- Wholesale transit services (including inter-tandem conveyance, inter-tandem transit and single transit).

A5.14 For those markets, we have not conducted a formal assessment of options, since the only policy option available is the removal of regulation.

Markets where we are proposing to find SMP

Wholesale analogue exchange lines

A5.15 We are proposing that regulation in the wholesale analogue exchange lines market should be amended to take account of developments that have occurred since the previous market review, for example changes to the condition related to the provision of new network access.

A5.16 If we did not impose any regulation in this market, BT and KCOM would not have incentives to supply fit-for-purpose wholesale products at prices that would be expected in a competitive market. We consider that this may be detrimental to consumers, since it could lead to there being less choice of narrowband service providers in the retail market.

A5.17 We believe that maintaining the existing regulation would not be proportionate, because developments in the market mean that some specific obligations can be removed.

A5.18 We propose a number of remedies in this market. We discuss these, and why we think each remedy is appropriate (as opposed to not imposing the remedy) as follows:

- requirement to provide network access on reasonable request: we discuss this in paragraphs 11.12 to 11.20;
- requirement not to unduly discriminate: we discuss this in paragraphs 11.21 to 11.28;
- basis of charges: we discuss this in paragraphs 11.29 to 11.41;
- requirement to publish a reference offer: we discuss this in paragraphs 11.46 to 11.54;
- requirement to notify charges: we discuss this in paragraphs 11.55 to 11.68;
- requirement to notify technical information: we discuss this in paragraphs 11.69 to 11.77;
- transparency as to quality of service: we discuss this in paragraphs 11.78 to 11.90;

- requests for new network access: we discuss this in paragraphs 11.91 to 11.102;
- cost accounting: we discuss this in paragraphs 11.103 to 11.110;
- accounting separation: we discuss this in paragraphs 11.111 to 11.118;
- obligation to provide WLR: we discuss this in section 13; and
- charge control: we discuss this in section 16.

Wholesale ISDN2 exchange lines

- A5.19 We are proposing that regulation in the wholesale ISDN2 exchange lines market should be amended to take account of developments that have occurred since the previous market review. As well as changes to the condition related to the provision of new network access, we are also proposing that the requirement for BT to meet the functional specification be removed.
- A5.20 We do not believe it would be appropriate to not impose any regulation in this market since BT and KCOM would not have incentives to supply fit-for-purpose wholesale products at prices that would be expected in a competitive market. As for the analogue exchange lines market we consider that this may be detrimental to consumers, since it could lead to there being less choice of narrowband service providers in the retail market.
- A5.21 We believe that maintaining the existing regulation would not be proportionate, because developments in the market mean that some specific obligations can be removed.
- A5.22 We propose a number of remedies in this market. We discuss these, and why we think each remedy is appropriate (as opposed to not imposing the remedy) as follows:
- requirement to provide network access on reasonable request: we discuss this in paragraphs 11.12 to 11.20;
 - requirement not to unduly discriminate: we discuss this in paragraphs 11.21 to 11.28;
 - basis of charges: we discuss this in paragraphs 11.29 to 11.41;
 - requirement to publish a reference offer: we discuss this in paragraphs 11.46 to 11.54;
 - requirement to notify charges: we discuss this in paragraphs 11.55 to 11.68;
 - requirement to notify technical information: we discuss this in paragraphs 11.69 to 11.77;
 - transparency as to quality of service: we discuss this in paragraphs 11.78 to 11.90;
 - requests for new network access: we discuss this in paragraphs 11.91 to 11.102;
 - cost accounting: we discuss this in paragraphs 11.103 to 11.110;

- accounting separation: we discuss this in paragraphs 11.111 to 11.118; and
- obligation to provide WLR: we discuss this in section 13.

Wholesale ISDN30 exchange lines

- A5.23 We are proposing that regulation in the wholesale ISDN30 exchange lines market should be amended to take account of developments that have occurred since the previous market review. As well as changes to the condition related to the provision of new network access, we are also proposing that the requirement for BT to meet the functional specification be removed.
- A5.24 We are also proposing that additional regulation in the form of a basis of charges and/or a charge control should be imposed. We have based this decision on an analysis of market share, BT's wholesale returns and the weak constraint provide by alternative supply options. We believe this is required because without such regulation, BT has set prices above those we would expect in a competitive market, and these costs are likely to have been passed on to retail consumers.
- A5.25 We do not believe it would be appropriate to not impose any regulation in this market since BT and KCOM would not have incentives to supply fit-for-purpose wholesale products at prices that would be expected in a competitive market. As for the analogue exchange lines market we consider that this may be detrimental to consumers, since it could lead to there being less choice of narrowband service providers in the retail market.
- A5.26 We believe that maintaining the existing regulation would not be proportionate, because developments in the market mean that some specific obligations can be removed whilst others are required to protect consumers from paying too much for these services.
- A5.27 We propose a number of remedies in this market. We discuss these, and why we think each remedy is appropriate (as opposed to not imposing the remedy) as follows:
- requirement to provide network access on reasonable request: we discuss this in paragraphs 11.12 to 11.20;
 - requirement not to unduly discriminate: we discuss this in paragraphs 11.21 to 11.28;
 - requirement to publish a reference offer: we discuss this in paragraphs 11.46 to 11.54;
 - requirement to notify charges: we discuss this in paragraphs 11.55 to 11.68;
 - requirement to notify technical information: we discuss this in paragraphs 11.69 to 11.77;
 - transparency as to quality of service: we discuss this in paragraphs 11.78 to 11.90;
 - requests for new network access: we discuss this in paragraphs 11.91 to 11.102;
 - cost accounting: we discuss this in paragraphs 11.103 to 11.110;

- accounting separation: we discuss this in paragraphs 11.111 to 11.118;
- obligation to provide WLR: we discuss this in section 13; and
- basis of charges and/or charge control: we discuss this in section 17.

Wholesale call origination

- A5.28 We are proposing that regulation in the wholesale call origination market should be amended to take account of developments that have occurred since the previous market review.
- A5.29 If we did not impose any regulation in this market, BT and KCOM would not have incentives to supply fit-for-purpose wholesale products at prices that would be expected in a competitive market. We consider that this may be detrimental to consumers, since it could lead to there being less choice of narrowband service providers in the retail market.
- A5.30 We believe that maintaining the existing regulation would not be proportionate, because developments in the market mean that some specific obligations, such as the obligation to provide CPS in accordance with the functional specification can be removed.
- A5.31 We propose a number of remedies in this market. We discuss these, and why we think each remedy is appropriate (as opposed to not imposing the remedy) as follows:
- requirement to provide network access on reasonable request: we discuss this in paragraphs 11.12 to 11.20;
 - requirement not to unduly discriminate: we discuss this in paragraphs 11.21 to 11.28;
 - basis of charges: we discuss this in paragraphs 11.29 to 11.41;
 - requirement to publish a reference offer: we discuss this in paragraphs 11.46 to 11.54;
 - requirement to notify charges: we discuss this in paragraphs 11.55 to 11.68;
 - requirement to notify technical information: we discuss this in paragraphs 11.69 to 11.77;
 - transparency as to quality of service: we discuss this in paragraphs 11.78 to 11.90;
 - requests for new network access: we discuss this in paragraphs 11.91 to 11.102;
 - cost accounting: we discuss this in paragraphs 11.103 to 11.110;
 - accounting separation: we discuss this in paragraphs 11.111 to 11.118;
 - obligation to provide CS/IA and CPS: we discuss this in section 14;
 - obligation to provide NTS Call Origination: we discuss this in section 15; and

- charge control: we discuss this in section 16.

Wholesale fixed geographic call termination

A5.32 We are proposing that regulation in the wholesale fixed geographic call termination market should remain the same as that imposed by the previous market review.

A5.33 If we did not impose any regulation in this market, providers of call termination would have the incentive to set high prices which would increase the retail prices of calls to fixed geographic numbers. It would therefore not be appropriate for us to propose not to impose regulation in this market.

A5.34 We have considered whether to impose additional regulation, in particular an obligation for all providers to publish prices. Without such an obligation providers of call termination may attempt to set different prices for some CPs. Without an obligation to publish prices, CPs will not what rates are being charged to other CPs for the same service. However, we should only impose such an obligation if we think the benefits arising from it would outweigh the costs of meeting the obligation. We have not been able to assess the costs or benefits of such a remedy. Our view is that the obligation for each provider of fixed geographic call termination (except BT and KCOM) to provide network access at fair and reasonable rates and this is a sufficient constraint on the setting of excessive prices.

A5.35 We discuss the obligations we propose to impose on all providers of fixed geographic call termination in paragraphs 12.80 to 12.88.

A5.36 We propose additional obligations for BT and KCOM in this market. We discuss these, and why we think each remedy is appropriate (as opposed to not imposing the remedy) as follows:

- requirement to provide network access on reasonable request: we discuss this in paragraphs 12.5 to 12.10 and 12.44 to 12.48;
- requirement not to unduly discriminate: we discuss this in paragraphs 12.11 to 12.14 and 12.49 to 12.52;
- basis of charges: we discuss this in paragraphs 12.15 to 12.20 and 12.53 to 12.57;
- requirement to publish a reference offer: we discuss this in paragraphs 12.20 to 12.25 and 12.58 to 12.61;
- requirement to notify charges: we discuss this in paragraphs 12.26 to 12.29 and 12.62 to 12.65;
- cost accounting: we discuss this in paragraphs 12.30 to 12.36 and 12.66 to 12.72;
- accounting separation: we discuss this in paragraphs 12.37 to 12.43 and 12.73 to 12.79; and
- charge control: we discuss this in section 16.

Interconnection circuits

- A5.37 We are proposing that regulation of interconnection circuits is required to allow the effective functioning of the wholesale call origination and call termination markets.
- A5.38 If we did not impose any regulation in this market, BT and KCOM would be able to inhibit the effective functioning of these markets by restricting access to them. We consider that this may be detrimental to consumers, since it could lead to there being less choice of narrowband service providers or higher prices in the retail market.
- A5.39 We propose to maintain the existing remedies on interconnection circuits. We discuss these, and why we think each remedy is appropriate (as opposed to not imposing the remedy) as follows:
- requirement to provide network access on reasonable request: we discuss this in paragraphs 11.12 to 11.20;
 - requirement not to unduly discriminate: we discuss this in paragraphs 11.21 to 11.28;
 - basis of charges: we discuss this in paragraphs 11.29 to 11.41;
 - requirement to publish a reference offer: we discuss this in paragraphs 11.46 to 11.54;
 - requirement to notify charges: we discuss this in paragraphs 11.55 to 11.68;
 - requirement to notify technical information: we discuss this in paragraphs 11.69 to 11.77;
 - transparency as to quality of service: we discuss this in paragraphs 11.78 to 11.90;
 - requests for new network access: we discuss this in paragraphs 11.91 to 11.102;
 - cost accounting: we discuss this in paragraphs 11.103 to 11.110;
 - accounting separation: we discuss this in paragraphs 11.111 to 11.118;
 - charge control: we discuss this in section 16.

PPP

- A5.40 We are proposing that regulation of PPP is required to allow the effective functioning of the wholesale call origination and call termination markets.
- A5.41 If we did not impose any regulation, BT would be able to set prices for its product management, policy and planning activities that are higher than costs plus a margin. In this case, competition could be harmed as other CPs would be paying too much for wholesale services. These higher prices may then be reflected at the retail level.
- A5.42 We propose to maintain a charge control on PPP. We discuss this in section 16.

NTS retail uplift

- A5.43 We are proposing that regulation of BT's NTS retail uplift charge is required to allow the effective functioning of the wholesale call origination market and, in particular, the NTS call origination remedy, which is explained in section 15.
- A5.44 If we did not impose any regulation on the retail uplift, BT would be able to over-recover costs associated with retailing NTS services from its competitors. In this case, competition could be harmed as other CPs would be paying too much (or receiving too small a share of the NTS retail charge) for wholesale services. This may then be reflected at the retail level.
- A5.45 We propose to maintain a charge control on the NTS retail uplift. We discuss this in section 16.

Annex 6

Regulatory Framework

A6.1 This Annex sets out the relevant main provisions of the legal and regulatory framework that applies to issues considered in this Explanatory Statement. In particular, the following is covered below:

- the key features and legal basis of the charge control regime;
- generally about the framework under the EC Communications Directives;
- the implementing UK legislation, the Communications Act 2003;
- the procedures and the three stages for market reviews;
- the reasons why *ex ante* regulation is needed as opposed to relying on competition law remedies;
- Ofcom's statutory Notifications of its decisions; AND
- Impact Assessments

A6.2 The present regulatory framework for electronic communications networks and services entered into force on 25 July 2003. The framework is designed to create harmonised regulation across Europe and is aimed at reducing entry barriers and fostering prospects for effective competition to the benefit of consumers. The basis for the regulatory framework is five EU Communications Directives (together "the Directives"):

- Directive 2002/21/EC on a common regulatory framework for electronic communications networks and services ("Framework Directive");
- Directive 2002/19/EC on access to, and interconnection of, electronic communications networks and associated facilities ("Access Directive");
- Directive 2002/20/EC on the authorisation of electronic communications networks and services ("Authorisation Directive");
- Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services, ("Universal Service Directive"); and
- Directive 2002/58/EC concerning the processing of personal data and the protection of privacy in the electronic communications sector ("Privacy Directive").

A6.3 This framework is currently being reviewed, but the Community legislation has yet to adopt legislative proposals.

The Communications Act 2003

A6.4 The Framework Directive, the Access Directive, the Authorisation Directive and the Universal Service Directive were implemented in the United Kingdom on 25 July 2003 via the Communications Act 2003 ("the Act"). The Privacy Directive was implemented by separate regulations which came into force on 11 December 2003.

- A6.5 In particular part 2 of the Act sets out the majority of that Act's provisions that implement the Directives. Sections 32, 45-50 and 78-90 are of particular importance. Ofcom is required to act in accordance with its general and specific duties in sections 3 and 4 of the Act, respectively.
- A6.6 Under section 3, Ofcom must, in carrying out its functions further the interests of citizens in relation to communications matters and the interests of consumers in relevant markets, where appropriate by promoting competition. As to the latter Ofcom must have regard, in particular, to the interests of those consumers in respect of choice, price, quality of service and value for money. This corresponds with the policy objective in Article 8(2) of the Framework Directive.
- A6.7 Section 4 of the Act requires that Ofcom acts in accordance with the six Community requirements set out at sections 4(3) to 4(9). Where it appears to Ofcom that its general duties conflict with its section 4 duties, priority must be given to the latter.
- A6.8 Ofcom has, however, a wide measure of discretion in balancing its statutory duties and objectives including where they conflict. In doing so, Ofcom will take all relevant considerations into account, including consultation responses

Market Reviews

- A6.9 The Directives require National Regulatory Authorities ('NRA') to carry out reviews of competition in communications markets to ensure that regulation remains appropriate and proportionate in the light of changing market conditions.
- A6.10 Each market review normally has three stages, namely:
- definition of the relevant markets;
 - assessment of competition in each market, in particular whether any undertakings have SMP in a given market;
 - and assessment of appropriate regulatory obligations where there has been a finding of SMP.
- A6.11 The three stages will be summarised, in turn, below. More detailed requirements and guidance concerning the conduct of market reviews are provided in the EU Communications Directives, the Act and in additional documents issued by the Commission, of which Ofcom are required to have taken utmost account.
- A6.12 Table A7.1 below indicates the relevant legislative framework for each stage.

Table A7.1: Legislative framework

Authority / Stage of Review	Communications Act 2003	EU Communication Directives	Other Guidance
Definition of Markets	s78-86 s84 (duty to review)	A15-16 Framework Directive	Commission Recommendation on Markets (2007)
SMP	S86 – only set on market review / no material change S78 – circumstances required for SMP conditions	A14 Framework Directive (definition : market power)	Commission SMP Guidelines (2002)
Remedies	S45-47 power to set condition; to whom they apply; test for setting / modifying S87-92 SMP service conditions : subject matter	A9-13 Access Directive A17-19 Universal Service Directive A16 Framework Directive	ERG Common Position on Remedies
Notification	S48-49; 79-80	Article 7 Framework Directive	Commission Recommendation on notifications (2008)

Market Definition Stage

- A6.13 Section 79(1) of the Act provides that, before making a market power determination, Ofcom must identify the market, which is, in its opinion, the one which, in the circumstances of the United Kingdom, is the market in relation to which it is appropriate to consider making such a determination and to analyse that market. The procedure is set out mainly in Article 15 of the Framework Directive and sections 78 to 86 of the Act.
- A6.14 Article 15(3) of the Framework Directive requires that NRAs shall, taking the utmost account of the Recommendation and SMP Guidelines published by the Commission, define the relevant markets *appropriate to national circumstances*, in particular relevant geographic markets within their territory, in accordance with the principles of competition law.

The Recommendation on relevant product and services markets.

- A6.15 The Commission has, in accordance with Article 16 of the Framework Directive, issued a Recommendation on relevant markets where it identifies a set of product and service markets within the electronic communication sector, in which *ex ante* regulation may be warranted.
- A6.16 The Recommendation seeks to promote harmonisation across the EC by ensuring that the same markets are subject to a market analysis in all Member States. NRAs are, however, able to regulate markets that differ from those identified in the Recommendation where this is justified by national circumstances and where the

Commission does not raise any objections under Article 7(4) of the Framework Directive.

- A6.17 The Commission adopted its first recommendation on 11 February 2003, defining seven retail level market and 11 wholesale level markets. Article 15(1) of the Framework Directive imposed an obligation upon the Commission to regularly review its Recommendation. The Commission reviewed the initial recommendation and, on 17 December 2007, adopted the second edition of the Recommendation, under which some markets in the 2003 Recommendation were removed or amended. The current 2007 Recommendation lists one retail level market and six wholesale level markets.
- A6.18 The removal of the market from the list published by the Commission indicates that the Commission no longer presumes that, in principle, *ex-ante* regulation is warranted for this market. This does not mean, however, that NRAs are not in a position after an analysis of the relevant market and the finding of SMP to impose regulatory remedies in these markets, should the national circumstances justify such a step and whilst taking due account of the Commission's SMP Guidelines and Recommendation.
- A6.19 Article 16 of the Framework Directive requires each national regulatory authority (NRA) to carry out an analysis of the relevant markets as soon as possible after the adoption of the recommendation on relevant product and service markets ("the Recommendation") or any updating thereof.

Market (SMP) Analysis Stage

General

- A6.20 The second market review stage concerns the assessment of competition in each identified services market to decide whether any undertaking has SMP.
- A6.21 In carrying out a market analysis, the key issue for an NRA is to determine whether the market in question is effectively competitive. The 27th recital to the Framework Directive clarifies the meaning of that concept. Namely, "[it] is essential that *ex ante* regulatory obligations should only be imposed where there is not effective competition, i.e. in markets where there are one or more undertakings with significant market power, and where national and Community competition law remedies are not sufficient to address the problem".
- A6.22 Thus, Article 16 further prescribes, in effect, what regulatory action NRAs must take depending upon whether or not the market in question has been found effectively competitive. If it has, then NRAs are prohibited to impose specific (SMP) obligations and must withdraw such obligations where they exist. On the other hand, where the market is not effectively competitive, the NRAs must identify the undertakings with SMP on that market and shall impose on them appropriate obligations.
- A6.23 Under the Act, the process of designating an undertaking as having SMP is referred to as the making of a market power determination under section 79. To reflect the provisions in Article 16, there is a close link in this analysis with the imposition of remedies. This is because section 45 of the Act details the various conditions that may be set. Section 46 of the Act prescribes who those conditions may be imposed upon.

A6.24 In relation to SMP services conditions, section 46(7) provides that they may be imposed on a particular person who is a communications provider or a person who makes associated facilities available and who has been determined to have significant market power in a “services market” (i.e. a specific market for electronic communications networks, electronic communications services or associated facilities). Accordingly, having identified the relevant market, Ofcom is required to analyse the market in order to assess whether any person or persons have SMP as defined in section 78 of the Act (Article 14 of the Framework Directive).

Guidelines for market analysis and the assessment of SMP

A6.25 The Commission have also published guidelines on market analysis and the assessment of SMP (the “SMP Guidelines”). This guidance was published, in accordance with Article 15(2) of the Framework Directive, by the Commission in July 2002.

A6.26 Oftel published its own additional guidelines on the criteria to assess effective competition. These supplement the SMP Guidelines and have been taken into account where appropriate.

A6.27 The SMP Guidelines state:

“NRAs will assess whether the competition is effective. A finding that effective competition exists on a relevant market is equivalent to a finding that no operator enjoys a single or joint dominant position on that market.”¹⁰⁸

A6.28 The SMP Guidelines go on to state:

“NRAs will conduct a forward looking structural evaluation of the relevant market, based on existing market conditions. NRAs should determine whether the market is prospectively competitive, and thus whether any lack of effective competition is durable, by taking into account expected or foreseeable market developments over the course of a reasonable period. The actual period used should reflect the specific characteristics of the market and the expected timing for the next review of the relevant market by the NRA. NRAs should take past data into account in their analysis when such data are relevant to the developments in that market in the foreseeable future.”¹⁰⁹

A6.29 In the SMP Guidelines, the EC discusses market shares as being an indicator of market power:

“...Market shares are often used as a proxy for market power. Although a high market share alone is not sufficient to establish the possession of significant market power (dominance), it is unlikely that a firm without a significant share of the relevant market would be in a dominant position. Thus, undertakings with market shares of no more than 25 % are not likely to enjoy a (single) dominant position on the market concerned. In the Commission's decision making practice, single dominance concerns normally arise in the case of

¹⁰⁸ Paragraph 19
¹⁰⁹ Paragraph 20

undertakings with market shares of over 40 %, although the Commission may in some cases have concerns about dominance even with lower market shares, as dominance may occur without the existence of a large market share. According to established case law, very large market shares — in excess of 50 % — are in themselves, save in exceptional circumstances, evidence of the existence of a dominant position...¹¹⁰

A6.30 However, the EC also notes that:

“It is important to stress that the existence of a dominant position cannot be established on the sole basis of large market shares. As mentioned above, the existence of high market shares simply means that the operator concerned might be in a dominant position. Therefore, NRAs should undertake a thorough and overall analysis of the economic characteristics of the relevant market before coming to a conclusion as to the existence of significant market power. In that regard, the following criteria can also be used to measure the power of an undertaking to behave to an appreciable extent independently of its competitors, customers and consumers. These criteria include amongst others:

- overall size of the undertaking;
- control of infrastructure not easily duplicated;
- technological advantages or superiority;
- absence of or low countervailing buying power;
- easy or privileged access to capital markets/financial;
- resources;
- product/services diversification (e.g. bundled products or services);
- economies of scale;
- economies of scope;
- vertical integration;
- highly developed distribution and sales network;
- absence of potential competition;
- barriers to expansion.

A dominant position can derive from a combination of the above criteria, which taken separately may not necessarily be determinative.”¹¹¹

¹¹⁰ Paragraph 75

¹¹¹ Paragraphs 78-79

The need for ex-ante regulation

- A6.31 Before turning to the last stage market review stage concerning remedies, it is necessary to consider whether competition law remedies are sufficient to address the problem. This consideration is necessary to establish, in line with the abovementioned 27th recital to the Framework Directive, whether or not a market is effectively competitive. (In this context, it is to be noted that the importance of identifying that problem reappears under Article 8(4) of the Access and Interconnection Directive. This is because obligations imposed in accordance with Article 8 shall be based on the nature of the problem identified, proportionate and justified in the light of the objectives laid down in Article 8 of the Framework Directive.)
- A6.32 Ofcom's own guidelines on Impact Assessment note that we will consider the option of no regulation in its impact assessment process.

Remedies Stage

Subject matter of the SMP remedies

- A6.33 The third and final market review stage concerns remedies. As noted above, Article 16 of the Framework Directive dictates the imposition or removal of SMP remedies depending upon whether or not a finding of SMP in an identified services market has been made. Where an SMP finding has been made, Ofcom will consider what appropriate SMP remedies are available.
- A6.34 Under section 45 of the Act, Ofcom is empowered generally to set SMP services conditions authorised or required by sections 87 to 92. The latter implement Articles 9 to 13 of the Access and Interconnection Directive and Articles 17 to 19 of the Universal Service Directive. In addition, Ofcom's power to set such conditions includes additional powers specified in section 45(10), such as powers to include provisions in SMP services conditions for Ofcom to make directions in respect of specified markets.
- A6.35 The SMP obligations relevant to the markets covered by this document are discussed in Sections 11-17.
- A6.36 Section 46 of the Act provides that SMP services conditions set under section 45 may only be applied if the person to whom they are to apply is a communications provider (or a person who makes associated facilities available) and is a person whom Ofcom has determined to be a person having SMP in a services market. It is therefore important to consider the precise identity of the regulated entity on whom it is appropriate to impose obligations.

SMP conditions in 'Technical Areas'

- A6.37 In the Commissions 2003 Recommendation it was recognised that for SMP remedies to be effective in a defined market, then it would often be the case that adjacent or related remedies are applied to *technical areas* as part of the overall obligation that addresses SMP. This was set out in the explanatory memorandum to the Recommendation.
- A6.38 The Commission reviewed and updated its Recommendation in 2007. The explanatory memorandum to the recommendation confirms the principle that

obligations may be set in relation to services both inside and outside a reviewed market, provided two tests are met. The two tests are:

- That the proposed obligation is the most appropriate and efficient means of remedying the lack of effective competition found on the relevant market; and
- The proposed obligation is an essential element in support of obligation(s) imposed on the relevant SMP market without which those obligations would be ineffective.

A6.39 This review proposes to identify interconnect circuits as a technical area, in which appropriate obligations would need to be imposed in order to ensure the effectiveness of the proposed SMP remedies in the call origination and call termination markets.

Regulated entity

A6.40 As noted above, section 46 provides that a person to whom an SMP services condition is applied must be a 'communications provider' or a 'person' who makes associated facilities available and a 'person' who Ofcom has determined to have SMP in a specific market for electronic communications networks, electronic communications services or associated facilities (i.e. the 'services market').

A6.41 Article 16 of the Framework Directive requires that, where an NRA determines that a relevant market is not effectively competitive, it shall identify "undertakings" with SMP on that market and impose appropriate specific regulatory obligations. For the purposes of EC competition law, "undertaking" includes companies within the same corporate group (*Vihov Commission Case C-73/95 P* [1996] ECR I-5447), for example, where a company within that group is not independent in its decision making.

A6.42 Ofcom considers it appropriate to prevent a dominant provider to whom a SMP service condition is applied, which is part of a group of companies, exploiting the principle of corporate separation. The dominant provider should not use another member of its group to carry out activities or to fail to comply with a condition, which would otherwise render the dominant provider in breach of its obligations. In this consultation Ofcom proposes that the following providers have SMP in at least one market:

- BT;
- KCOM; AND
- Other Communication Providers as set out at Annex A to Schedule 3 to the Notification accompanying this consultation document.

and will define each company as including any of its subsidiaries or holding companies, or any subsidiary of such holding companies (as defined by section 736 of the Companies Act 1985 as amended by the Companies Act 1989)

The legal tests

A6.43 However, before Ofcom can set or modify SMP services conditions on such a regulated entity, it must be satisfied that certain legal tests have been satisfied in imposing the SMP condition in question.

- A6.44 In Sections 11 to 17 of this document, Ofcom sets out its reasons explaining why those tests would be satisfied based on evidence presently before Ofcom. In addition to need of satisfying the general and specific duties, the appropriateness of the remedy and identifying the nature of the competition problem mentioned above, Ofcom must satisfy a number of additional tests.
- A6.45 First, under section 47(2) of the Act, Ofcom must show for each and every SMP services condition that it is:
- *objectively justifiable* in relation to the networks, services, facilities, apparatus or directories to which it relates;
 - *not such as to discriminate unduly* against particular persons or against a particular description of persons;
 - *proportionate* to what the condition or modification is intended to achieve; and
 - in relation to what it is intended to achieve, *transparent*.
- A6.46 Secondly, each of the tests set out in section 87(4) of the Act which Ofcom considers relevant must be satisfied. That section requires that Ofcom:
- “...must take into account, in particular, the following factors—
- (a) the technical and economic viability, having regard to the state of market development, of installing and using facilities that would make the proposed network access unnecessary;
- (b) the feasibility of the provision of the proposed network access;
- (c) the investment made by the person initially providing or making available the network or other facility in respect of which an entitlement to network access is proposed;
- (d) the need to secure effective competition in the long term;
- (e) any rights to intellectual property that are relevant to the proposal; and
- (f) the desirability of securing that electronic communications services are provided that are available throughout the member States.”
- A6.47 It is to be emphasised that this list is not exhaustive and other reasons can therefore be added by Ofcom for imposing the access obligation(s) in question.
- A6.48 Thirdly, in addition to the above-mentioned tests, Ofcom must also satisfy the tests set out in section 88 of the Act in relation to network access pricing etc. obligations, namely: price control; cost orientation and cost recovery rules; use of cost accounting system rules; obligations to adjust prices.
- A6.49 Section 88 only allows Ofcom to impose such obligations where:

- it appears to Ofcom from the market analysis carried out for the purpose of setting that condition that there is a relevant risk of adverse effects arising from price distortion (see below for the meaning of this term); and
- It also appears to Ofcom that the setting of the condition is appropriate for the purposes of promoting efficiency, promoting sustainable competition, and conferring the greatest possible benefits on the end-users of public electronic communications services. In considering these matters, Ofcom may have regard to the prices at which services are available in comparable competitive markets and may determine what they consider to represent efficiency by using such cost accounting methods as they think fit.

A6.50 There is a relevant risk of adverse affects arising from price distortion if the SMP designated undertaking might fix and maintain some or all of its prices at an excessively high level, or impose a price squeeze, so as to have adverse consequences for end-users of public electronic communications services.

A6.51 In addition, Ofcom must show that in setting the network access pricing obligation it has taken account of the extent of the SMP provider's investment in the matters to which the condition relates.

A6.52 It is to be noted that the term "price control" has not been defined in the EC Communications Directives. The 20th recital to the Access and Interconnection Directive suggests that it could cover a range of obligations concerning prices:

"Price control may be necessary when market analysis in a particular market reveals inefficient competition. The regulatory intervention may be relatively light, such as an obligation that prices for carrier selection are reasonable as laid down in Directive 97/33/EC, or much heavier such as an obligation that prices are cost oriented to provide full justification for those prices where competition is not sufficiently strong to prevent excessive pricing. In particular, operators with significant market power should avoid a price squeeze whereby the difference between their retail prices and the interconnection prices charged to competitors who provide similar retail services is not adequate to ensure sustainable competition. When a national regulatory authority calculates costs incurred in establishing a service mandated under this Directive, it is appropriate to allow a reasonable return on the capital employed including appropriate labour and building costs, with the value of capital adjusted where necessary to reflect the current valuation of assets and efficiency of operations. The method of cost recovery should be appropriate to the circumstances taking account of the need to promote efficiency and sustainable competition and maximise consumer benefits."

A6.53 Article 12 of that Directive, however, expressly empowers NRAs to impose obligations on operators to meet reasonable requests for access to, and use of, specific network elements and associated facilities, *inter alia* in situations where the NRA considers that denial of access or unreasonable *terms and conditions* having a similar effect would hinder the emergence of a sustainable competitive market at the retail level, or would not be in the end-user's interest, and that NRAs may attach to those obligations conditions covering fairness, reasonableness and timeliness.

A6.54 In the light of the potential interplay between these provisions, Ofcom has addressed the section 88 test also under the requirement to provide network access on fair and reasonable terms and conditions, including charges.

ERG Common Position on Remedies

A6.55 At a plenary meeting on 18/19 May 2006, the European Regulators Group (“ERG”) adopted a revised version of its document entitled ‘Revised ERG Common Position on the approach to Appropriate remedies in the new regulatory framework’, ERG (06) 33, (the “Common Position on Remedies”).

A6.56 That document sets out NRAs’ views on imposing remedies in a manner that contributes to the development of the internal market and ensures a consistent application of the new regulatory framework under the EC Communications Directives. .

A6.57 Ofcom has therefore taken into account those views in proposing appropriate remedies.

Ofcom’s Notifications of Proposals

Public (national) consultation & notification of Ofcom’s findings

A6.58 Ofcom is required to give interested parties an opportunity to make representations on its proposals contained in this document. That statutory obligation to consult is set out in:

- section 49(4) of the Act in respect of any proposed directions, approvals or consents given under SMP services conditions; and
- sections 48(2) and 80(1) of the Act in respect of any proposals on services market identifications, market power determinations and modifications to the relevant SMP services conditions, of the Act in accordance with Article 6 of the Framework Directive where the proposed draft measures have a significant impact on the relevant markets.

A6.59 Ofcom is entitled, by virtue of section 80(2) of the Act, to publish a single notification of its proposals as to services market identifications, market power determinations and modifications to the relevant SMP services conditions. Such a notification is published at Annex 7 to this document.

A6.60 To conclude the consultation process and in making its final decisions in respect of services market identifications, market power determinations and modifications to, as well as setting and revocation of, the relevant SMP services conditions, Ofcom is required to publish a notification under sections 48(1), 79(4) and 86 of the Act. Again, by virtue of section 79(5) of the Act, Ofcom may publish a single notification in respect of all of those matters. Subject to the outcome of our consultation Ofcom expects to publish such further notification in July 2009.

Annex 7

Notification

NOTIFICATION OF PROPOSALS UNDER SECTIONS 48(2) AND 80 OF THE COMMUNICATIONS ACT 2003

Proposals for identifying markets, making market power determinations and the setting of SMP services conditions in relation to BT, KCOM and specified Communication Providers providing termination services under section 45 of the Communications Act 2003

Background

1. On 28 November 2003, the Director General of Telecommunications (“The Director”) published a *Review of the fixed narrowband line, call origination, conveyance and transit markets*¹¹²; and a *Review of fixed geographic call termination markets*¹¹³.
2. On 29 December 2003, Ofcom took over the functions and responsibilities under the Communications Act 2003 relating to the EC Communications directives from The Director.
3. On 22 July 2004, Ofcom published *The regulatory financial reporting obligations on BT and Kingston Communications Final statement and notification (Accounting separation and cost accounting: Final statement and notification)*¹¹⁴.
4. On 30 July 2004, Ofcom published a *Review of BT’s product management, policy and planning (PPP) charge*¹¹⁵, setting a new SMP condition in relation to BT.
5. On 10 February 2005, Ofcom published *Modifications to BT’s SMP services conditions AA4, BA4 and PA1*¹¹⁶.
6. On 18 August 2005, Ofcom published a *Review of BT’s Network Charge Controls*¹¹⁷ which reviewed the markets for local-tandem conveyance / transit and inter-tandem conveyance / transit. The review found the market for inter-tandem conveyance / transit to be competitive; no finding of SMP was made and SMP conditions relating to that market were revoked. Further SMP conditions were set for a four year charge control period.

¹¹² *Review of the fixed narrowband wholesale exchange line, call origination, conveyance and transit markets*, 28 Nov 2003 (http://www.ofcom.org.uk/consult/condocs/narrowband_mkt_rvw/nwe/)

¹¹³ *Review of fixed geographic call termination markets*, 28 Nov 2003, (http://www.ofcom.org.uk/consult/condocs/narrowband_mkt_rvw/Eureviewfinala1.pdf)

¹¹⁴ ‘*The regulatory financial reporting obligations on BT and Kingston Communications, Final Statement and notification: Accounting separation and cost accounting*’, 22 July 2004, http://www.ofcom.org.uk/consult/condocs/fin_reporting/fin_report_statement/

¹¹⁵ *Review of BT’s product management, policy and planning charge*, 30 July 2004 (http://www.ofcom.org.uk/consult/condocs/rev_bt_pm/statement/statement.pdf)

¹¹⁶ *Consents to disapply BT’s SMP services conditions that require the notification of charges, terms and conditions and technical information in respect of certain products and processes relating to LLU and LLU backhaul*, 10 Feb 2005, (http://www.ofcom.org.uk/consult/condocs/dissmpbt/expl_sn/llusmp_explsn.pdf)

¹¹⁷ *Review of BT’s Network Charge Controls*, 18 Aug 2005 (<http://www.ofcom.org.uk/consult/condocs/charge/statement/>)

Proposals

7. Ofcom hereby makes, in accordance with sections 48(2) and 80 of the Communications Act 2003 (the "Act"), the following proposals for identifying markets, making market power determinations and the setting of SMP services conditions by reference to such determinations ("SMP conditions").

8. Ofcom is proposing to identify the following markets for the purpose of making market power determinations:

(a) for the United Kingdom, except the Hull Area:

- (i) wholesale analogue exchange line services;
- (ii) wholesale ISDN2 exchange line services;
- (iii) wholesale ISDN30 exchange line services;
- (iv) Wholesale call origination on a fixed narrowband network;
- (v) local-tandem conveyance and transit on fixed public; narrowband networks; and
- (vi) wholesale transit services,

(b) for the Hull Area:

- (i) wholesale analogue exchange line services;
- (ii) wholesale ISDN2 exchange line services;
- (iii) wholesale ISDN30 exchange line services; and
- (iv) Wholesale call origination on a fixed narrowband network,

(c) for the United Kingdom:

- (i) Wholesale fixed geographic call termination on each individual network.

9. Ofcom is proposing to make market power determinations that the following persons have significant market power:

- (a) in relation to each of the markets set out in paragraph 8(a)(i) to (iv) above, BT;
- (b) in relation to each of the markets set out in paragraph 8(b) above, KCOM.
- (c) in relation to the market set out in paragraph 8(c) above, BT, KCOM and the operators set out at Annex A to Schedule 3 of this notification (the extent of each person's public telephone network to constitute a separate market for the purposes of this notification).

10. Ofcom is proposing that the following markets are effectively competitive and that, therefore, is not proposing to determine any person as a person having significant market power in each of the markets set out in paragraph 8(a)(v) and (vi), above.

Proposals to set SMP service conditions

11. Ofcom is proposing to set SMP conditions on the persons referred to in paragraphs 9(a), (b) and (c) above as set out in Schedules 1, 2 and 3, respectively, to this Notification.

12. The effect of, and Ofcom's reasons for making, the proposals to identify the markets set out in paragraph 8 above and to make the market power determinations set out in paragraphs 9 and 10 above are contained in the case of the markets set out in:

(a) sub-paragraphs 8(a)(i), 8(a)(ii), 8(a)(iii) and 8(b)(i), 8(b)(ii), 8(b)(iii) in Section 5 of the consultation document accompanying this Notification;

(b) sub-paragraphs 8(a)(iv) and 8(b)(iv) in Section 6 of the consultation document accompanying this Notification;

(c) sub-paragraph 8(a)(v) in Section 8 of the consultation document accompanying this Notification;

(d) sub-paragraph 8(a)(vi) in Section 9 of the consultation document accompanying this Notification;

(e) sub-paragraph 8(c)(i) in Section 7 of the consultation document accompanying this Notification;

13. The effect of, and the Ofcom's reasons for making, the proposals to set the SMP conditions set out in Schedules 1, 2 and 3 to this Notification are contained in Sections 11 to 17 of the consultation document accompanying this Notification.

Proposals to revoke SMP service conditions

14. It is proposed that the following conditions be revoked in accordance with paragraph 15 below:

(a) The conditions (as modified)¹¹⁸ set out at Annex A of the *Review of the fixed narrowband wholesale exchange line, call origination, conveyance and transit markets*, published by the Director on 28 November 2003;

(b) The conditions (as modified)¹¹⁹ set out at Annex B of the *Review of fixed geographic call termination markets* published by the Director on 28 November 2003;

(c) Condition PA1 as set out in Schedule 2 of the *Review of BT's product management, policy and planning (PPP) charge* published by Ofcom on 30 July 2004.

15. The proposed revocations in paragraph 14 above would take effect on the publication of any Notification under sections 48(1) and 79(4) of the Act adopting these proposals.

16. It is proposed that conditions AA4(b) and AA4(c), as set out in schedule 2 of Annex 3 to the *Review of BT's Network Charge Controls* be revoked on 1 January 2010 in accordance with paragraph 17 below.

17. The proposed revocations in paragraph 16 above would take effect on the date specified only after the publication of any Notification under sections 48(1) and 79(4) of the Act adopting these proposals.

18. The effect of, and the Ofcom's reasons for making, the proposals to revoke SMP conditions set out in paragraphs 14 and 17 above are contained in Section 18 of the consultation document accompanying this Notification.

¹¹⁸ The SMP conditions set in the November 2003 reviews (footnotes 1 and 2 above), have been amended from time to time. The revocation of the substantive conditions includes any amendment that has subsequently been made to those conditions.

¹¹⁹ As for footnote 108 above

Proposals to amend SMP service conditions

19. Ofcom propose to amend Annex 2 to *The regulatory financial reporting obligations on BT and Kingston Communications Final statement and notification* dated 22 July 2004 setting further SMP conditions on BT in relation to regulatory accounting in respect of various markets (as amended), by removing reference;

- (a) in paragraph 4(a)(i) to markets 3, 7, 8 and 9
- (b) in paragraph 4(a)(ii) to market 2

20. Ofcom propose to further amend Annex 2 to *The regulatory financial reporting obligations on BT and Kingston Communications Final statement and notification* dated 22 July 2004 (as amended), by amending the table, "Part 1: Wholesale Markets" of Schedule 1 to the Annex as follows:

- (a) by removing the reference to "Wholesale residential analogue exchange line services in the UK excluding the Hull Area" to be replaced with "Wholesale analogue exchange line services in the UK excluding the Hull Area [as defined in the Final Statement]" and removing the reference to "28.11.03" and replacing it with "[date of Final Statement]" (Market 1 in the 2004 Notification)
- (b) by removing the reference to "Wholesale residential ISDN2 exchange line services in the UK excluding the Hull Area" (Market 2 in the 2004 Notification)
- (c) by removing the reference to "Wholesale business analogue exchange line services in the UK excluding the Hull Area" (Market 3 in the 2004 Notification)
- (d) by removing the reference to "Wholesale business ISDN2 exchange line services in the UK excluding the Hull Area" to be replaced with "Wholesale ISDN2 exchange line services in the UK excluding the Hull Area [as defined in the Final Statement]" (Market 4 in the 2004 Notification)
- (e) by removing the reference to "Call origination on the fixed public telephone networks in the UK excluding the Hull Area" to be replaced with "Wholesale call origination on a fixed narrowband network, in the UK excluding the Hull Area [as defined in the Final Statement]" (Market 6 in the 2004 Notification)
- (f) by removing the reference to "Local-tandem conveyance and transit on fixed public telephone networks in the UK excluding the Hull Area" (Market 7 in the 2004 Notification)
- (g) by removing the reference to "Single transit on fixed public narrowband networks in the UK excluding the Hull Area" (Market 9 in the 2004 Notification)
- (h) by removing the reference to "Fixed geographic call termination provided by BT" to be replaced with "Wholesale fixed geographic call termination on each individual network, provided by BT [as defined in the Final Statement]" and removing the reference to "28.11.03" and replacing it with "[date of Final Statement]" (Market 10 in the 2004 Notification)

21. Ofcom propose to amend Annex 3 to *The regulatory financial reporting obligations on BT and Kingston Communications Final statement and notification* dated 22 July 2004 setting further SMP conditions on KCOM in relation to regulatory accounting in respect of various markets (as amended), by removing reference;

- (a) in paragraph 4(a)(i) to market 3
- (b) in paragraph 4(a)(ii) to market 2

22. Ofcom propose to further amend Annex 3 to *The regulatory financial reporting obligations on BT and Kingston Communications Final statement and notification* dated 22 July 2004, by amending the table, "Part 1: Wholesale Markets" of Schedule 1 to the Annex as follows:

(a) by removing the reference to "Wholesale residential analogue exchange line services in the Hull Area" to be replaced with "Wholesale analogue exchange line services in the Hull Area [as defined in the Final Statement]" and removing the reference to "28.11.03" and replacing it with "[date of Final Statement]" (Market 1 in the 2004 Notification)

(b) by removing the reference to "Wholesale residential ISDN2 exchange line services in the Hull Area" (Market 2 in the 2004 Notification)

(c) by removing the reference to "Wholesale business analogue exchange line services in the Hull Area" (Market 3 in the 2004 Notification)

(d) by removing the reference to "Wholesale business ISDN2 exchange line services in the Hull Area" to be replaced with "Wholesale ISDN2 exchange line services in the Hull Area [as defined in the Final Statement]" (Market 4 in the 2004 Notification)

(e) by removing the reference to "Call origination on the fixed public telephone networks in the Hull Area" to be replaced with "Wholesale call origination on a fixed narrowband network, in Hull Area [as defined in the Final Statement]" (Market 6 in the 2004 Notification)

(f) by removing the reference to "Fixed geographic call termination provided by Kingston" to be replaced with "Wholesale fixed geographic call termination on each individual network provided by KCOM [as defined in the Final Statement]" and removing the reference to "28.11.03" and replacing it with "[date of Final Statement]" [as defined in the Final Statement]" (Market 10 in the 2004 Notification)

23. Ofcom further propose that, in relation to the service markets proposed at paragraph 8 of this Notification, by reference to the proposed market power determinations set out at paragraph 9 of this Notification, the following SMP services conditions, as set out in the *The regulatory financial reporting obligations on BT and Kingston Communications Final statement and notification* dated 22 July 2004, continue to apply;

- (a) In relation to BT, those conditions referred to at paragraph 4 of Annex 2 in relation to the wholesale markets numbered 1, 3, 4, 5, 6 and 10 (as amended), as specified in Schedule 2 to that Annex.
- (b) In relation to KCOM, those conditions referred to at paragraph 4 of Annex 3 in relation to the wholesale markets numbered 1, 4, 5, 6 and 7 (as amended), as specified in Schedule 2 to that Annex.

24. The effect of, and the Ofcom's reasons for making, the proposals to amend SMP conditions set out in paragraphs 19 to 22 above are contained in Section 18 of the consultation document accompanying this Notification;

Ofcom's duties and legal tests

25. In identifying and analysing the markets referred to in paragraph 6 above, and in considering whether to make the proposals set out in this Notification, Ofcom has, in accordance with section 79 of the Act, 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 identification and analysis or the determination of what constitutes significant market power.

26. Ofcom considers that the proposed SMP conditions referred to in paragraph 11 above comply with the requirements of sections 45 to 47, 87, 88 and 90 of the Act, as appropriate and relevant to each such SMP condition.

37. In making all of the proposals referred to in paragraphs 8 to 22 of this Notification, Ofcom has considered and acted in accordance with its general duties set out in section 3 of the Act and the six Community requirements in section 4 of the Act.

Making representations

28. Representations may be made to Ofcom about any of the proposals set out in this Notification and the accompanying consultation document by no later than 28 May 2009.

29. Copies of this Notification and the accompanying consultation document have been sent to the Secretary of State for Business, Enterprise and Regulatory Reform in accordance with sections 50(1)(a) and 81 of the Act, as well as the European Commission and to the regulatory authorities of every other member State in accordance with sections 50(3) and 81 of the Act.

Interpretation

30. Save as to referring to markets identified in paragraph 8 of this Notification and except as otherwise defined in paragraph 31 of this Notification, words or expressions used shall have the same meaning as they have been ascribed in the Act.

31. In this Notification:

(a) "**BT**" means British Telecommunications plc, 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;

(b) "**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 Kingston Communication (Hull) plc.

(c) "**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;

SCHEDULE 1

The **SMP services conditions** proposed to be imposed on BT under sections 45, 87, 88 and 90 of the Communications Act 2003 as a result of the analysis of the markets set out in paragraph 8(a) of the Notification in each of which it is proposed BT has significant market power (“**SMP conditions**”)

Part 1: Application, definitions and interpretation relating to the SMP conditions in Part 2

1. The SMP conditions in Part 2 of this Schedule 1 shall, except insofar as it is otherwise stated therein, apply to each and all of the markets set out in paragraph 8(a) of the Notification and to Interconnection Circuits.

2. In this Schedule 1:

(a) “**Act**” means the Communications Act 2003 (c. 21);

(b) “**Access Charge Change Notice**” has the meaning given to it in Condition AA6(a).2;

(c) “**Access Contract**” means:

(i) a contract for the provision by the Dominant Provider to another person of Network Access to the Dominant Provider’s Electronic Communications Network;

(ii) a contract under which Associated Facilities in relation to the Dominant Provider’s Public Electronic Communications Network are made available by the Dominant Provider to another person;

(d) “**Call Origination Services**” mean any and all of the following specific services provided by the Dominant Provider and covered by Condition AA1(a):

- (i) call origination (including operator assistance and emergency intermediate services); and
- (ii) call origination (including emergency intermediate services);

(e) “**Carrier Pre-selection**” means a facility which allows a Subscriber to whom a Publicly Available Telephone Service is provided by means of a Public Telephone Network to select which Pre-selected Provider of such Services provided wholly or partly by means of that Network is the Pre-selected Provider he wishes to use to carry his calls by designating in advance the selection that is to apply on every occasion when there has been no selection of Provider by use of a Telephone Number;

(f) “**Carrier Selection Interconnection Facilities**” means those facilities for Interconnection which enable a provider of a Public Telephone Network to provide Indirect Access to the Subscribers of the Dominant Provider;

(g) “**CSI**” means customer sited Interconnection;

(h) “**Directory**” means a printed document containing Directory Information on Relevant Subscribers of Publicly Available Telephone Services in the United Kingdom which is made available to members of the public;

(i) “**Directory Information**” means, in the case of a Directory, the name and address of the Relevant Subscriber and the Telephone Number assigned to the Relevant Subscriber for his use of Publicly Available Telephone Services and, in the case of a Directory Enquiry Facility,

shall be either such a Telephone Number of the Relevant Subscriber or information that such a Telephone Number of the Relevant Subscriber may not be supplied;

(j) “**Directory Enquiry Facility**” means Directory Information provided by means of a Public Telephone Network;

(k) “**Dominant Provider**” means British Telecommunications plc, 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;

(l) “**Exchange Line**” means Apparatus comprised in the Dominant Provider’s Electronic Communications Network and installed for the purpose of connecting a telephone exchange run by the Dominant Provider to a Network Termination Point comprised in Network Termination and Testing Apparatus installed by the Dominant Provider for the purpose of providing Electronic Communications Services at the premises at which the Network Termination and Testing Apparatus is located;

(m) “**Existing Line Transfer**” means the combination of transactions consisting of a customer (including but not limited to a customer who is a provider of a Public Electronic Communications Service) of the Dominant Provider for an Exchange Line terminating his contract (‘the customer contract’) with the Dominant Provider for the Exchange Line, and the Dominant Provider entering into a contract for that Exchange Line with a provider of a Public Electronic Communications Service (‘the Third Party contract’), except where the Third Party contract is entered into after the Dominant Provider has ceased the Exchange Line (in which case the Third Party contract shall be deemed to be a New Line Installation);

(n) “**IEC**” means Interconnection extension circuits;

(o) “**Indirect Access**” means a facility which allows a Subscriber to whom a Publicly Available Telephone Service is provided by means of a Public Telephone Network to select which such Service provided wholly or partly by means of that Network is the service he wishes to use by the use of a Telephone Number on each separate occasion on which a selection is made;

(p) “**Interconnection Circuits**” mean any and all of the following specific services provided by the Dominant Provider and covered by Condition AA1(a):

- (i) standard CSI connection;
- (ii) standard CSI rental – fixed;
- (iii) standard CSI rental – per km;
- (iv) high performance CSI connection
- (v) high performance CSI rental – fixed;
- (vi) high performance CSI rental – per km;
- (vii) ISI connection;
- (viii) ISI rental per 100m;
- (ix) IEC connection;
- (x) IEC rental – fixed;
- (xi) IEC rental per km;
- (xii) intra-building circuits connection;
- (xiii) intra-building circuits rental;
- (xiv) rearrangements;
- (xv) path protection connection per 34Mbit/s;
- (xvi) path protection connection per 140Mbit/s;
- (xvii) path protection rental per 34Mbit/s; and
- (xviii) path protection rental per 140Mbit/s;

(q) “**ISDN**” means the integrated services digital network which is an Electronic Communications Network evolved from the telephony integrated digital network that provides for digital end-to-end connectivity to support a wide range of Public Electronic Communications Services, including voice and non-voice services, to which End-users have access by a limited set of standard multipurpose customer interfaces;

(r) “**ISI**” means in-span Interconnection links;

(s) “**Local Exchange**” means a telephone exchange to which Customers are connected, usually via a remote or locally sited concentrator unit, which telephone exchange supports the provision of either analogue or digital Exchange Lines;

(t) “**Net Retail Call Revenue**” means the retail revenue for calls, excluding VAT and after any applicable discounts;

(u) “**Network Component**” means, to the extent they are used in the Services Market, the network components specified in any direction given by Ofcom from time to time for the purpose of these SMP conditions.

(v) “**Network Termination and Testing Apparatus**” means an item of Apparatus comprised in an Electronic Communications Network installed in a fixed position on Served Premises which enables:

(i) Approved Apparatus to be readily connected to, and disconnected from, the Network;

(ii) the conveyance of Signals between such Approved Apparatus and the Network;

(iii) the due functioning of the Network to be tested, but the only other functions of which, if any, are:

(A) to supply energy between such Approved Apparatus and the Network;

(B) to protect the safety or security of the operation of the Network; or

(C) to enable other operations exclusively related to the running of the Network to be performed or the due functioning of any system to which the Network is or is to be connected to be tested (separately or together with the Network);

(w) “**Network Termination Point**” means the physical point at which a Relevant Subscriber is provided with access to a Public Electronic Communications Network and, where it concerns Electronic Communications Networks involving switching or routing, that physical point is identified by means of a specific network address, which may be linked to the Telephone Number or name of a Relevant Subscriber. Where a Network Termination Point is provided at a fixed position on Served Premises, it shall be within an item of Network Termination and Testing Apparatus;

(x) “**New Line Installation**” means a service for the installation of an Exchange Line, where some or all external (or internal) wiring has to be provided, or brought into use, by the Dominant Provider. For purposes of this definition, “external wiring” means wiring from the distribution point to the protection box (or where one would be fitted) at the premises at which the Network Termination and Testing Apparatus is located and “internal wiring” means wiring from the protection box up to and including the first main socket, block terminal or other Network Termination Point;

(y) “**NTS**” means number translation services;

(z) “**NTS Calls**” means a call to a number identified in the Numbering Plan for the United Kingdom as a Special Service number or a Premium Rate Service number - plus calls to

0500 Freephone numbers; - excluding calls to 0844 04 numbers for Surftime Internet access services and calls to 0808 99 numbers for FRIACO;

(aa) “**NTS Call Origination**” means originating NTS Calls and retailing those NTS Calls to the End-User on behalf of the Third Party who has requested NTS call origination;

(bb) “**NTS Retail Uplift**” means the charge for retailing NTS Calls to the End-User;

(cc) “**Numbering Plan**” means the National Telephone Numbering Plan published from time to time by the Director pursuant to sections 56 and 60 of the Act 2003;

(dd) “**Ordinary Maintenance**” means maintenance which is part of the service provided by the Dominant Provider in consideration of the charge for an Exchange Line and includes normal fault repair, as defined in the Dominant Provider's standard terms and conditions;

(ee) “**Point of Connection**” means a point at which the Dominant Provider's Electronic Communications Network and another person's Electronic Communications Network are connected;

(ff) “**Premium Rate Service**” means a service as defined in the Numbering Plan for the United Kingdom as a Premium Rate Service;

(gg) “**Pre-selected Provider**” means a provider of a Public Telephone Network who has notified the Dominant Provider that it is able and willing to provide Carrier Pre-selection to Subscribers to whom the Dominant Provider provides Publicly Available Telephone Services;

(hh) “**Public Pay Telephone**” means a telephone available to the general public, for the use of which the means of payment may include coins and/or credit/debit cards and/or pre-payment cards, including cards for use with dialling codes;

(ii) “**Public Telephone Network**” means an Electronic Communications Network which is used to provide Publicly Available Telephone Services; it supports the transfer between Network Termination Points of speech communications, and also other forms of communication, such as facsimile and data;

(jj) “**Publicly Available Telephone Services**” means a service available to the public for originating and receiving national and international calls and access to Emergency Organisations through a number or numbers in a national or international telephone numbering plan, and in addition may, where relevant, include one or more of the following services: the provision of operator assistance services, Directory Enquiry Facilities, Directories, provision of Public Pay Telephones, provision of service under special terms, provision of specific facilities for End-users with disabilities or with special social needs and/or the provision of non-geographic services;

(kk) “**Reference Offer**” means the terms and conditions on which the Dominant Provider is willing to enter into an Access Contract;

(ll) “**Relevant Calls**” means all calls which originate on the Dominant Provider's Public Electronic Communications Network and which are of a type which are available for selection in accordance with the Carrier Pre-selection Functional Specification by a Subscriber to whom a Publicly Available Telephone Service is provided by means of a Public Telephone Network;

(mm) “**Relevant Subscriber**” means any person who is party to a contract with a provider of Public Electronic Communications Services for the supply of such Services;

(nn) “**Services Market**” means each of the markets sets out in paragraph 8(a) of the Notification;

(oo) “**Subscriber**” means any person who is party to a contract with the provider of Publicly Available Telephone Services for the supply of such Services in the United Kingdom;

(pp) “**Tandem Exchange**” means a telephone exchange whose primary function is not to support the provision of Exchange Lines but to switch traffic between other telephone exchanges in a Public Electronic Communications Network;

(qq) “**Third Party**” means either:

- (i) a person providing a Public Electronic Communications Network; or
- (ii) a person providing a Public Electronic Communications Service;

(rr) “**Transfer Charge**” means the charge or price that is applied, or deemed to be applied, by the Dominant Provider to itself for the use or provision of an activity or group of activities. For the avoidance of doubt, such activities or group of activities include, amongst other things, products and services provided from, to or within the Services Market and the use of Network Components in that Services Market;

(ss) “**Usage Factor**” means the average usage by any Communications Provider (including the Dominant Provider itself) of each Network Component in using or providing a particular product or service or carrying out a particular activity;

(tt) “**Wholesale Analogue Line Rental**” means an Electronic Communications Service provided by the Dominant Provider to a Third Party for the use and Ordinary Maintenance of an analogue Exchange Line;

(uu) “**Wholesale Business ISDN2 Line Rental**” means an Electronic Communications Service provided by the Dominant Provider to a Third Party for the use and Ordinary Maintenance of an ISDN2 Exchange Line (business quality of service);

(vv) “**Wholesale ISDN30 Line Rental**” means an Electronic Communications Service provided by the Dominant Provider to a Third Party for the use and Ordinary Maintenance of an ISDN30 Exchange Line;

(xx) “**Wholesale Line Rental**” means any and all of the following provided by the Dominant Provider:

- (i) Wholesale Analogue Line Rental;
- (ii) Wholesale ISDN2 Line Rental; and
- (iii) Wholesale ISDN30 Line Rental;

(yy) “**Wholesale Line Rental Per Customer Line Set-up Costs**” means the costs incurred by the Dominant Provider in providing Wholesale Line Rental Per Customer Line Set-up Facilities;

(zz) “**Wholesale Line Rental Per Customer Line Set-up Facilities**” means the Wholesale Line Rental facilities required from the Dominant Provider by a Third Party in order for the Third Party to be able to set up Wholesale Line Rental on the Exchange Line of a Subscriber to whom the Dominant Provider provides a Publicly Available Telephone Service by means of a Public Telephone Network;

(aaa) **“Wholesale Line Rental Per Provider On-going Costs”** means the costs incurred by the Dominant Provider in providing Wholesale Line Rental Per Provider On-going Facilities;

(bbb) **“Wholesale Line Rental Per Provider On-going Facilities”** means those Wholesale Line Rental facilities required from the Dominant Provider by any individual Third Party which enable the Third Party to continue on an on-going basis to offer Wholesale Line Rental to Subscribers to whom the Dominant Provider provides Publicly Available Telephone Services by means of a Public Telephone Network, including (without limitation to the generality of the foregoing) activities such as product management;

(ccc) **“Wholesale Line Rental Per Provider Set-up Costs”** means the costs incurred by the Dominant Provider in providing Wholesale Line Rental Per Provider Set-up Facilities;

(ddd) **“Wholesale Line Rental Per Provider Set-up Facilities”** means those Wholesale Line Rental facilities required from the Dominant Provider by any individual Third Party in order for the Third Party to be able to offer Wholesale Line Rental to Subscribers to whom the Dominant Provider provides Publicly Available Telephone Services by means of a Public Telephone Network, including (without limitation to the generality of the foregoing) activities such as the setting up of arrangements for the electronic transfer of customer orders;

(eee) **“Wholesale Line Rental Services”** means any and all of the following specific services provided by the Dominant Provider:

- (i) Wholesale Analogue Line Rental (residential quality of service);
- (ii) Wholesale Analogue Line Rental (business quality of service);
- (iii) Existing Line Transfer of a single analogue Exchange Line or multiplexes thereof (residential quality of service);
- (iv) Existing Line Transfer of a single analogue Exchange Line or multiplexes thereof (business quality of service);
- (v) New Line Installation (analogue) (residential quality of service); and
- (vi) New Line Installation (analogue) (business quality of service);

(fff) **“Wholesale Line Rental System Set-up Costs”** means the costs incurred by the Dominant Provider in developing and implementing Wholesale Line Rental System Set-up Facilities; and

(ggg) **“Wholesale Line Rental System Set-up Facilities”** means those Wholesale Line Rental Facilities required by the Dominant Provider in order for the Dominant Provider to be able to provide Wholesale Line Rental facilities, such as the software and any alterations needed on the Dominant Provider’s switches and the modifications required for the Dominant Provider’s support systems.

3. For the purpose of interpreting the SMP conditions in Part 2:

(a) except in so far as the context otherwise requires, words or expressions shall have the meaning assigned to them in paragraph 2 of this Part above and otherwise any word or expression shall have the same meaning as it has in the Act;

(b) the Interpretation Act 1978 (c. 30) shall apply as if each of the SMP conditions in Part 2 were an Act of Parliament; and

(c) headings and titles shall be disregarded.

Part 2: The SMP conditions

Condition AA1(a) - Requirement to provide Network Access on reasonable request

AA1(a).1 Where a Third Party reasonably requests in writing Network Access, the Dominant Provider shall provide that Network Access. The Dominant Provider shall also provide such Network Access as Ofcom may from time to time direct.

AA1(a).2 The provision of Network Access in accordance with paragraph AA1(a).1 above shall occur as soon as it is reasonably practicable and shall be provided on fair and reasonable terms, conditions and charges and on such terms, conditions and charges as Ofcom may from time to time direct.

AA1(a).3 The Dominant Provider shall comply with any direction Ofcom may make from time to time under this Condition AA1(a).

AA1(a).4 The Direction made in the document 'BT's use of Cancel Other' published on 28 July 2005, shall continue to have force for the purposes of this condition from the date that this Condition AA1(a) enters force.

Condition AA1(b) - Requests for new Network Access

AA1(b).1 The Dominant Provider shall, for the purposes of transparency, publish reasonable guidelines, in relation to requests for new Network Access made to it. Such guidelines shall detail:

- (a) the form in which such a request should be made;
- (b) the information that the Dominant Provider requires in order to consider a request for new Network Access; and
- (c) the time-scales in which such requests will be handled by the Dominant Provider.

AA1(b).2 These guidelines shall meet the following principles:

- (a) the process should be documented end-to-end;
- (b) the timescales for each stage of the process shall be reasonable;
- (c) the criteria by which requests will be assessed shall be clearly identified; and
- (e) any changes to the guidelines be agreed between BT and industry.

AA1(b).3 The Dominant Provider shall, upon a reasonable request from a Third Party considering making a request for new Network Access, provide that Third Party with information so as to enable that Third Party to make a request for new Network Access. Such information shall be provided within a reasonable period.

AA1(b).4 On receipt of a written request for new Network Access, the Dominant Provider shall deal with the request in accordance with the guidelines described at paragraph AA1(b).1 above. A modification of a request for new Network Access which has previously been submitted to the Dominant Provider, and rejected by the Dominant Provider, shall be considered as a new request.

AA1(b).5 The Dominant Provider is required to provide Ofcom with a description of the processes it has put in place to ensure compliance with this Condition AA1(b). The Dominant Provider shall keep those processes under review to ensure that they remain adequate for that purpose. Where changes to the process are agreed with industry, BT should notify Ofcom of those changes.

Condition AA2 - Requirement not to unduly discriminate

AA2.1 The Dominant Provider shall not unduly discriminate against particular persons or against a particular description of persons in relation to matters connected with Network Access.

Condition AA3 - Basis of charges

AA3.1 Unless Ofcom directs otherwise from time to time, the Dominant Provider shall secure, and shall be able to demonstrate to the satisfaction of Ofcom, that each and every charge offered, payable or proposed for Network Access covered by Condition AA1(a) is reasonably derived from the costs of provision based on a forward looking long-run incremental cost approach and allowing an appropriate mark up for the recovery of common costs including an appropriate return on capital employed.

AA3.2 For the avoidance of any doubt, where the charge offered, payable or proposed for Network Access covered by Condition AA1(a) is for a service which is subject to a charge control under Condition AA4, the Dominant Provider shall secure, and shall be able to demonstrate to the satisfaction of Ofcom, that such a charge satisfies the requirements of paragraph AA3.1 above.

AA3.3 The Dominant Provider shall comply with any direction Ofcom may from time to time direct under this Condition AA3.

Condition AA5 - Requirement to publish a Reference Offer

AA5.1 Except in so far as Ofcom may otherwise consent in writing, the Dominant Provider shall publish a Reference Offer and act in the manner set out below.

AA5.2 Subject to paragraph AA5.8 below, the Dominant Provider shall ensure that a Reference Offer in relation to the provision of Network Access includes at least the following:

- (a) a description of the Network Access to be provided, including technical characteristics (which shall include information on network configuration where necessary to make effective use of the Network Access);
- (b) the locations of the points of Network Access;
- (c) the technical standards for Network Access (including any usage restrictions and other security issues);
- (d) the conditions for access to ancillary, supplementary and advanced services (including operational support systems, information systems or databases for pre-ordering, provisioning, ordering, maintenance and repair requests and billing);
- (e) any ordering and provisioning procedures;
- (f) relevant charges, terms of payment and billing procedures;

- (g) details of interoperability tests;
- (h) details of traffic and network management;
- (i) details of maintenance and quality as follows:
 - (i) specific time scales for the acceptance or refusal of a request for supply and for completion, testing and hand-over or delivery of services and facilities, for provision of support services (such as fault handling and repair);
 - (ii) service level commitments, namely the quality standards that each party must meet when performing its contractual obligations;
 - (iii) the amount of compensation payable by one party to another for failure to perform contractual commitments;
 - (iv) a definition and limitation of liability and indemnity; and
 - (v) procedures in the event of alterations being proposed to the service offerings, for example, launch of new services, changes to existing services or change to prices;
- (j) details of measures to ensure compliance with requirements for network integrity;
- (k) details of any relevant intellectual property rights;
- (l) a dispute resolution procedure to be used between the parties;
- (m) details of duration and renegotiation of agreements;
- (n) provisions regarding confidentiality of non-public parts of the agreements;
- (o) rules of allocation between the parties when supply is limited (for example, for the purpose of co-location or location of masts);
- (p) the standard terms and conditions for the provision of Network Access;
- (q) in relation to those products and services subject to Conditions AA3 and AA4, the amount applied to:
 - (i) each Network Component used in providing Network Access with the relevant Usage Factors; and
 - (ii) the Transfer Charge for each Network Component or combination of Network Components described above,reconciled in each case to the charge payable by a Communications Provider other than the Dominant Provider.

AA5.3 In relation to those products and services subject to Conditions AA3 and AA4, to the extent that the Dominant Provider provides to itself Network Access that:

- (a) is the same, similar or equivalent to that provided to any other Third Party; or

(b) may be used for a purpose that is the same, similar or equivalent to that provided to any other Third Party,

in a manner that differs from that detailed in a Reference Offer in relation to Network Access provided to any other Third Party, the Dominant Provider shall ensure that it publishes a Reference Offer in relation to the Network Access that it provides to itself which includes, where relevant, at least those matters detailed in paragraphs AA5.2(a) to (q) above.

AA5.4 The Dominant Provider shall update and publish the Reference Offer in relation to any amendments or in relation to any further Network Access provided after the date this Condition AA5 enters into force.

AA5.5 Publication referred to above shall be effected by:

(a) placing a copy of the Reference Offer on any relevant website operated or controlled by the Dominant Provider; and

(b) sending a copy of the Reference Offer to Ofcom.

AA5.6 The Dominant Provider shall send a copy of the current version of the Reference Offer to any person at that person's written request (or such parts which have been requested).

AA5.7 The Dominant Provider shall make such modifications to the Reference Offer as Ofcom may direct from time to time.

AA5.8 The Dominant Provider shall provide Network Access at the charges, terms and conditions in the relevant Reference Offer and shall not depart therefrom either directly or indirectly.

AA5.9 The Dominant Provider shall comply with any direction Ofcom may make from time to time under this Condition AA5.

Condition AA6(a) - Requirement to notify charges

AA6(a).1 Except in so far as Ofcom may otherwise consent in writing, the Dominant Provider shall publish charges and act in the manner set out below.

AA6(a).2 Save as provided in Condition AA6(a).2A below and except where new or amended charges are directed or determined by Ofcom or where such charges are required by a notification or an enforcement notification given by Ofcom under sections 94 or 95 of the Act, the Dominant Provider shall send to Ofcom and to every Third Party with which it has entered into an Access Contract covered by Condition AA1(a) a written notice of any amendment to the charges on which it provides Network Access or in relation to any charges for new Network Access (an "Access Charge Change Notice"):

(a) in the case of the markets set out in paragraphs 8(a)(i), 8(a)(ii) and 8(a)(iv) of this Notification and interconnection circuits, not less than 90 days before any such amendment comes into effect but only where that amendment is due to come into effect before [date 6 months after the date of the Notification]

(b) in any other case not less than 28 days before any such amendment comes into effect.

AA6(a).3 The Dominant Provider shall ensure that an Access Charge Change Notice includes:

- (a) a description of the Network Access in question;
- (b) a reference to the location in the Dominant Provider's current Reference Offer of the terms and conditions associated with the provision of that Network Access;
- (c) the date on which or the period for which any amendments to charges will take effect (the "effective date");
- (d) in relation to those products and services subject to Conditions AA3 and AA4, the current and proposed new charge and the relevant Usage Factors applied to each Network Component comprised in that Network Access, reconciled in each case with the current or proposed new charge;
- (e) the information specified in sub-paragraph (d) above with respect to that Network Access to which that paragraph applies; and
- (f) in relation to those products and services subject to Conditions AA3 and AA4, the relevant network tariff gradient.

AA6(a).4 The Dominant Provider shall not apply any new charge identified in an Access Charge Change Notice before the effective date.

AA6(a).5 In relation to those products and services subject to Conditions AA3 and AA4, to the extent that the Dominant Provider provides to itself Network Access that:

- (a) is the same, similar or equivalent to that provided to any other Third Party; or
- (b) may be used for a purpose that is the same, similar or equivalent to that provided to any other Third Party, in a manner that differs from that detailed in an Access Charge Change Notice in relation to Network Access provided to any other Third Party, the Dominant Provider shall ensure that it sends to Ofcom an Access Charge Change Notice in relation to the Network Access that it provides to itself which includes, where relevant, at least those matters detailed in paragraphs AA6(a).3(a) to (f).

Condition AA6(b) - Requirement to notify technical information

AA6(b).1 Save where the Director consents otherwise, where the Dominant Provider:

- (a) proposes to provide Network Access covered by Condition AA1(a), the terms and conditions for which comprise new:
 - (i) technical characteristics (including information on network configuration where necessary to make effective use of the Network Access);
 - (ii) locations of the points of Network Access; or
 - (iii) technical standards (including any usage restrictions and other security issues), or

(b) proposes to amend an existing Access Contract covered by Condition AA1(a) by modifying the terms and conditions listed in paragraph AA6(b).1(a)(i) to (iii) above on which the Network Access is provided,

the Dominant Provider shall publish a written notice (the "Notice") of the new or amended terms and conditions not less than 90 days before either the Dominant Provider enters into an Access Contract to provide the new Network Access or the amended terms and conditions of the existing Access Contract come into effect. This obligation for prior notification shall not apply where new or amended charges or terms and conditions are directed or determined by the Office of Communications ("Ofcom") or are required by a notification or an enforcement notification given by Ofcom under sections 94 or 95 of the Act."

AA6(b).2 The Dominant Provider shall ensure that the Notice includes:

- (a) a description of the Network Access in question;
- (b) a reference to the location in the Dominant Provider's Reference Offer of the relevant terms and conditions;
- (c) the date on which or the period for which the Dominant Provider may enter into an Access Contract to provide the new Network Access or any amendments to the relevant terms and conditions will take effect (the "effective date").

AA6(b).3 The Dominant Provider shall not enter into an Access Contract containing the terms and conditions identified in the Notice or apply any new relevant terms and conditions identified in the Notice before the effective date.

AA6(b).4 Publication referred to in paragraph AA6(b).1 shall be effected by:

- (a) placing a copy of the Notice on any relevant website operated or controlled by the Dominant Provider;
- (b) sending a copy of the Notice to Ofcom; and
- (c) sending a copy of the Notice to any person at that person's written request, and where the Notice identifies a modification to existing relevant terms and conditions, to every Third Party with which the Dominant Provider has entered into an Access Contract covered by Condition AA1(a). The provision of such a copy of Notice may be subject to a reasonable charge.

Condition AA7

Transparency as to quality of service

AA7.1 The Dominant provider shall publish all such information for the purposes of securing transparency as to the quality of service in relation to Network Access provided by the Dominant Provider, in such manner and form as Ofcom may from time to time direct.

AA7.2 The Dominant Provider shall comply with any direction Ofcom may make from time to time under this Condition AA7

Condition AA8

Requirement to provide Carrier Pre-selection etc.

AA8.1 The Dominant Provider shall provide Carrier Pre-selection as soon as it is reasonably practicable on reasonable terms to any of its Subscribers upon request.

AA8.2 Pursuant to a request under paragraph AA8.1 above, the Dominant Provider shall provide Carrier Pre-selection Interconnection Facilities as soon as it is reasonably practicable on reasonable terms. The Dominant Provider shall also provide such Carrier Pre-selection Facilities as Ofcom may from time to time direct.

AA8.3 Unless Ofcom directs otherwise from time to time, the Dominant Provider shall ensure that charges are based on the forward looking long-run incremental cost of providing Carrier Pre-selection Interconnection Facilities, except where the Dominant Provider and the Pre-selected Provider have agreed another basis for the charges.

AA8.4 The Dominant Provider should ensure that prices and other charges imposed upon Subscribers do not constitute a disincentive to the use of Carrier Pre-selection.

AA8.5 The Dominant Provider shall comply with any direction that Ofcom may make from time to time under this Condition AA8.

AA8.6 This Condition is without prejudice to the generality of the provisions in Conditions AA1(a) to AA7 above.

Condition AA9 - Requirement to provide Indirect Access ('Carrier Selection') etc.

AA9.1 The Dominant Provider shall provide Indirect Access as soon as it is reasonably practicable on reasonable terms to any of its Subscribers upon request.

AA9.2 Pursuant to a request under paragraph AA9.1 above, the Dominant Provider shall provide Carrier Selection Interconnection Facilities as soon as it is reasonably practicable on reasonable terms to a provider of a Public Telephone Network. The Dominant Provider shall also provide such Carrier Selection Interconnection Facilities as Ofcom may from time to time direct.

AA9.3 Unless Ofcom directs otherwise from time to time, the Dominant Provider shall ensure that charges are based on the forward looking long-run incremental cost of providing Carrier Selection Interconnection Facilities, except where the Dominant Provider and the selected Provider have agreed another basis for the charges.

AA9.4 The Dominant Provider should ensure that prices and other charges imposed upon Subscribers do not constitute a disincentive to the use of Indirect Access.

AA9.5 The Dominant Provider shall comply with any direction that Ofcom may make from time to time under this Condition AA9.

AA9.6 This Condition AA9 is without prejudice to the generality of the provisions in Conditions AA1(a) to AA7 above.

Condition AA10 - Requirement to provide Wholesale Line Rental etc.

AA10.1 The Dominant Provider shall provide as soon as is reasonably practicable, or as directed by Ofcom, on reasonable terms to every Third Party who makes a reasonable request in relation to:

- (a) wholesale analogue exchange line services;
- (b) wholesale ISDN2 exchange line services; and
- (c) wholesale ISDN30 exchange line services.

AA10.2 Unless Ofcom directs otherwise from time to time, the Dominant Provider shall ensure that charges of providing WLR services in paragraph AA10.1 are based on the forward looking long-run incremental cost, except where the Dominant Provider and Third Party have agreed another basis for the charges.

AA10.3 The Dominant Provider shall comply with any direction that Ofcom may make from time to time under this Condition AA10.

AA10.4 This Condition AA10 is without prejudice to the generality of the provisions in Conditions AA1(a) to AA7 above.

Condition AA11 - Requirement to provide NTS Call Origination

AA11.1 The Dominant Provider shall provide NTS Call Origination as soon as it is reasonably practicable to every Third Party who reasonably requests it in writing.

AA11.2 Without prejudice to paragraphs AA11.3 and AA11.4 below and where a request is covered by paragraph AA11.1 above, the Dominant Provider shall provide NTS Call Origination on fair and reasonable terms, conditions and charges and on such terms, conditions and charges as Ofcom may from time to time direct.

AA11.3 The Dominant Provider shall pass the Net Retail Call Revenue to the Third Party that is purchasing the NTS Call Origination, less the charges referred to in Condition AA11.4 below.

AA11.4 The Dominant Provider shall make no charges for providing NTS Call Origination covered by paragraph AA11.1 except for:

- (a) a charge for the Call Origination Service used to originate the NTS Call;
- (b) a charge for the NTS Retail Uplift; and
- (c) a charge for bad debt relating to the retailing by the Dominant Provider of Premium Rate Services calls.

AA11.5 For the charge referred to in Condition AA11.4 (c) above, the Dominant Provider shall charge the Third Party no more than 3.03 per cent of the Net Retail Call Revenue for that Premium Rate Service call.

AA11.6 The Dominant Provider shall comply with any direction Ofcom may make from time to time under this Condition AA11.

AA11.7 This Condition AA11 is without prejudice to the generality of the provisions in Conditions AA1(a) to AA7 above.

SCHEDULE 2

The SMP services conditions proposed to be imposed on KCOM under sections 45, 87, 88 and 90 of the Communications Act 2003 as a result of the analysis of the markets set out in paragraph 8(b) of the Notification in each of which it is proposed KCOM has significant market power (“SMP conditions”)

Part 1: Application, definitions and interpretation relating to the SMP conditions in Part 2

1. The SMP conditions in Part 2 of this Schedule 1 shall, except insofar as it is otherwise stated therein, apply to each and all of the markets set out in paragraph 8(b) of the Notification.

2. In this Schedule 1:

(a) “**Act**” means the Communications Act 2003 (c. 21);

(b) “**Access Charge Change Notice**” has the meaning given to it in Condition AB5(a).2;

(c) “**Access Contract**” means:

(i) a contract for the provision by the Dominant Provider to another person of Network Access to the Dominant Provider’s Electronic Communications Network;

(ii) a contract under which Associated Facilities in relation to the Dominant Provider’s Public Electronic Communications Network are made available by the Dominant Provider to another person;

(d) “**Carrier Pre-selection**” means a facility which allows a Subscriber to whom a Publicly Available Telephone Service is provided by means of a Public Telephone Network to select which Pre-selected Provider of such Services provided wholly or partly by means of that Network is the Pre-selected Provider he wishes to use to carry his calls by designating in advance the selection that is to apply on every occasion when there has been no selection of Provider by use of a Telephone Number;

(e) “**Carrier Pre-selection Facilities**” means those facilities which enable the Pre-selected Provider to provide Carrier Pre-selection to Subscribers to whom a Publicly Available Telephone Service is provided by means of a Public Telephone Network, including (without limitation to the generality of the foregoing):

- (i) Carrier Pre-selection Per Customer Line Set-up Facilities;
- (ii) Carrier Pre-selection Per Provider Set-up Facilities;
- (iii) Carrier Pre-selection Per Provider On-going Facilities; and
- (iv) Carrier Pre-selection System Set-up Facilities;

(f) “**Carrier Pre-selection Interconnection Facilities**” means those facilities for Interconnection which enable the Pre-selected Provider to provide Carrier Pre-selection to the Subscribers of the Dominant Provider; including (without limitation to the generality of the foregoing):

- (i) Carrier Pre-selection Per Customer Line Set-up Facilities;
 - (ii) Carrier Pre-selection Per Provider Set-up Facilities,
 - (iii) Carrier Pre-selection Per Provider On-going Facilities
- but excluding Carrier Pre-selection System Set-up Facilities;

(g) “**Carrier Pre-selection Per Customer Line Set-up Costs**” means the costs incurred by the Dominant Provider in providing Carrier Pre-selection Per Customer Line Set-up Facilities;

(h) “**Carrier Pre-selection Per Customer Line Set-up Facilities**” means those Carrier Pre-selection Facilities required from the Dominant Provider by a Pre-selected Provider in order for the Preselected Provider to be able to set up Carrier Pre-selection on the Exchange Line of a Subscriber to whom the Dominant Provider provides a Publicly Available Telephone Service by means of a Public Telephone Network;

(i) “**Carrier Pre-selection Per Provider On-going Costs**” means the costs incurred by the Dominant Provider in providing Carrier Pre-selection Per Provider On-going Facilities;

(j) “**Carrier Pre-selection Per Provider On-going Facilities**” means those Carrier Pre-selection Facilities required from the Dominant Provider by any individual Pre-selected Provider which enable the Pre-selected Provider to continue on an on-going basis to offer Carrier Pre-selection to Subscribers to whom the Dominant Provider provides Publicly Available Telephone Services by means of a Public Telephone Network, including (without limitation to the generality of the foregoing) activities such as product management;

(k) “**Carrier Pre-selection Per Provider Set-up Costs**” means the costs incurred by the Dominant Provider in providing Carrier Preselection Per Provider Set-up Facilities;

(l) “**Carrier Pre-selection Per Provider Set-up Facilities**” means those Carrier Pre-selection Facilities required from the Dominant Provider by any individual Pre-selected Provider in order for the Pre-selected Provider to be able to offer Carrier Pre-selection to Subscribers to whom the Dominant Provider provides Publicly Available Telephone Services by means of a Public Telephone Network, including (without limitation to the generality of the foregoing) activities such as data management amendments and the setting up of arrangements for the electronic transfer of customer orders;

(m) “**Carrier Pre-selection System Set-up Costs**” means the costs incurred by the Dominant Provider in developing and implementing Carrier Pre-selection System Set-up Facilities, and, for the purposes of cost recovery only, the costs to the Dominant Provider for the provision of Carrier Pre-selection by means of Autodiallers in the period April 2000 to December 2001 (regardless of when the costs were incurred) until such time as those costs have been fully recovered by the Dominant Provider;

(n) “**Carrier Pre-selection System Set-up Facilities**” means those Carrier Pre-selection Facilities required by the Dominant Provider in order for the Dominant Provider to be able to provide Carrier Pre-selection Facilities, such as the software and any alterations needed on the Dominant Provider’s switches and the modifications required for the Dominant Provider’s support systems;

(o) “**Carrier Selection Interconnection Facilities**” means those facilities for Interconnection which enable a provider of a Public Telephone Network to provide Indirect Access to the Subscribers of the Dominant Provider;

(p) “**Directory**” means a printed document containing Directory Information on Relevant Subscribers of Publicly Available Telephone Services in the United Kingdom which is made available to members of the public;

(q) “**Directory Information**” means, in the case of a Directory, the name and address of the Relevant Subscriber and the Telephone Number assigned to the Relevant Subscriber for his use of Publicly Available Telephone Services and, in the case of a Directory Enquiry Facility, shall be either such a Telephone Number of the Relevant Subscriber or information that such a Telephone Number of the Relevant Subscriber may not be supplied;

(r) “**Directory Enquiry Facility**” means Directory Information provided by means of a Public Telephone Network;

(s) “**Dominant Provider**” 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;

(t) “**Exchange Line**” means Apparatus comprised in the Dominant Provider’s Electronic Communications Network and installed for the purpose of connecting a telephone exchange run by the Dominant Provider to a Network Termination Point comprised in Network Termination and Testing Apparatus installed by the Dominant Provider for the purpose of providing Electronic Communications Services at the premises at which the Network Termination and Testing Apparatus is located;

(u) “**Indirect Access**” means a facility which allows a Subscriber to whom a Publicly Available Telephone Service is provided by means of a Public Telephone Network to select which such Service provided wholly or partly by means of that Network is the service he wishes to use by the use of a Telephone Number on each separate occasion on which a selection is made;

(v) “**Local Exchange**” means a telephone exchange to which Customers are connected, usually via a remote or locally sited concentrator unit, which telephone exchange supports the provision of either analogue or digital Exchange Lines;

(w) “**Network Component**” means, to the extent they are used in the Services Market, the network components specified in any direction given by Ofcom from time to time for the purpose of these SMP conditions.

(x) “**Network Termination and Testing Apparatus**” means an item of Apparatus comprised in an Electronic Communications Network installed in a fixed position on Served Premises which enables:

- (i) Approved Apparatus to be readily connected to, and disconnected from, the Network;
- (ii) the conveyance of Signals between such Approved Apparatus and the Network;
- (iii) the due functioning of the Network to be tested, but the only other functions of which, if any, are:
 - (A) to supply energy between such Approved Apparatus and the Network;
 - (B) to protect the safety or security of the operation of the Network; or
 - (C) to enable other operations exclusively related to the running of the Network to be performed or the due functioning of any system to which the Network is or is to be connected to be tested (separately or together with the Network);

(y) “**Network Termination Point**” means the physical point at which a Relevant Subscriber is provided with access to a Public Electronic Communications Network and, where it concerns Electronic Communications Networks involving switching or routing, that physical point is identified by means of a specific network address, which may be linked to the Telephone Number or name of a Relevant Subscriber. Where a Network Termination Point is provided at a fixed position on Served Premises, it shall be within an item of Network Termination and Testing Apparatus;

(z) “**Pre-selected Provider**” means a provider of a Public Telephone Network who has notified the Dominant Provider that it is able and willing to provide Carrier Pre-selection to Subscribers to whom the Dominant Provider provides Publicly Available Telephone Services;

(aa) “**Public Pay Telephone**” means a telephone available to the general public, for the use of which the means of payment may include coins and/or credit/debit cards and/or pre-payment cards, including cards for use with dialling codes;

(bb) “**Public Telephone Network**” means an Electronic Communications Network which is used to provide Publicly Available Telephone Services; it supports the transfer between Network Termination Points of speech communications, and also other forms of communication, such as facsimile and data;

(cc) “**Publicly Available Telephone Services**” means a service available to the public for originating and receiving national and international calls and access to Emergency Organisations through a number or numbers in a national or international telephone numbering plan, and in addition may, where relevant, include one or more of the following services: the provision of operator assistance services, Directory Enquiry Facilities, Directories, provision of Public Pay Telephones, provision of service under special terms, provision of specific facilities for Endusers with disabilities or with special social needs and/or the provision of non-geographic services;

(dd) “**Reference Offer**” means the terms and conditions on which the Dominant Provider is willing to enter into an Access Contract;

(ee) “**Relevant Calls**” means all calls which originate on the Dominant Provider’s Public Electronic Communications Network and which are of a type which are available for selection in accordance with the Carrier Pre-selection Functional Specification by a Subscriber to whom a Publicly Available Telephone Service is provided by means of a Public Telephone Network;

(ff) “**Relevant Subscriber**” means any person who is party to a contract with a provider of Public Electronic Communications Services for the supply of such Services;

(gg) “**Served Premises**” means a single set of premises in single occupation where Apparatus has been installed for the purpose of the provision of Electronic Communications Services by means of an Electronic Communications Network at those premises;

(hh) “**Services Market**” means each of the markets sets out in paragraph 8(b) of the Notification;

(ii) “**Subscriber**” means any person who is party to a contract with the provider of Publicly Available Telephone Services for the supply of such Services in the United Kingdom;

(jj) “**Tandem Exchange**” means a telephone exchange whose primary function is not to support the provision of Exchange Lines but to switch traffic between other telephone exchanges in a Public Electronic Communications Network;

(kk) “**Third Party**” means either:

- (i) a person providing a Public Electronic Communications Network; or
- (ii) a person providing a Public Electronic Communications Service;

(ll) “**Transfer Charge**” means the charge or price that is applied, or deemed to be applied, by the Dominant Provider to itself for the use or provision of an activity or group of activities. For the avoidance of doubt, such activities or group of activities include, amongst other things, products and services provided from, to or within the Services Market and the use of Network Components in that Services Market; and

(mm) “**Usage Factor**” means the average usage by any Communications Provider (including the Dominant Provider itself) of each Network Component in using or providing a particular product or service or carrying out a particular activity.

3. For the purpose of interpreting the SMP conditions in Part 2:

(a) except in so far as the context otherwise requires, words or expressions shall have the meaning assigned to them in paragraph 2 of this Part above and otherwise any word or expression shall have the same meaning as it has in the Act;

(b) the Interpretation Act 1978 (c. 30) shall apply as if each of the SMP conditions in Part 2 were an Act of Parliament; and

(c) headings and titles shall be disregarded.

Part 2: The SMP conditions

Condition AB1 - Requirement to provide Network Access on reasonable request

AB1.1 Where a Third Party reasonably requests in writing Network Access, the Dominant Provider shall provide that Network Access. The Dominant Provider shall also provide such Network Access as Ofcom may from time to time direct.

AB1.2 The provision of Network Access in accordance with paragraph AB1.1 shall occur as soon as it is reasonably practicable and shall be provided on fair and reasonable terms, conditions and charges and on such terms, conditions and charges as Ofcom may from time to time direct.

AB1.3 The Dominant Provider shall comply with any direction Ofcom may make from time to time under this Condition AB1.

Condition AB2 - Requirement not to unduly discriminate

AB2.1 The Dominant Provider shall not unduly discriminate against particular persons or against a particular description of persons in relation to matters connected with Network Access.

Condition AB3 - Basis of charges

AB3.1 Unless Ofcom directs otherwise from time to time, the Dominant Provider shall secure, and shall be able to demonstrate to the satisfaction of Ofcom, that each and every charge offered, payable or proposed for Network Access covered by Condition AB1 is reasonably derived from the costs of provision based on a forward looking long-run incremental cost approach and allowing an appropriate mark up for the recovery of common costs including an appropriate return on capital employed.

AB3.2 The Dominant Provider shall comply with any direction Ofcom may from time to time direct under this Condition AB3.

Condition AB4 - Requirement to publish a Reference Offer

AB4.1 Except in so far as Ofcom may otherwise consent in writing, the Dominant Provider shall publish a Reference Offer and act in the manner set out below.

AB4.2 Subject to paragraph AB4.8 below, the Dominant Provider shall ensure that a Reference Offer in relation to the provision of Network Access includes at least the following:

- (a) a description of the Network Access to be provided, including technical characteristics (which shall include information on network configuration where necessary to make effective use of the Network Access);
- (b) the locations of the points of Network Access;
- (c) the technical standards for Network Access (including any usage restrictions and other security issues);
- (d) the conditions for access to ancillary, supplementary and advanced services (including operational support systems, information systems or databases for pre-ordering, provisioning, ordering, maintenance and repair requests and billing);
- (e) any ordering and provisioning procedures;
- (f) relevant charges, terms of payment and billing procedures;
- (g) details of interoperability tests;
- (h) details of traffic and network management;
- (i) details of maintenance and quality as follows:
 - (i) specific time scales for the acceptance or refusal of a request for supply and for completion, testing and hand-over or delivery of services and facilities, for provision of support services (such as fault handling and repair);
 - (ii) service level commitments, namely the quality standards that each party must meet when performing its contractual obligations;

- (iii) the amount of compensation payable by one party to another for failure to perform contractual commitments;
 - (iv) a definition and limitation of liability and indemnity; and
 - (v) procedures in the event of alterations being proposed to the service offerings, for example, launch of new services, changes to existing services or change to prices;
- (j) details of measures to ensure compliance with requirements for network integrity;
 - (k) details of any relevant intellectual property rights;
 - (l) a dispute resolution procedure to be used between the parties;
 - (m) details of duration and renegotiation of agreements;
 - (n) provisions regarding confidentiality of non-public parts of the agreements;
 - (o) rules of allocation between the parties when supply is limited (for example, for the purpose of co-location or location of masts); and
 - (p) the standard terms and conditions for the provision of Network Access; and
 - (q), the amount applied to:
 - (i) each Network Component used in providing Network Access with the relevant Usage Factors; and
 - (ii) the Transfer Charge for each Network Component or combination of Network Components described above, reconciled in each case to the charge payable by a Communications Provider other than the Dominant Provider.

AB4.3 To the extent that the Dominant Provider provides to itself Network Access that:

- (a) is the same, similar or equivalent to that provided to any other Third Party; or
- (b) may be used for a purpose that is the same, similar or equivalent to that provided to any other Third Party, in a manner that differs from that detailed in a Reference Offer in relation to Network Access provided to any other Third Party, the Dominant Provider shall ensure that it publishes a Reference Offer in relation to the Network Access that it provides to itself which includes, where relevant, at least those matters detailed in paragraphs AB4.2(a) to (q) above.

AB4.4 The Dominant Provider shall update and publish the Reference Offer in relation to any amendments or in relation to any further Network Access provided after the date this Condition AB4 enters into force.

AB4.5 Publication referred to above shall be effected by:

- (a) placing a copy of the Reference Offer on any relevant website operated or controlled by the Dominant Provider; and
- (b) sending a copy of the Reference Offer to Ofcom.

AB4.6 The Dominant Provider shall send a copy of the current version of the Reference Offer to any person at that person's written request (or such parts which have been requested).

AB4.7 The Dominant Provider shall make such modifications to the Reference Offer as Ofcom may direct from time to time.

AB4.8 The Dominant Provider shall provide Network Access at the charges, terms and conditions in the relevant Reference Offer and shall not depart therefrom either directly or indirectly.

AB4.9 The Dominant Provider shall comply with any direction Ofcom may make from time to time under this Condition AB4.

Condition AB5(a) - Requirement to notify charges

AB5(a).1 Except in so far as Ofcom may otherwise consent in writing, the Dominant Provider shall publish charges and act in the manner set out below.

AB5(a).2 The Dominant Provider shall send to Ofcom and to every Third Party with which it has entered into an Access Contract covered by Condition AB1 a written notice of any amendment to the charges on which it provides Network Access or in relation to any charges for new Network Access (an "Access Charge Change Notice"):

(a) in the case of each of the markets set out in paragraph 8(b) of this Notification (except for the market set out in subparagraphs 8(b)(iii)) and interconnection circuits, not less than 90 days before any such amendment comes into effect if that amendment is due to come into effect before [date 6 months after the date of the Notification]

(b) in any other case not less than 28 days before any such amendment comes into effect."

AB5(a).3 The Dominant Provider shall ensure that an Access Charge Change Notice includes:

(a) a description of the Network Access in question;

(b) a reference to the location in the Dominant Provider's current Reference Offer of the terms and conditions associated with the provision of that Network Access; and

(c) the date on which or the period for which any amendments to charges will take effect (the "effective date").

(d) in relation to those products and services subject to Condition AB3, the current and proposed new charge and the relevant Usage Factors applied to each Network Component comprised in that Network Access, reconciled in each case with the current or proposed new charge;

(e) the information specified in sub-paragraph (d) above with respect to that Network Access to which that paragraph applies; and

(f) in relation to those products and services subject to Condition AB3, the relevant network tariff gradient.

AB5(a).4 The Dominant Provider shall not apply any new charge identified in an Access Charge Change Notice before the effective date.

AB5(a).5 In relation to those products and services subject to Condition AB3, to the extent that the Dominant Provider provides to itself Network Access that:

(a) is the same, similar or equivalent to that provided to any other Third Party; or

(b) may be used for a purpose that is the same, similar or equivalent to that provided to any other Third Party, in a manner that differs from that detailed in an Access Charge Change Notice in relation to Network Access provided to any other Third Party, the Dominant Provider shall ensure that it sends to Ofcom an Access Charge Change Notice in relation to the Network Access that it provides to itself which includes, where relevant, at least those matters detailed in paragraphs AB5(a).3(a) to (f).

Condition AB5(b) - Requirement to notify technical information

AB5(b).1 Save where Ofcom consents otherwise, where the Dominant Provider:

(a) proposes to provide Network Access covered by Condition AB1, the terms and conditions for which comprise new:

(i) technical characteristics (including information on network configuration where necessary to make effective use of the Network Access);

(ii) locations of the points of Network Access; or

(iii) technical standards (including any usage restrictions and other security issues),

or

(b) proposes to amend an existing Access Contract covered by Condition AB1 by modifying the terms and conditions listed in paragraph AB5(b).1(a)(i) to (iii) above on which the Network Access is provided, the Dominant Provider shall publish a written notice (the "Notice") of the new or amended terms and conditions not less than 90 days before either the Dominant Provider enters into an Access Contract to provide the new Network Access or the amended terms and conditions of the existing Access Contract come into effect.

AB5(b).2 The Dominant Provider shall ensure that the Notice includes:

(a) a description of the Network Access in question;

(b) a reference to the location in the Dominant Provider's Reference Offer of the relevant terms and conditions;

(c) the date on which or the period for which the Dominant Provider may enter into an Access Contract to provide the new Network Access or any amendments to the relevant terms and conditions will take effect (the "effective date").

AB5(b).3 The Dominant Provider shall not enter into an Access Contract containing the terms and conditions identified in the Notice or apply any new relevant terms and conditions identified in the Notice before the effective date.

AB5(b).4 Publication referred to in paragraph AB5(b).1 shall be effected by:

- (a) placing a copy of the Notice on any relevant website operated or controlled by the Dominant Provider;
- (b) sending a copy of the Notice to Ofcom; and
- (c) sending a copy of the Notice to any person at that person's written request, and where the Notice identifies a modification to existing relevant terms and conditions, to every Third Party with which the Dominant Provider has entered into an Access Contract covered by Condition AB1. The provision of such a copy of Notice may be subject to a reasonable charge.

Condition AB6 - Requirement to provide Carrier Pre-selection etc.

AB6.1 The Dominant Provider shall provide Carrier Pre-selection as soon as it is reasonably practicable on reasonable terms to any of its Subscribers upon request.

AB6.2 Pursuant to a request under paragraph AB6.1 above, the Dominant Provider shall provide Carrier Pre-selection Interconnection Facilities as soon as it is reasonably practicable on reasonable terms. The Dominant Provider shall also provide such Carrier Pre-selection Facilities as Ofcom may from time to time direct.

AB6.3 The Dominant Provider shall ensure that prices and other charges imposed upon Subscribers do not constitute a disincentive to the use of Carrier Pre-selection.

AB6.4 The Dominant Provider shall ensure that charges for the provision of the respective facilities mentioned below shall be made by the Dominant Provider as follows:

(a) subject always to the requirement of reasonableness, charges shall be based on the forward looking long-run incremental costs of providing Carrier Pre-selection Facilities unless:

- (i) the Dominant Provider and the Pre-selected Provider have agreed another basis for the charges; or
- (ii) any other basis for such charges be used as directed by Ofcom from time to time;

(b) the Dominant Provider shall categorise its costs as falling within one of the following categories:

- (i) Carrier Pre-selection Per Provider Set-up Costs;
- (ii) Carrier Pre-selection Per Provider On-going Costs;
- (iii) Carrier Pre-selection Per Customer Line Set-up Costs; or
- (iv) Carrier Pre-selection System Set-up Costs,

and, where the Dominant Provider either fails to categorise its costs in such a manner or Ofcom considers that any individual item of cost cannot reasonably be categorised in the manner in which the Dominant Provider has made the categorisation, the cost in question

shall fall within one of the categories in sub-paragraphs (i) to (iv) above or, as the case may be, in any new category of cost, as Ofcom may direct;

(c) the Dominant Provider shall recover the costs for any new category of cost that Ofcom has directed under sub-paragraph (b) above in the manner in which Ofcom may direct;

(d) the Dominant Provider shall recover the costs incurred in providing Carrier Pre-selection Per Provider Set-up Facilities, Carrier Pre-selection Per Provider On-going Facilities and Carrier Pre-selection Per Customer Line Set-up Facilities by means of direct charges to Pre-selected Providers;

(e) the Dominant Provider shall recover the costs incurred in providing Carrier Pre-selection System Set-up Facilities by means of a separate surcharge on all Relevant Calls; and

(f) the Dominant Provider shall modify any of its charges for the provision of Carrier Pre-selection Facilities in the manner in which Ofcom may direct.

AB6.5 The Dominant Provider shall comply with any direction that Ofcom may make from time to time under this Condition AB6.

AB6.6 This Condition AB6 is without prejudice to the generality of the provisions in Conditions AB1 to AB5 above.

Condition AB7 - Requirement to provide Indirect Access ('Carrier Selection') etc.

AB7.1 The Dominant Provider shall provide Indirect Access as soon as it is reasonably practicable on reasonable terms to any of its Subscribers upon request.

AB7.2 Pursuant to a request under paragraph AB7.1 above, the Dominant Provider shall provide Carrier Selection Interconnection Facilities as soon as it is reasonably practicable on reasonable terms to a provider of a Public Telephone Network. The Dominant Provider shall also provide such Carrier Selection Interconnection Facilities as Ofcom may from time to time direct.

AB7.3 Unless Ofcom directs otherwise from time to time, the Dominant Provider shall ensure that charges are based on the forward looking long-run incremental cost of providing Carrier Selection Interconnection Facilities, except where the Dominant Provider and selected Provider have agreed another basis for the charges.

AB7.4 The Dominant Provider shall ensure that prices and other charges imposed upon Subscribers do not constitute a disincentive to the use of Indirect Access.

AB7.5 The Dominant Provider shall comply with any direction that Ofcom may make from time to time under this Condition AB7.

AB7.6 This Condition AB7 is without prejudice to the generality of the provisions in Conditions AB1 to AB5 above.

SCHEDULE 3

The SMP services conditions proposed to be imposed on BT, KCOM and all persons listed at Annex A under sections 45, 87, 88 and 90 of the Communications Act 2003 as a result of the analysis of the market set out in paragraph 8(c) of the Notification in which BT, KCOM and all persons listed in Annex A have significant market power (“SMP conditions”)

Part 1: Application, definitions and interpretation relating to the SMP conditions in Part 2

1. The SMP conditions in Part 2 of this Schedule 3 shall only apply to the following dominant providers;

- (a) SMP Conditions BA1, BA2, BA3, BA5 and BA6 to BT only;
- (b) SMP Conditions BB1, BB2, BB3, BB4 and BB5 to KCOM only;
- (c) SMP Conditions BC1 to those persons listed at Annex A only.

2. The SMP conditions in Part 2 of this Schedule 3 shall apply to the market set out at paragraph 8(c) of the Notification.

3. In this Schedule 3:

(a) “**Act**” means the Communications Act 2003 (c. 21);

(b) “**Access Charge Change Notice**” has the meaning given to it in Condition BA6.2 and BB5.2 for BT and KCOM respectively;

(c) “**Dominant Provider**” means, in relation to

- (i) SMP Conditions BA1, BA2, BA3, BA5 and BA6; British Telecommunications plc, 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;
- (ii) SMP Conditions BB1, BB2, BB3, BB4 and BB5; 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;
- (iii) SMP Conditions BC1 any person listed at Annex A to this Schedule

(e) “**Exchange Line**” means Apparatus comprised in the Dominant Provider’s Electronic Communications Network and installed for the purpose of connecting a telephone exchange run by the Dominant Provider to a Network Termination Point comprised in Network Termination and Testing Apparatus installed by the Dominant Provider for the purpose of providing Electronic Communications Services at the premises at which the Network Termination and Testing Apparatus is located;

(d) “**Fixed Call Termination Wholesale Service**” means an Electronic Communications Service provided by the Dominant Provider from (and over) the local exchange to (but not including the conveyance of Signals over) an Exchange Line.

(e) “**Network Component**” means, to the extent they are used in the network components specified in any direction given by the Director from time to time for the purpose of these conditions;

(f) “**Network Termination Point**” means the physical point at which a Subscriber is provided with access to a Public Electronic Communications Network and, where it concerns Electronic Communications Networks involving switching or routing, that physical point is identified by means of a specific network address, which may be linked to the Telephone Number or name of a Subscriber. Where a Network Termination Point is provided at a fixed position on Served Premises it shall be within an item of Network Termination and Testing Apparatus;

(g) “**Network Termination and Testing Apparatus**” means an item of apparatus comprised in an Electronic Communications Network installed in a fixed position on Served Premises which enables:

- (a) Approved Apparatus to be readily connected to, and disconnected from, the network;
- (b) the conveyance of Signals between such Approved Apparatus and the Network
- (c) the due functioning of the Network to be tested,

But the only other functions of which if any are:

- (i) to supply energy between such Approved Apparatus and the Network
- (ii) to protect the safety or security of the operation of the Network
- (iii) to enable other operations exclusively related to the running of the network to be performed or the due functioning of any system to which the network is or is to be connected to be tested (separately or together with the network);

(h) “**Reference Offer**” means the terms and conditions on which the Dominant Provider is willing to enter into an Access Contract;

(i) “**The 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 Kingston Communication (Hull) plc.

(j) “**Third Party**” means either:

- (i) a person providing a Public Electronic Communications Network; or
- (ii) a person providing a Public Electronic Communications Service;

(k) “**Transfer Charge**” means the charge or price that is applied, or deemed to be applied, by the Dominant Provider to itself for the use or provision of an activity or group of activities. For the avoidance of doubt, such activities or group of activities include, amongst other things, products and services provided from, to or within the Services Market and the use of Network Components in that Services Market;

(l) “**Usage Factor**” means the average usage by any Communications Provider (including the Dominant Provider itself) of each Network Component in using or providing a particular product or service or carrying out a particular activity;

(m) “**Wholesale Service**” means any services related to Network Access used by or offered to any Communications Provider (including the Dominant Provider)

4. For the purpose of interpreting the SMP conditions in Part 2:

- (a) except in so far as the context otherwise requires, words or

expressions shall have the meaning assigned to them in paragraph 2 of this Part above and otherwise any word or expression shall have the same meaning as it has in the Act;

(b) the Interpretation Act 1978 (c. 30) shall apply as if each of the SMP conditions in Part 2 were an Act of Parliament; and

(c) headings and titles shall be disregarded.

Part 2: The SMP conditions

SMP Conditions relating to BT

Condition BA1 - Requirement to provide Network Access on reasonable request

BA1.1 Where a Third Party reasonably requests in writing Network Access, the Dominant Provider shall provide that Network Access. The Dominant Provider shall also provide such Network Access as Ofcom may from time to time direct.

BA1.2 The provision of Network Access in accordance with paragraph BA1.1 above shall occur as soon as it is reasonably practicable and shall be provided on fair and reasonable terms, conditions and charges and on such terms, conditions and charges as Ofcom may from time to time direct.

BA1.3 The Dominant Provider shall comply with any direction Ofcom may make from time to time under this Condition BA1.

Condition BA2 - Requirement not to unduly discriminate

BA2.1 The Dominant Provider shall not unduly discriminate against particular persons or against a particular description of persons in relation to matters connected with Network Access.

Condition BA3 - Basis of charges

BA3.1 Unless Ofcom directs otherwise from time to time, the Dominant Provider shall secure, and shall be able to demonstrate to the satisfaction of Ofcom, that each and every charge offered, payable or proposed for Network Access covered by Condition BA1 is reasonably derived from the costs of provision based on a forward looking long-run incremental cost approach and allowing an appropriate mark up for the recovery of common costs including an appropriate return on capital employed.

BA3.2 For the avoidance of any doubt, where the charge offered, payable or proposed for Network Access covered by Condition BA1 is for a service which is subject to a charge control under Condition BA4, the Dominant Provider shall secure, and shall be able to demonstrate to the satisfaction of Ofcom, that such a charge satisfies the requirements of paragraph BA3.1 above.

BA3.3 The Dominant Provider shall comply with any direction Ofcom may from time to time direct under this Condition BA3.

Condition BA5 - Requirement to publish a Reference Offer

BA5.1 Except in so far as Ofcom may otherwise consent in writing, the Dominant Provider shall publish a Reference Offer and act in the manner set out below.

BA5.2 Subject to paragraph BA5.8 below, the Dominant Provider shall ensure that a Reference Offer in relation to the provision of Network Access includes at least the following:

- (a) a description of the Network Access to be provided, including technical characteristics (which shall include information on network configuration where necessary to make effective use of the Network Access);
- (b) the locations of the points of Network Access;
- (c) the technical standards for Network Access (including any usage restrictions and other security issues);
- (d) the conditions for access to ancillary, supplementary and advanced services (including operational support systems, information systems or databases for pre-ordering, provisioning, ordering, maintenance and repair requests and billing);
- (e) any ordering and provisioning procedures;
- (f) relevant charges, terms of payment and billing procedures;
- (g) details of interoperability tests;
- (h) details of traffic and network management;
- (i) details of maintenance and quality as follows:
 - (i) specific time scales for the acceptance or refusal of a request for supply and for completion, testing and hand-over or delivery of services and facilities, for provision of support services (such as fault handling and repair);
 - (ii) service level commitments, namely the quality standards that each party must meet when performing its contractual obligations;
 - (iii) the amount of compensation payable by one party to another for failure to perform contractual commitments;
 - (iv) a definition and limitation of liability and indemnity; and
 - (v) procedures in the event of alterations being proposed to the service offerings, for example, launch of new services, changes to existing services or change to prices;
- (j) details of measures to ensure compliance with requirements for network integrity;
- (k) details of any relevant intellectual property rights;
- (l) a dispute resolution procedure to be used between the parties;
- (m) details of duration and renegotiation of agreements;

- (n) provisions regarding confidentiality of non-public parts of the agreements;
- (o) rules of allocation between the parties when supply is limited (for example, for the purpose of co-location or location of masts);
- (p) the standard terms and conditions for the provision of Network Access;
- (q) the amount applied to:
 - (i) each Network Component used in providing Network Access with the relevant Usage Factors; and
 - (ii) the Transfer Charge for each Network Component or combination of Network Components described above,reconciled in each case to the charge payable by a Communications Provider other than the Dominant Provider.

BA5.3 To the extent that the Dominant Provider provides to itself Network Access that:

- (a) is the same, similar or equivalent to that provided to any other Third Party; or
 - (b) may be used for a purpose that is the same, similar or equivalent to that provided to any other Third Party,
- in a manner that differs from that detailed in a Reference Offer in relation to Network Access provided to any other Third Party, the Dominant Provider shall ensure that it publishes a Reference Offer in relation to the Network Access that it provides to itself which includes, where relevant, at least those matters detailed in paragraphs BA5.2(a) to (q) above.

BA5.5 The Dominant Provider shall update and publish the Reference Offer in relation to any amendments or in relation to any further Network Access provided after the date this Condition BA5 enters into force.

BA5.6 Publication referred to above shall be effected by:

- (a) placing a copy of the Reference Offer on any relevant website operated or controlled by the Dominant Provider; and
- (b) sending a copy of the Reference Offer to Ofcom.

BA5.7 The Dominant Provider shall send a copy of the current version of the Reference Offer to any person at that person's written request (or such parts which have been requested).

BA5.8 The Dominant Provider shall make such modifications to the Reference Offer as Ofcom may direct from time to time.

BA5.9 The Dominant Provider shall provide Network Access at the charges, terms and conditions in the relevant Reference Offer and shall not depart therefrom either directly or indirectly.

BA5.10 The Dominant Provider shall comply with any direction Ofcom may make from time to time under this Condition AA5.

Condition BA6 - Requirement to notify charges

BA6.1 Except in so far as Ofcom may otherwise consent in writing, the Dominant Provider shall publish charges and act in the manner set out below.

BA6.2 The Dominant Provider shall send to Ofcom and to every Third Party with which it has entered into an Access Contract covered by Condition BA1 a written notice of any amendment to the charges on which it provides Network Access or in relation to any charges for new Network Access (an "Access Charge Change Notice");

(a) not less than 90 days before any such amendment comes into effect if that amendment is due to come into effect before [date 6 months after Notification]

(b) not less than 28 days before any such amendment comes into effect if that amendment is due to come into effect on or after [date 6 months after Notification]

BA6.3 The Dominant Provider shall ensure that an Access Charge Change Notice includes:

(a) a description of the Network Access in question;

(b) a reference to the location in the Dominant Provider's current Reference Offer of the terms and conditions associated with the provision of that Network Access;

(c) the date on which or the period for which any amendments to charges will take effect (the "effective date");

(d) the current and proposed new charge and the relevant Usage Factors applied to each Network Component comprised in that Network Access, reconciled in each case with the current or proposed new charge;

(e) the information specified in sub-paragraph (d) above with respect to that Network Access to which that paragraph applies; and

(f) the relevant network tariff gradient.

BA6.4 The Dominant Provider shall not apply any new charge identified in an Access Charge Change Notice before the effective date.

BA6.5 To the extent that the Dominant Provider provides to itself Network Access that:

(a) is the same, similar or equivalent to that provided to any other Third Party; or

(b) may be used for a purpose that is the same, similar or equivalent to that provided to any other Third Party,

in a manner that differs from that detailed in an Access Charge Change Notice in relation to Network Access provided to any other Third Party, the Dominant Provider shall ensure that it sends to Ofcom an Access Charge Change Notice in relation to the Network Access that it provides to itself which includes, where relevant, at least those matters detailed in paragraphs BA6.3(a) to (f).

SMP Conditions relating to KCOM

Condition BB1 - Requirement to provide Network Access on reasonable request

BB1.1 Where a Third Party reasonably requests in writing Network Access, the Dominant Provider shall provide that Network Access. The Dominant Provider shall also provide such Network Access as Ofcom may from time to time direct.

BB1.2 The provision of Network Access in accordance with paragraph BB1.1 above shall occur as soon as it is reasonably practicable and shall be provided on fair and reasonable terms, conditions and charges and on such terms, conditions and charges as Ofcom may from time to time direct.

BB1.3 The Dominant Provider shall comply with any direction Ofcom may make from time to time under this Condition BA1.

Condition BB2 - Requirement not to unduly discriminate in the Hull Area

BB2.1 The Dominant Provider shall not unduly discriminate against particular persons or against a particular description of persons in relation to matters connected with Network Access.

Condition BB3 - Basis of charges in the Hull Area

BB3.1 Unless Ofcom directs otherwise from time to time, the Dominant Provider shall secure, and shall be able to demonstrate to the satisfaction of Ofcom, that each and every charge offered, payable or proposed for Network Access covered by Condition BB1 is reasonably derived from the costs of provision based on a forward looking long-run incremental cost approach and allowing an appropriate mark up for the recovery of common costs including an appropriate return on capital employed.

BA3.2 The Dominant Provider shall comply with any direction Ofcom may from time to time direct under this Condition BA3.

Condition BB4 - Requirement to publish a Reference Offer for the Hull Area

BB4.1 Except in so far as Ofcom may otherwise consent in writing, the Dominant Provider shall publish a Reference Offer in relation to the provision of Network Access in the Hull Area and act in the manner set out below.

BB4.2 Subject to paragraph BB4.8 below, the Dominant Provider shall ensure that a Reference Offer in relation to the provision of Network Access includes at least the following:

- (a) a description of the Network Access to be provided, including technical characteristics (which shall include information on network configuration where necessary to make effective use of the Network Access);
- (b) the locations of the points of Network Access;
- (c) the technical standards for Network Access (including any usage restrictions and other security issues);

- (d) the conditions for access to ancillary, supplementary and advanced services (including operational support systems, information systems or databases for pre-ordering, provisioning, ordering, maintenance and repair requests and billing);
- (e) any ordering and provisioning procedures;
- (f) relevant charges, terms of payment and billing procedures;
- (g) details of interoperability tests;
- (h) details of traffic and network management;
- (i) details of maintenance and quality as follows:
 - (i) specific time scales for the acceptance or refusal of a request for supply and for completion, testing and hand-over or delivery of services and facilities, for provision of support services (such as fault handling and repair);
 - (ii) service level commitments, namely the quality standards that each party must meet when performing its contractual obligations;
 - (iii) the amount of compensation payable by one party to another for failure to perform contractual commitments;
 - (iv) a definition and limitation of liability and indemnity; and
 - (v) procedures in the event of alterations being proposed to the service offerings, for example, launch of new services, changes to existing services or change to prices;
- (j) details of measures to ensure compliance with requirements for network integrity;
- (k) details of any relevant intellectual property rights;
- (l) a dispute resolution procedure to be used between the parties;
- (m) details of duration and renegotiation of agreements;
- (n) provisions regarding confidentiality of non-public parts of the agreements;
- (o) rules of allocation between the parties when supply is limited (for example, for the purpose of co-location or location of masts);
- (p) the standard terms and conditions for the provision of Network Access;
- (q) the amount applied to:
 - (i) each Network Component used in providing Network Access with the relevant Usage Factors; and
 - (ii) the Transfer Charge for each Network Component or combination of Network Components described above,reconciled in each case to the charge payable by a Communications Provider other than the Dominant Provider.

BB4.3 To the extent that the Dominant Provider provides to itself Network Access that:

- (a) is the same, similar or equivalent to that provided to any other Third Party; or
 - (b) may be used for a purpose that is the same, similar or equivalent to that provided to any other Third Party,
- in a manner that differs from that detailed in a Reference Offer in relation to Network Access provided to any other Third Party, the Dominant Provider shall ensure that it publishes a Reference Offer in relation to the Network Access that it provides to itself which includes, where relevant, at least those matters detailed in paragraphs BB4.2(a) to (q) above.

BB4.5 The Dominant Provider shall update and publish the Reference Offer in relation to any amendments or in relation to any further Network Access provided after the date this Condition BB4 enters into force.

BB4.6 Publication referred to above shall be effected by:

- (a) placing a copy of the Reference Offer on any relevant website operated or controlled by the Dominant Provider; and
- (b) sending a copy of the Reference Offer to Ofcom.

BB4.7 The Dominant Provider shall send a copy of the current version of the Reference Offer to any person at that person's written request (or such parts which have been requested).

BB4.8 The Dominant Provider shall make such modifications to the Reference Offer as Ofcom may direct from time to time.

BB4.9 The Dominant Provider shall provide Network Access in the Hull Area at the charges, terms and conditions in the relevant Reference Offer and shall not depart therefrom either directly or indirectly.

BB4.10 The Dominant Provider shall comply with any direction Ofcom may make from time to time under this Condition AA5.

Condition BB5 - Requirement to notify charges in respect of Network Access provided in the Hull Area

BB5.1 Except in so far as Ofcom may otherwise consent in writing, the Dominant Provider shall publish charges and act in the manner set out below.

BB5.2 The Dominant Provider shall send to Ofcom and to every Third Party with which it has entered into an Access Contract covered by Condition BB1 a written notice of any amendment to the charges on which it provides Network Access or in relation to any charges for new Network Access (an "Access Charge Change Notice");

- (a) not less than 90 days before any such amendment comes into effect if that amendment is due to come into effect before [date 6 months after Notification]

(b) not less than 28 days before any such amendment comes into effect if that amendment is due to come into effect on or after [date 6 months after Notification]

BB5.3 The Dominant Provider shall ensure that an Access Charge Change Notice includes:

- (a) a description of the Network Access in question;
- (b) a reference to the location in the Dominant Provider's current Reference Offer of the terms and conditions associated with the provision of that Network Access;
- (c) the date on which or the period for which any amendments to charges will take effect (the "effective date");
- (d) the current and proposed new charge and the relevant Usage Factors applied to each Network Component comprised in that Network Access, reconciled in each case with the current or proposed new charge;
- (e) the information specified in sub-paragraph (d) above with respect to that Network Access to which that paragraph applies; and
- (f) the relevant network tariff gradient.

BB5.4 The Dominant Provider shall not apply any new charge identified in an Access Charge Change Notice before the effective date.

BB5.5 To the extent that the Dominant Provider provides to itself Network Access in the Hull Area that:

- (a) is the same, similar or equivalent to that provided to any other Third Party; or
 - (b) may be used for a purpose that is the same, similar or equivalent to that provided to any other Third Party,
- in a manner that differs from that detailed in an Access Charge Change Notice in relation to Network Access provided to any other Third Party, the Dominant Provider shall ensure that it sends to Ofcom an Access Charge Change Notice in relation to the Network Access that it provides to itself which includes, where relevant, at least those matters detailed in paragraphs BB5.3(a) to (f).

SMP Condition relating to Communication Providers listed at Annex A

Condition BC1 – Requirement to provide Network Access on reasonable request

BC1.1 Where a Third Party reasonably requests in writing Network Access, the Dominant Provider shall provide that Network Access. The Dominant Provider shall also provide Network Access as Ofcom may from time to time direct.

BC1.2 The provision of Network Access in accordance with paragraph BC1.1 shall occur as soon as reasonably practicable and shall be provided on fair and reasonable terms, conditions and charges and on such terms, conditions and charges as Ofcom may from time to time direct.

BC1.3 The Dominant Provider shall comply with any direction Ofcom may make from time to time under this Condition.

Annex A to Schedule 3 (List of Dominant Providers for the purpose of Schedule 3)

1. 118 Limited whose registered company number is 03951948, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.
2. 24 Seven Communications Limited whose registered company number is 04468566, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.
3. 4D Interactive Ltd whose registered company number is 02676756, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.
4. Aggregated Telecom Ltd whose registered company number is 03882936, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.
5. Atlas Interactive Group Ltd whose registered company number is 03249486, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.
6. BSKYB whose registered company number is 05349163, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.
7. C3 Europe Ltd whose registered company number is 04188942, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.
8. Cable & Wireless UK whose registered company number is 01541957, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.
9. Callagenix Ltd whose registered company number is 03963819, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.
10. Collouquium Limited whose registered company number is SC142248, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.
11. COLT Telecommunications whose registered company number is 02452736, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding

company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

12. Connect Telecom Ltd whose registered company number is 06298460, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

13. Digitech Solutions whose registered company number is 04546657, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

14. Edge Telecom Ltd whose registered company number is 03101247, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

15. Eircom (UK) Limited whose registered company number is 03478971, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

16. Elephant Talk Communications PRS UK Limited whose registered company number is 05890632, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

17. ETC Telecom Ltd whose registered company number is 06295193, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

18. Evoxus Limited whose registered company number is 03798888, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

19. Flexitel Limited whose registered company number is 02772380, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

20. Gamma Telecom Ltd whose registered company number is 04340834, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

21. Global Crossing (UK) Telecommunications Limited whose registered company number is 02495998, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

22. Global One Communications Holding Limited whose registered company number is 02082327, and any subsidiary or holding company of it, or any subsidiary of it, or any

subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

23. I Communicate Services whose registered company number is 06212287, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

24. IDT Global Ltd whose registered company number is 03322447, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

25. Inclarity plc whose registered company number is 02673204, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

26. "Intouch Communication" Services Limited whose registered company number is 03606467, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

27. IV Response Ltd whose registered company number is 04318927, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

28. KDDI Europe Limited whose registered company number is 02407242, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

29. Kingston Communications Limited whose registered company number is 03317871, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

30. Magrathea Telecommunications Limited whose registered company number is 04260485, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

31. Mars Telecom Ltd whose registered company number is 04713626, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

32. Medius Networks Limited whose registered company number is 04157875, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

33. Net Solutions Europe Limited whose registered company number is 03203624, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding

company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

34. Nexus Telecommunications Ltd whose registered company number is 03895766, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

35. NPLUSONE Limited whose registered company number is SC236129, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

36. N T L Glasgow registered company number is SC075177, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

37. O-Bit Telecom Limited whose registered company number is 04365519, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

38. Optics Telecom Limited whose registered company number is 04874092, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

39. Orange Limited whose registered company number is 03110666, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

40. Oxygen8 Communications UK Limited whose registered company number is 03383285, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

41. PNC Telecom plc whose registered company number is 02709891, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

42. Premier Voicemail Limited whose registered company number is 03172426, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

43. Primus Telecom Ltd whose registered company number is 02937312, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

44. QICOMM Limited whose registered company number is 05422551, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company,

all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989..

45. QX Telecom Limited whose registered company number is 03820728, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

46. Ringmaster Ltd whose registered company number is 03450577, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

47. Sala Trading Ltd whose registered company number is 03617973, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

48. SingTel (Europe) Ltd whose registered company number is 03426947, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

49. Skycom Limited whose registered company number is 04101655, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

50. Skytel Limited whose registered company number is 04227994, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

51. Spacetel whose registered company number is 06184554, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

52. Spitfire Network Services whose registered company number is 02657590, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

53. Starcomm Ltd whose registered company number is 02830288, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

54. Stardex (UK) Limited whose registered company number is SC192625, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

55. Subhan Universal Limited whose registered company number is 05642502, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding

company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

56. Swiftnet Ltd whose registered company number is 02469394, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

57. Switch Services Limited whose registered company number is 04968578, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

58. Syntec Limited whose registered company number is 03529985, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

59. Teamphone.com whose registered company number is 01403177, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989..

60. Telco Global Networks Limited whose registered company number is 04214792, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

61. Teledesign plc whose registered company number is 03254784, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

62. Telephony Services Ltd whose registered company number is 05134355, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

63. Telsis Systems Limited whose registered company number is 02312314, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

64. Telstra Ltd whose registered company number is 03830643, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

65. Telswitch Ltd whose registered company number is 06127089, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

66. Telxl Limited whose registered company number is 04249562, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all

as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

67. T-Mobile whose registered company number is 02382161, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

68. Tweedwind (Two) Limited whose registered company number is 04392360, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

69. United Connect Ltd whose registered company number is 03204967, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

70. Vectone Network Limited whose registered company number is 05445235, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

71. Verizon UK Limited whose registered company number is 02776038, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

72. Virgin Media Limited whose registered company number is 02591237, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

73. Virtual Universe Ltd whose registered company number is 03064568, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

74. Vital Phone Limited whose registered company number is 04203630, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

75. Vodafone Ltd whose registered company number is 01471587, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

76. VTL (UK) Ltd whose registered company number is 04287100, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

77. Wavecrest (UK) Ltd whose registered company number is 03042254, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company,

all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

78. Wire9 Telecom plc whose registered company number is 04210403, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

79. XTEC Communications Limited whose registered company number is 03673661, and any subsidiary or holding company of it, or any subsidiary of it, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989.

Annex 8

Notification regarding WLR KPIs

NOTIFICATION UNDER SECTIONS 49 OF THE COMMUNICATIONS ACT 2003

Proposed Direction under section 49 of the Communications Act 2003 and Condition AA7 proposed as a result of the analysis of the wholesale access markets in the United Kingdom, excluding the Hull Area) in the *Review of the fixed narrowband services wholesale markets*

Proposal in this Notification

1. Ofcom hereby makes, in accordance with sections 49(4) of the Act, the following proposal for giving a direction in relation to the publishing of Wholesale Line Rental Key Performance Indicators.
2. The proposed direction setting Wholesale Line Rental Key Performance Indicators is set out in the Schedule to this Notification.
3. The effect of, and the reasons for giving the proposed direction is set out in the accompanying consultation document.

Ofcom's Duties

4. In making the proposal set out in the Notification, Ofcom has considered and acted in accordance with its general duties in section 3 of the Act and the six Community requirements in section 4 of the Act.

Making representations

5. Representations may be made to Ofcom about this proposal set out in this Notification and the accompanying consultation document by no later than 28 May 2009.
6. In accordance with section 50 of the Act, copies of this Notification have been sent to the Secretary of State, the European Commission and to regulatory authorities of every other Member State.

Interpretation

7. Except for references made to the identified services markets in this Notification and subject to paragraph 8 below, words or expressions used in this Notification shall have the same meaning as they have been ascribed in the Act.
8. In this Notification—
 - (a) “**Act**” means the Communications Act 2003 (c.21);
 - (b) “**BT**” means British Telecommunications plc, 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;

(c) “**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 Kingston Communications (Hull) plc;

9. For the purpose of interpreting this Notification—

(a) headings and titles shall be disregarded; and

(b) the Interpretation Act 1978 (c. 30) shall apply as if this Notification were an Act of Parliament.

SIGNATURE

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

SCHEDULE

[Proposed] Direction under section 49 of the Communications Act 2003 and Condition AA7 proposed as a result of the analysis of the wholesale access markets in the *Review of the fixed narrowband services wholesale markets*

Background

1. On [date of final statement] Ofcom concluded its *Review of the fixed narrowband services wholesale markets* in which it identified markets, made market power determinations and set appropriate SMP conditions as set out in the Notification at Annex [X] to the review, and explained in the accompanying explanatory statement.
2. Ofcom determined in the review referred to in paragraph 1, above, that BT, as a Dominant Provider, has significant market power in, amongst others, the following markets in the United Kingdom, excluding the Hull Area:
 - i. wholesale analogue exchange line services
 - ii. wholesale ISDN2 exchange line services
 - iii. wholesale ISDN30 exchange line services
3. SMP service Condition AA7 (Transparency as to quality of service) was set in relation to, amongst others, the markets referred to in paragraph 2.
4. This Direction concerns matter to which proposed Condition AA7 relates.
5. For the reasons set out in Section 11 of the explanatory statement accompanying this Direction Ofcom is satisfied that, in accordance with section 49(2) of the Act, this Direction is:
 - i. objectively justifiable in relation to the networks, services, facilities, apparatus or directories to which it relates;
 - ii. not such as to discriminate unduly against particular persons or against a particular description of persons;
 - iii. proportionate to what it is intended to achieve; and
 - iv. in relation to what it is intended to achieve, transparent.
6. For the reasons set out in Section 3 of the explanatory statement accompanying this Direction, Ofcom is satisfied that it has acted in accordance with the relevant duties set out in sections 3 and 4 of the Act.
7. Ofcom has considered every representation about the proposed Direction duly made to it and the Secretary of State has not notified Ofcom of any international obligation of the United Kingdom for this purpose.

Direction

8. Ofcom hereby, pursuant to section 49 of the Act and proposed Condition AA7 in Schedule 1 to the Notification, gives the following Direction:

9. The Dominant Provider shall publish, by placing a copy of the information on any relevant website operated or controlled by the Dominant Provider, the information specified in Parts 1 and 2 of Annex A to this Direction in relation to the provision of Wholesale Line Rental, as required in paragraph 11 below.
10. The Dominant Provider shall provide to individual Third Parties, by a confidential link on any relevant website operated or controlled by the Dominant Provider, the information specified in Parts 1 and 2 of Annex A to this Direction in relation to the provision of Wholesale Line Rental, as required in paragraph 11 below.
11. The Dominant Provider shall provide to Ofcom, by means of electronic mail to such person in Ofcom as notified from time to time, the information specified in Parts 1 and 2 of Annex A to this Direction in relation to the provision of Wholesale Line Rental, as required in paragraph 11 below..
12. The information required by paragraphs 9 10 and 11 above shall be published and provided as required by the Dominant Provider within 14 Working Days of the last Working Day of every month in respect of that month.
13. The Annex to this Direction forms part of the Direction.
14. Nothing in this Direction shall require the Dominant Provider to publish confidential information relating to its business or that of a Third Party.
15. For the purpose of interpreting this Direction the following definitions shall apply:

“Act” means the Communications Act 2003;

“Committed Order” means an Order which has passed validation and has been registered on the Dominant Provider’s operational support system and a Contract Delivery Date has been confirmed;

“Completed Order” means an Order which has been provisioned and for which all other related work has been carried out;

“Contract Delivery Date” means the date agreed between the Dominant Provider and a Third Party for an Order to become a Completed Order;

“Dominant Provider” means British Telecommunications plc, whose registered company number is 1800000, and any British Telecommunications plc subsidiary or holding company, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989;

“Exchange Line” means Apparatus comprised in the Dominant Provider’s Electronic Communications Network and installed for the purpose of connecting a telephone exchange run by the Dominant Provider to a Network Termination Point comprised in Network Termination and Testing Apparatus installed by the Dominant Provider for the purpose of providing Electronic Communications Services at the premises at which the Network Termination and Testing Apparatus is located;

“Fault” means a degradation or problem or with Wholesale Line Rental which is identified by the Dominant Provider or a Third Party and which is registered on the Dominant Provider’s operational support system;

“Hull Area” means the area defined as the ‘Licensed Area’ in the license 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 Kingston Communications (Hull) plc;

“Installed Base” means the average number of Wholesale Line Rental lines that are in use during the Reporting Period;

“ISDN” means the integrated services digital network which is an Electronic Communications Network evolved from the telephony integrated digital network that provides for digital end-to-end connectivity to support a wide range of Public Electronic Communications Services, including voice and non-voice service to which End Users have access by a limited set of standard multi-purpose customer interfaces;

“KPI” means key performance indicator;

“Level 1 Care” means the level of care provided by the Dominant Provider which provides the standard level of response to a Fault on an Exchange Line, provided as part of the basic line rental;

“Level 2 Care” means the level of care provided by the Dominant Provider which provides an enhanced level of response to a Fault on an Exchange Line, guaranteeing a response within a specified time;

“Level 3 Care” means the level of care provided by the Dominant Provider which provides an enhanced level of response to a Fault on an Exchange Line, guaranteeing a response within a specified time and providing cover 24 hours per day, seven days a week including public and bank holidays;

“Newly Provisioned Lines” means an Order where any Wholesale Line Rental product/Exchange Line Service is not being provided by the Dominant Provider to the Third Party at the time of order;

“Notification” means the Notification referred to in Recital (A) of this Direction above, as published on [date of Final Statement];

“Order” means a request for Wholesale Line Rental submitted to the Dominant Provider by a Third Party;

“Pending Order” means an Order which has been approved by the Dominant Provider and is awaiting a Contractual Delivery Date;

“Rejected Order” means an Order which cannot be placed by the Dominant Provider on its operational support system;

“Reporting Period” means the month in respect of which the Dominant Provider is required to publish or provide to Ofcom as required the Wholesale Line Rental KPIs;

“Restored Service” means the point at which the Wholesale Line Rental in relation to which a Fault was registered becomes available again for use by the Third Party;

“Scheduled Outages” means the defined periods of time whereby the Dominant Provider’s operational support system is not available for use by Third Parties in order for the Dominant Provider to perform certain tasks including, but not limited to, routine maintenance, changing configurations, software upgrades and updating

facilities and may include specific maintenance activities whereby the Dominant Provider must have given as much notice as reasonably practicable and in any event not less than seven calendar days;

“Third Party” means either:

- i. a person providing a Public Electronic Communications Network; or
- ii. a person providing a Public Electronic Communications Service;

“Transferred Lines” means an Order where Wholesale Line Rental is being provided to the Third Party by another Third Party (including those provided by the Dominant Provider) at the time of order;

“Wholesale Analogue Line Rental” means an Electronic Communications Service provided by the Dominant Provider to a Third Party for the use and Ordinary Maintenance of an analogue Exchange Line;

“Wholesale ISDN2 Line Rental” means an Electronic Communications Service provided by the Dominant Provider to a Third Party for the use and Ordinary Maintenance of an ISDN2 Exchange Line;

“Wholesale ISDN30 Line Rental” means an Electronic Communications Service provided by the Dominant Provider to a Third Party for the use and Ordinary Maintenance of an ISDN30 Exchange Line;

“Wholesale Line Rental” means each of the following provided by the Dominant Provider:

- i. Wholesale Analogue Line Rental provided to Third Parties’ End Users;
- ii. Wholesale ISDN2 Line Rental;
- iii. Wholesale ISDN30 Line Rental;

and, for the avoidance of doubt, any requirement to publish or provide to Ofcom as required the Wholesale Line Rental KPIs shall be a requirement to publish or provide that information separately in relation to each of the above;

“Working Day” means any day other than Saturdays, Sundays, public holidays or bank holidays in the United Kingdom.

16. Except insofar as the context otherwise requires, words or expressions shall have the meaning assigned to them and otherwise any word or expression shall have the same meaning as it has in the Act, or if it has no meaning there, in Part 1 of Schedule 1 to the Notification.
17. For the purpose of interpreting this Direction:
 - i. headings and titles shall be disregarded; and
 - ii. the Interpretation Act 1978 shall apply as if this Direction were an Act of Parliament.

18. This direction shall take effect on the day it is published.

Annex A Wholesale Line Rental KPIs

Part 1: Indicators

1. The Dominant Provider shall publish the information required in KPIs (i) to (viii) below in relation to the provision of Wholesale Line Rental, in at least the detail outlined below:

- a) an industry average (for the avoidance of doubt this excludes provision by the Dominant Provider to itself);
- b) best in class;

2. The Dominant Provider shall also publish the information required in KPIs (ii) to (vi) below in relation to the provision of Wholesale Line Rental to itself.

3. In relation to KPIs (ii) to (vi), the Dominant Provider should publish separate KPI results where options exist for third parties to purchase differing levels of service.

4. The Dominant Provider shall provide to Ofcom KPIs (i) to (viii) as described in paragraphs 1, 2 and 3 above by electronic mail to the designated person.

5. The Dominant Provider shall also provide to Ofcom data relating to specific third parties upon request.

6. The Dominant Provider shall provide to each third party on a confidential basis via a link on any relevant website operated or controlled by the Dominant Provider, the information required in KPIs (i) to (viii) below for that third party.

7. Where the Dominant Provider does not provide Wholesale Line Rental to itself, it shall instead publish or provide as required the information required in relation to the equivalent implicit wholesale product provided by the Dominant Provider to itself in order for it to provide downstream services to End Users.

Percentage of orders rejected

- (i) the percentage of Committed Orders that became Rejected Orders during the Reporting Period;

Percentage of orders provisioned on time

- (ii) the percentage of Completed Orders that were completed by the Contract Delivery Date during the Reporting Period in relation to each of:

- (a) Newly Provisioned Lines; and
- (b) Transferred Lines;

Percentage of new provisions reported as faulty

- (iii) the percentage of Completed Orders that were reported as having a Fault during the Reporting Period whereby that Fault was reported within 30 calendar days of the date that it became a Completed Order;

Percentage of installed base reported as faulty

- (iv) the number of Completed Orders that were registered as having a Fault during a three month rolling period, ending at the end of the Reporting Period, measured as a percentage of the mean of the Installed Base;

Average time to restore service

- (v) the average time (in working hours) during the Reporting Period for the Dominant provider to achieve Restored Service after a Fault has been registered in relation to each of:

- (a) Level 1 Care;
- (b) Level 2 Care; and
- (c) Level 3 Care;

Percentage of repeat faults

(vi) the percentage of Faults that were reported as having a further Fault during the Reporting Period whereby the further Fault was registered within 30 calendar days of the Dominant Provider achieving Restored Service of the previous Fault;

Gateway availability

(vii) the percentage of actual availability of the Dominant Provider's ordering gateway during the Reporting Period compared to the potential availability during the same period as published by the Dominant Provider, excluding any Scheduled Outages;

(viii) the percentage of actual availability of the Dominant Provider's ordering gateway during the Reporting Period compared to the potential availability during the same period as published by the Dominant Provider, including any Scheduled Outages.

Part 2: Volumes

1. The Dominant Provider shall publish the information required in KPIs **(i) to (iv)** below in relation to the provision of Wholesale Line Rental to all Third Parties (as an aggregate figure which, for the avoidance of doubt includes provision by the Dominant Provider of Wholesale Line Rental to itself);
2. The Dominant Provider shall provide to Ofcom by electronic mail the information required in KPIs (i) to (iv) below in relation to the provision of End User Access to itself. BT shall also provide to Ofcom data relating to specific third parties upon request.
3. Where the Dominant Provider does not provide End User Access to itself, it shall instead publish or provide as required the information required in relation to the equivalent implicit wholesale product provided by the Dominant Provider to itself in order for it to provide downstream services to End Users.

Volume of orders submitted

(i) the total number of Orders that became Pending Orders during the Reporting Period;

Volume of orders completed

(ii) the total number of Committed Orders that became Completed Orders during the Reporting Period in relation to each of:

- (a) Newly Provisioned Lines; and
- (b) Transferred Lines;

Volume of installed base

(iii) the Installed Base during the Reporting Period;

Volume of faults reported

(iv) the number of Faults where the Dominant Provider subsequently achieves Restored Service during the Reporting Period in relation to each of:

- (a) Level 1 Care;
- (b) Level 2 Care; and
- (c) Level 3 Care.

Annex 9

Notification regarding interconnection circuits KPIs

NOTIFICATION UNDER SECTIONS 49 OF THE COMMUNICATIONS ACT 2003

Proposed Direction under section 49 of the Communications Act 2003 and Condition AA7 proposed as a result of the analysis of the wholesale Call Origination markets in the United Kingdom, excluding the Hull Area) in the *Review of the fixed narrowband services wholesale markets*

Proposal in this Notification

1. Ofcom hereby makes, in accordance with sections 49(4) of the Act, the following proposal for giving a direction in relation to the publishing of Interconnection Circuits Key Performance Indicators.
2. The proposed direction setting Interconnection Circuits Key Performance Indicators is set out in the Schedule to this Notification.
3. The effect of, and the reasons for giving the proposed direction is set out in the accompanying consultation document.

Ofcom's Duties

4. In making the proposal set out in the Notification, Ofcom has considered and acted in accordance with its general duties in section 3 of the Act and the six Community requirements in section 4 of the Act.

Making representations

5. Representations may be made to Ofcom about this proposal set out in this Notification and the accompanying consultation document by no later than 28 May 2009.
6. In accordance with section 50 of the Act, copies of this Notification have been sent to the Secretary of State, the European Commission and to regulatory authorities of every other Member State.

Interpretation

7. Except for references made to the identified services markets in this Notification and subject to paragraph 8 below, words or expressions used in this Notification shall have the same meaning as they have been ascribed in the Act.

8. In this Notification—

- (a) “**Act**” means the Communications Act 2003 (c.21);

(b) “**BT**” means British Telecommunications plc, 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;

(c) “**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 Kingston Communications (Hull) plc;

9. For the purpose of interpreting this Notification—

(a) headings and titles shall be disregarded; and

(b) the Interpretation Act 1978 (c. 30) shall apply as if this Notification were an Act of Parliament.

SIGNATURE

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

SCHEDULE

[Proposed] Direction under section 49 of the Communications Act 2003 and Condition AA7 proposed as a result of the analysis of the Call Origination markets) in the *Review of the fixed narrowband services wholesale markets*

Background

1. On [date of final statement] Ofcom concluded its *Review of the fixed narrowband services wholesale markets* in which it identified markets, made market power determinations and set appropriate SMP conditions as set out in the Notification at Annex [X] to the review, and explained in the accompanying explanatory statement.
2. Ofcom determined in the review referred to in paragraph 1, above, that BT, as a Dominant Provider, has significant market power in, amongst others, the Call Origination market in the United Kingdom, excluding the Hull Area:
3. SMP service Condition AA7 (Transparency as to quality of service) was set in relation to, amongst others, the Call Origination market.
4. This Direction concerns matter to which proposed Condition AA7 relates.
5. For the reasons set out in Section 11 of the explanatory statement accompanying this Direction Ofcom is satisfied that, in accordance with section 49(2) of the Act, this Direction is:
 - i. objectively justifiable in relation to the networks, services, facilities, apparatus or directories to which it relates;
 - ii. not such as to discriminate unduly against particular persons or against a particular description of persons;
 - iii. proportionate to what it is intended to achieve; and
 - iv. in relation to what it is intended to achieve, transparent.
6. For the reasons set out in Section 3 of the explanatory statement accompanying this Direction, Ofcom is satisfied that it has acted in accordance with the relevant duties set out in sections 3 and 4 of the Act.
7. Ofcom has considered every representation about the proposed Direction duly made to it and the Secretary of State has not notified Ofcom of any international obligation of the United Kingdom for this purpose.

Direction

8. Ofcom hereby, pursuant to section 49 of the Act and proposed Condition AA7 in Schedule 1 to the Notification, gives the following Direction:
9. The Dominant Provider shall publish, by placing a copy of the information on any relevant website operated or controlled by the Dominant Provider, as required by paragraph 12 below, the information specified in Parts 1 and 2 of Annex A to this Direction in relation to the provision of Interconnection Circuits (“the Interconnection Circuits KPIs”), as required by paragraph 12 below.

10. The Dominant Provider shall provide to individual Third Parties, by a confidential link on any relevant website operated or controlled by the Dominant Provider, the information specified in Parts 1 and 2 of Annex A to this Direction in relation to the provision of Interconnection Circuits, as required in paragraph 12 below
11. The Dominant Provider shall provide to Ofcom the information specified in Parts 1 and 2 of Annex A to this Direction in relation to the provision of Interconnection Circuits (“the Interconnection Circuits KPIs”), as required by paragraph 12 below,.
12. The information required by paragraphs 9, 10 and 11 above shall be published and provided as required by the Dominant Provider within 14 Working Days of the last Working Day of the Reporting Period in respect of that Reporting Period.
13. The reference to publishing in paragraphs 9 and 10 above will be satisfied by placing a copy of the required information on any relevant website operated or controlled by the Dominant Provider
14. The Annex to this Direction forms part of the Direction.
15. Nothing in this Direction shall require the Dominant Provider to publish confidential information relating to its business or that of a Third Party.
16. For the purpose of interpreting this Direction the following definitions shall apply:

“Act” means the Communications Act 2003;

“Augmented Route” means an Order where any Interconnection Circuit is being provided to the Third Party by another Third Party (including those provided by the Dominant Provider) at the time of order and the effect of that order is to modify the capacity of the route;

“Committed Order” means an Order for which a Contract Delivery Date has been confirmed;

“Completed Order” means an Order which has been provisioned and for which all other related work has been carried out;

“Contract Delivery Date” means the date agreed between the Dominant Provider and a Third Party for an Order to become a Completed Order;

“CSI” means customer sited Interconnection links;

“DMA” (Data Management Amendments) means the routing amendment which a Third Party requests the Dominant Provider to make in order to modify the way in which calls are routed both at the Digital Local Exchange and at the tandem switches;

“Dominant Provider” means British Telecommunications plc, whose registered company number is 1800000, and any British Telecommunications plc subsidiary or holding company, or any subsidiary of that holding company, all as defined by Section 736 of the Companies Act 1985 as amended by the Companies Act 1989;

“Fault” means a degradation or problem or with Interconnection Circuits which is identified by the Dominant Provider or a Third Party and which is registered on the Dominant Provider’s operational support system;

“Hull Area” means the area defined as the ‘Licensed Area’ in the license 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 Kingston Communications (Hull) plc;

“IEC” means Interconnection extension circuits;

“Installed Base” means the average number of Interconnection Circuits lines that are in use during the Reporting Period;

“Interconnection Circuits” mean any and all of the following specific services provided by the Dominant Provider:

- i. CSI;
- ii. ISI;
- iii. IEC;

“ISI” means in-span Interconnection links;

“KPI” means key performance indicator;

“New Route” means an Order where any Interconnection Circuits are not being provided by the Dominant Provider to the Third Party at the time of order;

“Notification” means the Notification referred to in Recital (A) of this Direction above, as published on [date of Final Statement];

“Order” means a request for Interconnection Circuits submitted to the Dominant Provider by a Third Party;

“Reporting Period” means the period of three calendar months in respect of which the Dominant Provider is required to publish or provide to Ofcom as required the Interconnection Circuit KPIs;

“Restored Service” means the point at which the Interconnection Circuit in relation to which a Fault was registered becomes available again for use by the Third Party;

“Third Party” means either:

- i. a person providing a Public Electronic Communications Network; or
- ii. a person providing a Public Electronic Communications Service;

“Working Day” means any day other than Saturdays, Sundays, public holidays or bank holidays in the United Kingdom.

17. Except insofar as the context otherwise requires, words or expressions shall have the meaning assigned to them and otherwise any word or expression shall have the same meaning as it has in the Act, or if it has no meaning there, in Part 1 of Schedule 1 to the Notification.

18. For the purpose of interpreting this Direction:
 - i. headings and titles shall be disregarded; and
 - ii. the Interpretation Act 1978 shall apply as if this Direction were an Act of Parliament.
19. This direction shall take effect on the day it is published.

Annex A

Interconnection Circuit KPIs

Part 1: Indicators

1. The Dominant Provider shall publish the information required in KPIs (i) to (iii) below in relation to the provision of Interconnection Circuits to:
 - a) all Third Parties (as an aggregate figure);
2. The Dominant Provider shall publish the information required in KPI (iii) below in relation to the provision of Data Management Amendments to itself.
3. The Dominant Provider shall provide to Ofcom the information required in KPIs (i) to (iii) in relation to the provision of Interconnection Circuits to all Third Parties.

Percentage of orders provisioned on time

- (i) the percentage of Completed Orders that were completed by the Contract Delivery Date during the Reporting Period;

Average time to restore service

- (ii) the average time (in hours) during the Reporting Period for the Dominant Provider to achieve Restored Service after a Fault has been registered;

Data Management Amendments

- (iii) the percentage of Data Management Amendments for new numbers that become Completed Orders during the Reporting Period whereby they are completed within 30 Working Days of the Order becoming a Committed Order excluding any Data Management Amendments where the standard 30 Working Day lead time has not been requested.

Part 2: Volumes

1. The Dominant Provider shall publish the information required in KPIs (i) to (iii) below in relation to the provision of Interconnection Circuits to all Third Parties (as an aggregate figure);
2. The Dominant Provider shall provide to Ofcom the information required in KPI (iii) below in relation to the provision of Data Management Amendments to itself.

Volume of orders provisioned

- (i) the total number of Committed Orders that became Completed Orders during the Reporting Period;

Volume of faults reported

- (ii) the number of Faults where the Dominant Provider subsequently achieves Restored Service during the Reporting Period;

Volume of Data Management Amendments

- (iii) the total number of Data Management Amendments for new number ranges that became Complete

Annex 10

Notification proposing withdrawal of direction relating to local-tandem transit and inter-tandem transit for IA

Proposed withdrawal of a Direction

NOTIFICATION UNDER SECTIONS 49 OF THE COMMUNICATIONS ACT 2003
Proposal for withdrawing a Direction dated 27 November 2003 relating to Local-tandem transit and inter-tandem transit for Indirect Access traffic imposed on BT as a result of a market power determination made by the Director on 27 November 2003 that BT had significant market power in the market for local-tandem conveyance and transit on fixed public narrowband networks in the United Kingdom, but not including the Hull Area.

Background

1. On 27 November 2003 the Director published the *Review of the fixed narrowband wholesale exchange line, call origination, conveyance and transit markets* (“the 2003 review”), in which BT were determined to have SMP in relation to, amongst other markets, the local-tandem conveyance and local-tandem transit market.
2. At Annex D to the 2003 review, the Director published the Direction Local-tandem transit and inter-tandem transit for Indirect Access traffic.

Proposal in this Notification

3. Ofcom hereby makes, in accordance with section 49(4) of the Act, the proposal to withdraw the Direction Local-tandem transit and inter-tandem transit for Indirect Access traffic.
4. The effect of, and the reasons for making the proposed withdrawal are set out at Section 18 of the accompanying consultation document.

Ofcom’s Duties

5. In making the proposal set out in this Notification, Ofcom has considered and acted in accordance with its general duties in Section 3 of the Act and the six Community requirements in section 4 of the Act.
6. Ofcom is satisfied that the tests set out at section 49(2) of the Act are satisfied, as explained in Section 18 of the accompanying consultation document.

Making Representations

7. Representations may be made to Ofcom about this proposal set out in this Notification and the accompanying consultation document by no later than 28 May 2009

In accordance with section 50 of the Act, copies of this Notification have been sent to the Secretary of State, the European Commission and to the regulatory authorities

of every other Member State.

Interpretation

8. Except for references made to the identified services market in this Notification and subject to paragraph 8 below, words or expressions used in this Notification shall have the same meaning as they have been ascribed in the Act.

9. In this Notification—

(a) “**Act**” means the Communications Act 2003 (c.21);

(b) “**BT**” means British Telecommunications plc, 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;

(c) “**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 Kingston Communications (Hull) plc;

10. For the purpose of interpreting this Notification—

(a) headings and titles shall be disregarded; and

(b) the Interpretation Act 1978 (c. 30) shall apply as if this Notification were an Act of Parliament.

Annex 11

Notification of withdrawal of direction related to BT's credit vetting supplemental agreement

Proposed withdrawal of a Direction

NOTIFICATION UNDER SECTIONS 49 OF THE COMMUNICATIONS ACT 2003
Proposal for withdrawing a Direction dated 27 November 2003 relating to BT's Credit Vetting Supplemental Agreement imposed on BT as a result of a market power determination made by the Director on 27 November 2003 that BT had significant market power in markets for call origination on fixed public telephone networks, local-tandem conveyance and transit on fixed public narrowband networks, inter-tandem conveyance and transit on fixed public narrowband networks and single transit on fixed public narrowband networks in the United Kingdom, but not including the Hull Area.

Background

1. On 27 November 2003 the Director published the *Review of the fixed narrowband wholesale exchange line, call origination, conveyance and transit markets* ("the 2003 review"), in which BT were determined to have SMP in relation to, amongst others, the following markets in the United Kingdom, but not including the Hull Area:

- (a) call origination on fixed public telephone networks;
- (b) local-tandem conveyance and transit on fixed public narrowband networks;
- (c) inter-tandem conveyance and transit on fixed public narrowband networks; and
- (d) single transit on fixed public narrowband networks.

2. At Annex F to the 2003 review, the Director published the Direction BT's Credit Vetting Supplemental Agreement.

Proposal in this Notification

3. Ofcom hereby makes, in accordance with section 49(4) of the Act, the proposal to withdraw the Direction BT's Credit Vetting Supplemental Agreement.

4. The effect of, and the reasons for making the proposed withdrawal are set out at Section 18 of the accompanying consultation document.

Ofcom's Duties

5. In making the proposal set out in this Notification, Ofcom has considered and acted in accordance with its general duties in Section 3 of the Act and the six Community requirements in section 4 of the Act.

6. Ofcom is satisfied that the tests set out at section 49(2) of the Act are satisfied, as explained in Section 18 of the accompanying consultation document.

Making Representations

7. Representations may be made to Ofcom about this proposal set out in this

Notification and the accompanying consultation document by no later than 28 May 2009

In accordance with section 50 of the Act, copies of this Notification have been sent to the Secretary of State, the European Commission and to the regulatory authorities of every other Member State.

Interpretation

8. Except for references made to the identified services market in this Notification and subject to paragraph 8 below, words or expressions used in this Notification shall have the same meaning as they have been ascribed in the Act.

9. In this Notification—

(a) “**Act**” means the Communications Act 2003 (c.21);

(b) “**BT**” means British Telecommunications plc, 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;

(c) “**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 Kingston Communications (Hull) plc;

10. For the purpose of interpreting this Notification—

(a) headings and titles shall be disregarded; and

(b) the Interpretation Act 1978 (c. 30) shall apply as if this Notification were an Act of Parliament.

Annex 12

Notification of withdrawal of direction relating to publication of KPIs

Proposed withdrawal of a Direction

NOTIFICATION UNDER SECTIONS 49 OF THE COMMUNICATIONS ACT 2003
Proposal for withdrawing two Directions dated 23 September 2004 “Directions under the Quality of Service Condition (AA7) in the Fixed Narrowband Review” published as Annex 2 to the statement “Requirement on BT to publish Key Performance Indicators”

Background

1. On 27 November 2003 the Director published the *Review of the fixed narrowband wholesale exchange line, call origination, conveyance and transit markets* (“the 2003 review”), in which BT were determined to have SMP in relation to, amongst others, the following markets in the United Kingdom, but not including the Hull Area:

- i. wholesale analogue exchange line services
- ii. wholesale ISDN2 exchange line services
- iii. wholesale ISDN30 exchange line services
- iv. call origination on fixed public telephone networks
- v. local-tandem conveyance and transit on fixed public narrowband networks;
- vi. inter-tandem conveyance and transit on fixed public narrowband networks; and
- vii. single transit on fixed public narrowband networks.

2. SMP Service condition AA7 – Transparency as to quality of service required, at paragraph AA7.2, the Dominant Provider to comply with any direction made by Ofcom under that condition.

3. On 23 September 2004 Ofcom published *Requirement on BT to publish Key Performance Indicators* giving amongst others, two directions under SMP Service condition AA7, *Directions under the Quality of Service Condition (AA7) in the Fixed Narrowband Review*, as set out at Annex 2 to the statement, which related to the publication of Key Performance Indicators (“KPIs”) in relation to the provisions of Wholesale Line Rental and Interconnection Circuits.

4. This proposal does not affect any other Direction made under the statement and only relates to the two Directions set out at Annex 2 to the statement.

Proposals in this Notification

5. Ofcom hereby makes, in accordance with section 49(4) of the Act, the proposal to withdraw the Directions, both dated 23 September 2004:

- (a) Direction under the Quality of Service Condition (AA7) in the Fixed Narrowband Review (relating to Wholesale Line Rental KPIs)
- (b) Direction under the Quality of Service Condition (AA7) in the Fixed Narrowband Review (relating to Interconnection Circuits KPIs)

6. The effect of, and the reasons for making the proposed withdrawal are set out at Section 18 of the accompanying consultation document.

Ofcom's Duties

7. In making the proposal set out in this Notification, Ofcom has considered and acted in accordance with its general duties in Section 3 of the Act and the six Community requirements in section 4 of the Act.

8. Ofcom is satisfied that the tests set out at section 49(2) of the Act are satisfied, as explained in Section 18 of the accompanying consultation document.

Making Representations

9. Representations may be made to Ofcom about this proposal set out in this Notification and the accompanying consultation document by no later than 28 May 2009

In accordance with section 50 of the Act, copies of this Notification have been sent to the Secretary of State, the European Commission and to the regulatory authorities of every other Member State.

Interpretation

10. Except for references made to the identified services market in this Notification and subject to paragraph 8 below, words or expressions used in this Notification shall have the same meaning as they have been ascribed in the Act.

11. In this Notification—

(a) “**Act**” means the Communications Act 2003 (c.21);

(b) “**BT**” means British Telecommunications plc, 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;

(c) “**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 Kingston Communications (Hull) plc;

10. For the purpose of interpreting this Notification—

(a) headings and titles shall be disregarded; and

(b) the Interpretation Act 1978 (c. 30) shall apply as if this Notification were an Act of Parliament.