



Variations to BT's
Undertakings under the
Enterprise Act 2002 in respect
of 21CN, Space and power and
OSS separation

Consultation

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Section 1

Summary

- 1.1 This consultation seeks views from interested parties on three proposed variations to BT's undertakings ("the Undertakings") under the Enterprise Act 2002. The three variations relate to:
 - BT's consultation principles with respect to the deployment of its Next Generation Network (NGN), and an obligation on BT to publish its NGN plan of record on a regular basis;
 - the processes and products used to manage accommodation within BT's exchanges; and
 - the requirement to implement physical separation of certain Operational Support Systems (OSS).
- 1.2 Ofcom is proposing to agree to these variations. Our reasons for this are detailed in this document.
- 1.3 The first of these variations will commit BT to follow published guidelines when it consults on products or network design decisions related to its NGN. In addition, this variation will commit BT to publishing a plan of record for its NGN programme on a regular basis. The plan of record will include the information other communications providers need in order to be able to interconnect to BT's NGN.
- 1.4 In our review of the impact of the Telecommunications Strategic Review (TSR Review) published on 10 December 2007¹ we said that we thought that clear consultation was "of paramount importance to ensure that BT's next generation network deployment does not unfairly restrict access." We also said that it was important to avoid situations where communications providers may not be aware of whether they have up to date information on BT's NGN rollout plans which they need in order to plan their own networks.
- 1.5 The variation in relation to NGN consultation and information publication formalises commitments made by BT to resolve the issues we highlighted in our TSR Review. On this basis we propose to agree to this variation.
- 1.6 Our TSR Review also highlighted several issues related to space and power within BT's exchanges. We said that we were concerned that Openreach does not exert sufficient control over the process of space allocation to manage its own products effectively. We explained that there were a number of cases where space and power had not been available for communications providers using Local Loop Unbundling (LLU), which prevented them from deploying equipment in some exchanges. Communications providers were also concerned that this problem was made worse because BT was reserving space for its NGN deployment. We also expressed concern that Openreach's accommodation product was contractually restricted to supporting only LLU related equipment. This restriction required communications providers to obtain alternative space to meet other requirements and resulted in an inefficient use of space.

¹ http://www.ofcom.org.uk/telecoms/btundertakings/tsr_statement/tsr_statement.pdf

- 1.7 The proposed variation will add a series of commitments related to the space and power products and processes operated by Openreach to the Undertakings. The proposed variation will commit Openreach to implementing a proactive review process of space availability, including a commitment to audit exchanges where conflicts in requirements for space may occur. It will also set in place a process by which allocations of space for BT's NGN are made. The proposed variation will commit Openreach to consult on the development of a more flexible co-mingling product to allow products other than just LLU to use this space.
- 1.8 We are proposing to agree to the variation related to space and power because we believe it addresses the key issues raised in our TSR Review related to space and power management and allocation.
- 1.9 In our June 2007 statement we agreed to vary the Undertakings in respect of changes to milestones for Operational Support Systems (OSS) separation². We also highlighted that there were particular risks around physical separation of BT's fibre inventory management systems. Since then we have further discussed the separation of these systems with BT and considered potential risks in more depth. Implementing full physical separation would risk disrupting the service provided by BT to other communications providers, including BT's own downstream divisions. We are, therefore, proposing to agree with BT to an approach that allows a limited amount of sharing of some fibre inventory management systems. BT proposes to implement a service level inventory to remove the need for access to Openreach data for the majority of users in BT's other divisions. We consider that this is a pragmatic solution to the complex issue of physically separating the fibre inventory management systems and reduces the risks to customer service posed by full physical systems separation. Therefore, we are proposing to agree to vary the Undertakings to reflect this limited amount of systems sharing and the requirement for the rest of BT to use a separate service level inventory.
- 1.10 BT has also indicated to us concerns that meeting the Undertakings' milestones related to the separation of systems supporting the supply of voice services may result in customers being negatively impacted. We have discussed alternatives with BT and are proposing to agree an approach which still results in physical separation of systems by 30 June 2010 but does not require data to be migrated out of Openreach systems into BT Operate. Instead, operational separation will be achieved by moving some BT employees into Openreach and by developing a new system to manage any exceptions to the automated process for provisioning voice services that is already in place between Openreach and BT Operate. Whilst this approach results in physical separation, it means two of the interim milestones no longer reflect the solution that will be implemented and are hence no longer relevant. Therefore, we propose to agree to vary the Undertakings to instead commit BT to the development of the exception handling system and to move users onto this system.
- 1.11 Section 155 of the Enterprise Act requires that Ofcom consults where it proposes to amend the Undertakings in a material respect. We do not believe the proposed changes to the Undertakings are material as they do not affect the overall solution provided by the Undertakings.
- 1.12 We do not believe the variation related to BT's NGN is material as it provides clarity of process around mechanisms envisaged in the Undertakings.

² http://www.ofcom.org.uk/consult/condocs/bt_oss/statement/statement.pdf

- 1.13 Further, we do not believe the variation in respect of space and power is material as it adds clarity around the processes that Openreach will operate in supporting the products that it is required to provide by the Undertakings. The proposed variation also places on Openreach the obligation to consult with customers on developing a more flexible space and power (co-mingling) product to allow communications providers to more effectively use Openreach's LLU and Ethernet products. We do not believe this in any way has a negative impact on the solution provided by the Undertakings as these obligations seek to resolve issues that have arisen as a result of implementing products included within the Undertakings.
- 1.14 We do not believe the variation related to Operational Support Systems separation for fibre inventory management systems and supply side separation for voice services will affect the overall operation of the Undertakings in a material way because it still delivers physical separation in all but a very limited number of cases where we believe that physical separation may have a negative impact on the service offered by BT to consumers and communications providers.
- 1.15 However, we believe the specific issues addressed by these proposed variations are of importance to CPs and ought to be consulted on. It is our view that a six week consultation is appropriate in this case. Ofcom intends to publish a final statement with respect to the variations within this Consultation in September 2008.

Section 2

Background

- 2.1 On 22 September 2005 British Telecommunications plc ("BT") offered, and Ofcom accepted, the Undertakings pursuant to section 154 of the Enterprise Act 2002. The Undertakings addressed issues that had been raised by Ofcom as it considered whether to refer certain markets to the Competition Commission in relation to the provision of fixed telecommunications. The Undertakings were accepted by Ofcom in lieu of making such a reference at that time. Ofcom's reasons for accepting the Undertakings, together with the Undertakings themselves, are set out in full in the document entitled *Final statements on the Strategic Review of Telecommunications, and undertakings in lieu of a reference under the Enterprise Act 2002*³.
- 2.2 Since the Undertakings were agreed, BT has been focused on meeting the commitments it made. On 10 December 2007, Ofcom published its TSR Review⁴. Within the TSR Review we highlighted the progress that BT had made on delivering its Undertakings.
- 2.3 We also highlighted a number of issues that had arisen during the implementation of the Undertakings to date and said we were working with BT to resolve these issues.
- 2.4 For three of the issues identified – industry consultation and publication of information related to BT's next generation network (NGN) deployment, the allocation of space and power within BT exchanges and the physical separation of certain Operational Support Systems – we have agreed with BT that a variation to the Undertakings is an appropriate way to ensure the resolution of these issues. This consultation presents the proposed variations and Ofcom's reasoning in proposing to agree to these variations.
- 2.5 The Enterprise Act requires that Ofcom should "have regard to the need to achieve as comprehensive a solution as is reasonable and practicable to the adverse effect on competition". Ofcom's competition concerns were set out in its *Strategic Review of Telecommunications Phase 2 Consultation Document*⁵. In considering the case for varying the Undertakings, Ofcom has considered whether the variations are material and whether the Undertakings will continue to provide such a solution. Section 155 of the Enterprise Act further requires Ofcom to consult for a minimum period of 15 days where it proposes to amend the Undertakings in a material respect.
- 2.6 We do not consider the variation in respect of consultation and publication of information related to BT's NGN deployment is material because it provides clarity to processes envisaged when the Undertakings were originally agreed.
- 2.7 We also do not consider the variation in respect of space and power to be material as the proposed variation adds clarity around the processes that Openreach will operate in providing space and power to support the products that it is required to provide on an EOI basis by the Undertakings. We do not

³ http://www.ofcom.org.uk/consult/condocs/statement_tsr/

⁴ http://www.ofcom.org.uk/telecoms/btundertakings/tsr_statement/tsr_statement.pdf

⁵ http://www.ofcom.org.uk/consult/condocs/telecoms_p2/

believe this variation has a negative impact on the solution provided by the Undertakings as it relates to addressing issues that have arisen as a consequence of the implementation of the requirements in the Undertakings and provides transparency around key processes that support LLU.

- 2.8 Lastly, we do not consider that the variation in respect of OSS is material because it still provides for physical separation of OSS in all but a very limited number of cases where such physical separation would risk negatively impacting customer service. We envisaged that there may be a requirement to review the Undertakings in respect of the shared fibre inventory systems when we agreed to variation 9⁶. The variation that we propose to agree in this consultation provides a solution which we believe delivers the benefits of equality of access without risking significant impact to customer experience.
- 2.9 Although we do not consider the proposed variations to be material for the reasons stated above, we consider that the specific issues addressed by these proposed variations are of importance to CPs and ought to be consulted on.
- 2.10 It is our view that a six week consultation is appropriate in this case. Ofcom intends to publish a final statement with respect to the variations within this Consultation in September 2008.

⁶ http://www.ofcom.org.uk/consult/condocs/bt_oss/statement/statement.pdf

Section 3

Ofcom's reasoning with respect to the proposed variations

Introduction

- 3.1 In this section, we set out our position in respect of the proposed variations to the Undertakings and our reasons for adopting this position. This consultation invites comments on the described proposal from interested stakeholders.
- 3.2 The proposed wording of the variations is set out in Annex 6. Respondents are strongly recommended to consider this before answering the questions which follow. The reasoning we put forward in this section is based on the information available to Ofcom at the time of publication and Ofcom reserves the right to change its position with respect to any request as a result of the consultation process or any other information that comes to light during the consultation process. Any such change will be fully explained in the subsequent statement due for publication in September 2008.
- 3.3 The Enterprise Act requires that Ofcom should "have regard to the need to achieve as comprehensive a solution as is reasonable and practicable to the adverse effect on competition". Ofcom's competition concerns were set out in its *Strategic Review of Telecommunications Phase 2 Consultation Document*⁷. In considering the case for agreeing to variations to the Undertakings, Ofcom must consider whether this solution is materially and negatively affected by the variations in question. We explain our reasoning in relation to these considerations below.

Variation in respect of consultation principles and the regular publication of a plan of record for BT's Next Generation Network (NGN)

- 3.4 Next generation networks (NGN) offer communications providers the opportunity to provide innovative services and to reduce operational costs related to supporting the network. Previous network architectures were based on separate networks being deployed to support separate services. NGNs are based on providing a common platform to support all services.
- 3.5 BT is in the process of deploying a NGN which it commonly refers to as its 21st Century Network (21CN). BT's 21CN deployment will move services onto an NGN, allowing it to close down the multiple networks it currently runs to support these services. This means that other communications providers will need to interconnect to 21CN in order to continue to support their services which rely on the BT network. Therefore, good communication is needed between BT and other communications providers to ensure this interconnection can be realised in a timely and efficient manner.
- 3.6 In our TSR Review⁸, we said BT had engaged reasonably well with industry in relation to the deployment of 21CN. We highlighted, however, that some specific consultations carried out through BT's Consult21 process had caused concern

⁷ http://www.ofcom.org.uk/consult/condocs/telecoms_p2/

⁸ http://www.ofcom.org.uk/telecoms/btundertakings/tsr_statement/tsr_statement.pdf

amongst communications providers. Issues highlighted by communications providers included the lack of detail included in the consultations, a lack of clarity about what decisions may be made based on the responses, the timescales for responding and the way that BT may subsequently change the decisions it has made following the consultation.

- 3.7 We believe it is of paramount importance that consultations carried out by BT on its 21CN deployment are clearly understood. In response to the concerns we highlighted to BT, BT has agreed to develop and document a set of guidelines which all its Consult21 consultations will follow.
- 3.8 The specific content of the guidelines will not be added to the Undertakings by this variation as we consider that the guidelines may develop and this should not require further variation to the Undertakings. Therefore, BT will commit to publishing its guidelines in a separate document. The guidelines proposed by BT will ensure that consultations carried out in respect to 21CN will clearly state:
- the objectives of the consultation;
 - the decisions that the consultation will inform;
 - the timescales for consultation;
 - the process for responding;
 - the mechanism for considering responses; and
 - the specific questions to which BT is requesting responses.
- 3.9 The guidelines will also set out how BT will explain the decisions it has made based on the responses to consultation.
- 3.10 In our TSR Review we also expressed concern that the information that communications providers need to plan their networks and products based on 21CN deployment had not been updated for some time whilst BT carried out a re-planning activity. The proposed variation to the Undertakings includes a commitment by BT to update its plan of record on a regular basis. The plan of record will include information on interconnection and on deployment schedules for 21CN on a per-exchange basis. It will also include indicative roadmaps for SMP products to be supported on 21CN as well as three months advance notification of the introduction of new SMP products, except where different timescales are required due to specific SMP conditions or as otherwise agreed with Ofcom.
- 3.11 BT will publish the first of its quarterly plans of record under this agreement in early October 2008.
- 3.12 We believe the proposed variation addresses the key issues we highlighted in our TSR Review with respect to BT's NGN programme. We do not consider that this variation is material as it relates to clarifying requirements already included in the Undertakings. Further, we do not believe this variation will have a negative impact on the Undertakings. We believe this variation is important in supporting the effective deployment of products on 21CN that meet the requirements of communications providers and consider it will increase the transparency of the development and deployment of BT's 21CN. This increased transparency is in the interest of communications providers and consumers who use the services of these communications providers.
- 3.13 Therefore we propose to agree to this variation. The proposed wording of the variation is provided in Annex 6.

Question 1: *Do you agree to this proposed variation which will commit BT to publish guidelines for its Consult21 consultation process and to publish its NGN plan of record on a quarterly basis? If you do not, please explain why.*

Variation in respect of Openreach accommodation products and processes

- 3.14 Communications providers that provide broadband services based on LLU need to locate their equipment at the BT local exchange building (referred to in this variation as an MDF (Main Distribution Frame) site). There are currently over 4 million unbundled lines in the UK, and around 80% of the UK's population is connected to a local exchange in which at least one provider other than BT is located.
- 3.15 The processes and products supplied by Openreach to allow other communications providers to locate their equipment in the local exchanges are therefore vital in supporting the supply of services via LLU. These products comprise a number of elements including space, power, internal cabling and equipment racks.
- 3.16 In our TSR Review⁹ we highlighted a number of concerns related to the provision of space and power within BT exchanges for use by communications providers. These were:
- the lack of available space and power in some exchanges meaning orders from LLU providers were being rejected;
 - Openreach's control of the space and power processes was insufficient to allow it to meet the requirements of its customers;
 - space and power reservations being made by BT for its 21CN raised concerns relating to the availability of space for other communications providers; and
 - the Openreach co-mingling product was restricted to LLU use only, leading to inefficient use of space by communications providers.
- 3.17 We also highlighted that BT had recently set up a review of space allocation in exchanges where orders from LLU providers had previously been rejected due to lack of space availability. This process has shown that many previously rejected orders could be fulfilled. In many cases, the perceived lack of space was down to inaccurate records. In other cases, the process used was not flexible enough to highlight where space could be released given a modest amount of effort.
- 3.18 While we were encouraged by BT's initiative to review previous order rejections, we have subsequently discussed further improvements to the current space and power processes and products with BT and are proposing to agree to the changes set out below.

⁹ http://www.ofcom.org.uk/telecoms/btundertakings/tsr_statement/tsr_statement.pdf

Availability of space and Openreach control of space and power processes

- 3.19 Openreach will implement a proactive review process to assess the availability of space in local exchanges. This will identify the sites where Openreach and Ofcom believe LLU demand is most probable. The list of sites will be made available by Openreach for communications providers' information.
- 3.20 Openreach will provide this list of sites to BT's Operate division. BT Operate will review this list and highlight any sites where space may be limited. Openreach and BT Operate will then agree a rolling programme to survey these sites in order to confirm the accuracy of space records, establish whether more space can be made available and estimate the cost of creating more space. BT Operate will carry out this work based on planning instructions provided by Openreach. Openreach will sign-off that the reviews have been carried out to its satisfaction and will approve any work required to create additional space. Communications providers will be able to raise concerns about the reviews with the Equality of Access Board (EAB). The EAB will have an ongoing monitoring and audit role.
- 3.21 Openreach will allocate space and power associated with its Metallic Path Facility, Shared Metallic Path Facility and backhaul products on an EOI basis. Specifically, BT will follow the same process as other communications providers in requesting space for these products from Openreach and will be subject to the same planning rules for power.
- 3.22 For space allocated to other communications providers, Openreach will provide a product including racks and power. BT Operate will physically provide the racks and connect the power plant in a supply arrangement with Openreach.
- 3.23 For space allocated to BT, BT Operate will provide racks and power in accordance with the planning rules used by Openreach in allocating space and power. The physical provisioning activity carried out by BT Operate is not required to be carried out on an equivalent basis by the obligations in the Undertakings related to space and power.
- 3.24 Handover Distribution Frames (HDFs) and internal tie cabling will be provided by Openreach on an equivalent basis.
- 3.25 Openreach will publish guidelines detailing the approach it will adopt for the space and power allocation process, including the proactive review. These will include the way in which allocation will be achieved on an EOI basis, subject to this being on a first come first served basis. The guidelines will include the roles of Openreach and BT Operate in the space and power allocation process.
- 3.26 Ofcom believes this process will give Openreach control of the process for obtaining space for its customers' requirements as well as providing transparency to communications providers. We also believe it will address the high number of rejections that have occurred in the past by pro-actively identifying potential problems and, where feasible and commercially viable, putting in place a solution in time to satisfy new orders. It is, therefore, our view that despite Openreach not owning all accommodation assets, Openreach will be able to obtain sufficient space to meet the demands of its customers.

Space allocations for BT's 21CN

- 3.27 Openreach is also proposing to implement a new process for managing the allocation of space to BT's 21CN programme. This process will place a time limit on allocations for 21CN to ensure that space is used as efficiently as possible. In its plan of record, BT will publish a date by which its NGN equipment is due to be deployed at each exchange. Where the date is within 18 months, BT's space allocations will be firm. Where the date is further out than 18 months, the BT 21CN reservation will be tentative and will be relinquished if the space is needed by another communications provider to deploy LLU or a backhaul product.
- 3.28 Openreach will provide a space-only product which will allow communications providers to also reserve space up to 18 months in advance. The charges for this product will reflect the costs that BT incurs for similar space allocations for 21CN, in particular any rental and building lease charges and costs of security.
- 3.29 We believe this revised approach to reserving space addresses the issue raised in our review with regards to 21CN space allocation. We believe that a time window of 18 months is appropriate as BT needs sufficient lead-time to be able to plan its network and provide notice to consumers and communications providers of its migration plans, whilst time-limiting BT's ability to book space for future requirements.
- 3.30 Where the date for equipment deployment for BT's 21CN is further than 18 months away, we are of the view that it is appropriate to let existing reservations stay in place as tentative assignments. We believe that, to force the release and re-booking of this space would be disproportional and an inefficient use of resource. A process by which tentative bookings are released if there is demand for LLU or backhaul space from other communications providers achieves the same objective in a less intrusive manner. Consequently, our view is that a process utilising tentative bookings is more appropriate.

Flexibility of co-mingling portfolio

- 3.31 We believe that where Openreach products require a communications provider to house equipment in a BT exchange in order to connect to the access network or to connect the access network to the backhaul network, the space should be provided by Openreach as the underlying access products and the backhaul products are provided by Openreach. The most efficient way to achieve this is within a flexible accommodation product that allows multiple products provided by Openreach to use shared space.
- 3.32 Currently, Openreach's co-mingling product supports LLU related products. Any other space requirements are provided through other products (principally Netlocate) delivered by parts of BT other than Openreach. Openreach has agreed to consult with industry on revising the scope of the co-mingling portfolio to provide more flexible accommodation space. This variation commits BT, through Openreach, to consult on this more flexible portfolio and, subject to reasonable demand from communications providers, to develop it.

Openreach's approach to meeting these requirements

- 3.33 Openreach has commenced the proactive review process. It has also discussed with industry a change to the forecasting and ordering process, and is currently intending to trial an updated ordering process following the next quarterly

forecast in mid-2008. Additionally, Openreach has also presented its proposals for the space only product.

- 3.34 Openreach has also commenced engagement with industry about a more flexible co-mingling portfolio and has indicated to Ofcom that it hopes to launch a product in the middle of 2008. This engagement has included options to use Openreach provided space to support products provided by BT divisions other than Openreach, as well as to meet the requirements included in the proposed variation.

Variation text

- 3.35 The variation related to space and power will formalise as Undertakings obligations the engagement Openreach has commenced with industry. The variation will add two new sections to the Undertakings (Section 5.49 and 5.50) as follows:
- Section 5.49(a) will commit Openreach to launch a space-only product that will allow all communications providers to also book space for LLU or backhaul 18 months in advance of the 21CN implementation date. Section 5.49(g) will set out the requirement for 21CN space allocation, in particular the establishment of the 18 month horizon for 21CN space which will prevent long-term pre-booking of exchange space. Space allocations made in relation to the initial deployment of 21CN will become firm 18 months before the date for installation as documented in BT's plan of record for 21CN. Reservations for deployment beyond 18 months will be tentative and will be relinquished if another communications provider has an earlier requirement for LLU or backhaul that cannot otherwise be met;
 - Section 5.49(b) will include the obligation to develop guidelines detailing the approach Openreach will adopt for the co-mingling space allocation process. The guidelines will include a description of the space allocation process, an explanation of Openreach's control of the process and products and the role in the process that BT Operate will play;
 - Section 5.49(b) will also include the requirement to ensure space allocation for Metallic Path Facility, Shared Metallic Path Facility and backhaul products is carried out on an equivalence of Inputs (Eol) basis, subject to a first come first served approach;
 - Sections 5.49(c) – (f) will include the obligations to carry out proactive reviews of sites where space is in short supply in order to confirm that space records are accurate and to identify options to free up space. The EAB will monitor this process and in particular review those sites where space is constrained. The EAB's initial review will also include 20 randomly selected sites where space records indicate that there is sufficient space with the objective of validating the accuracy of the space records. Space allocations for 21CN will be included in the review process. The outcome of the review is subject to challenge by communications providers, who can raise concerns to the EAB. The EAB will have an ongoing monitoring, review and, if necessary, audit role; and
 - Section 5.50 will oblige Openreach to consult with industry on expanding the use of co-mingling space to accommodate equipment other than LLU equipment.

- 3.36 The proposed wording of the variation is provided in Annex 6.
- 3.37 We consider that this variation is likely to be important to communications providers because it addresses issues that have arisen in the provision of space and power to support LLU and other services since the Undertakings were agreed.
- 3.38 Ofcom does not believe this change to the Undertakings is material because the new requirements it adds to the Undertakings provide clarity around the processes that Openreach will follow in meeting its obligations to supply certain products. We do not believe that this has a negative impact on the solution provided by the Undertakings as it relates to the resolution of specific implementation issues that have arisen since the Undertakings were first agreed. The resolution of these issues will benefit communications providers as it will provide them with more effective access to, and utilisation of, accommodation within BT's local exchanges for the support of their services.
- 3.39 We believe this proposed variation addresses the issues we highlighted in our TSR Review. Consequently, Ofcom proposes to agree to this variation.

Question 2: *Do you agree to this proposed variation to provide more control of space and power products and processes to Openreach and to require BT to consult on a more flexible co-mingling portfolio? If you do not, please explain why.*

Variation in respect of a change to the requirements for physical separation of Operational Support Systems (OSS)

- 3.40 In our consultation on BT Operational Support Systems (OSS) separation published on 27 March 2007, we explained that Equality of Access comprises Equivalence of Inputs and Organisational Separation¹⁰. Physical separation of the systems used by each BT business unit is a very strong and practical method of ensuring that the operational separation required by the Undertakings is fully implemented.
- 3.41 During the period August 2006 to June 2007 Ofcom worked closely with BT to establish a Systems Separation Programme that would give confidence in meeting the date of June 2010 for complete physical separation of Openreach OSS from the rest of BT (RoBT). The resulting programme, the approach taken, and the interim milestones were documented in a Systems Separation Roadmap (Version 4). A subset of these Roadmap milestones was included in the variation which was signed by BT and Ofcom in June 2007¹¹.
- 3.42 BT's approach to separation is to build new physically separate operational systems for Openreach, BT Retail, BT Wholesale, and BT Global Services and move data that is currently in shared systems to the new systems. Existing shared systems will be closed or moved to a single Line of Business (LoB).

¹⁰ http://www.ofcom.org.uk/consult/condocs/bt_oss/btoss.pdf Sections 2.2 to 2.4 explain the concepts of Equivalence of Inputs and Organisational Separation, and the roles they play in delivering Equality of Access.

¹¹ http://www.ofcom.org.uk/consult/condocs/bt_oss/statement/statement.pdf

- 3.43 Systems separation is a major business and technology change that has the potential to impact adversely on customer service. The approach to separation includes specific activities to ensure that migrations are carefully planned and tested to minimise risk and avoid disruption to customer service. Delivery of the roadmap and its regular review with Ofcom are required by section 5.44 of the Undertakings.
- 3.44 Work has progressed on the Systems Separation Programme, some activities have been completed and more detailed analysis of specific areas has been carried out. This has resulted in a proposed solution to managing the shared fibre inventory which we highlighted as a complex issue in our statement in June 2007 in support of the OSS variation¹², and a proposed change to the approach for supply side separation of systems supporting voice services which changes the definition of two interim milestones. This information has been captured in a new version of the Systems Separation Roadmap (Version 5.0).
- 3.45 Ofcom does not consider these changes to be material as they do not affect the overall solution provided by the Undertakings. Physical separation is still planned to be completed by June 2010 except in a very limited case where such physical separation risks impacting customer experience. Ofcom is consulting on these changes to ensure transparency of the programme.

Shared Fibre Inventory Systems

- 3.46 When the June 2007 variation was agreed it was recognised that separating BT's fibre inventory systems posed a significant issue. Systems separation is a complex area with the potential to impact adversely on customer service for all communications providers. The statement we published when we agreed to variation 9¹³ referred to the need for BT and Ofcom to work together to agree a detailed solution. That work has progressed and is documented in Version 5 of the Systems Separation Roadmap.
- 3.47 The challenge has arisen because BT has historically built its network for maximum efficiency and not separation. This means that ducts, cables, fibres and transmission equipment have been configured into a network that optimises the use of these assets. Where economic, a duct or cable or transmission route has been utilised for a complete range of services – including BT's core network, Inter Exchange Links, Retail services, Wholesale services and Openreach services. This shared network carries services for BT, for Openreach and for other communications providers. Retrospective separation of these assets into Openreach and the rest of BT would be very expensive and present a major risk to customer service for all communications providers.
- 3.48 The Undertakings therefore did not require the physical separation of the networks but did require OSS separation. OSS was defined to include network management systems including those holding the asset information.
- 3.49 Analysis of the possibility of OSS separation of the asset systems raised a number of concerns. The most significant was the ability of BT to restore service quickly following a Major Service Outage (MSO), such as a duct or fibre route being damaged; the loss of a key network node; or a major transmission equipment failure. Under such conditions a series of well rehearsed processes

¹² http://www.ofcom.org.uk/consult/condocs/bt_oss/statement/statement.pdf

¹³ http://www.ofcom.org.uk/consult/condocs/bt_oss/statement/

are initiated. For BT Operate to be able to diagnose the root cause of the problem and restore service they have to assess how to re-route and reconfigure services to restore service avoiding the cause of the initial failure. This requires an understanding of which services and customers have been affected, alternative equipment on which service can be reinstated, and information on physical routing, redundancy and separation to ensure restoration will not be impacted by common equipment.

- 3.50 Addressing network failures requires a complete picture of the network which is currently held in a small number of shared systems. It is the complete view of the network provided by this small number of systems that allows BT Operate to diagnose and respond to such incidents very rapidly and in some cases automatically.
- 3.51 If an MSO occurred and the information on Openreach and BT Operate assets were placed in separate systems, BT Operate would have to request information from Openreach in order to build a holistic view of the network and develop appropriate recovery plans. This interchange would introduce a significant delay into the recovery period. There is also the risk that because the data is held separately it could become inconsistent and this would not be discovered until during the MSO, adding delay to the recovery process. It is Ofcom's view that the benefits of asset separation would not justify the significant risks of disruption to the rapid restoration of service following an MSO. The size and scale of the BT Network is such that an MSO occurs approximately daily.
- 3.52 Consequently, Ofcom has worked with BT to develop a solution which does not disrupt the recovery from major incidents, gives BT no commercial advantage, and maximises the level of separation.
- 3.53 The proposed solution introduces a new "Service Level Information" approach that fully separates the inventory of BT Retail, BT Wholesale, and BT Global Services from Openreach. This will ensure that the rest of BT is able to access Service Level Information about their products and services on their own systems whilst ensuring a point of equivalence is created between Openreach and BT Operate/BT Design (where these divisions support Openreach) on the one hand and the rest of BT on the other, in respect of Physical Layer Information. As a result all communications providers benefit equally from the retention of the current processes for rapid restoration of service.
- 3.54 The solution allows a small number of BT Operate systems to hold data provided by Openreach, enabling the complete view of the network which is essential to enable the rapid repair and restoration of service following a MSO.
- 3.55 The proposed solution will minimise the amount of shared data. This shared data will be provided on a read-only basis to BT Operate. It will also minimise the number of users with access to that data and only allow access for specific defined tasks. Access will be controlled by user access controls that will be subject to regular audit.
- 3.56 Ofcom believes the approach for managing the shared fibre inventory is a pragmatic solution to a complex issue. Whilst the solution does allow for some limited sharing of systems, we believe this is more than offset by the much reduced risk of service disruption that would have affected all communications providers.

- 3.57 We have taken care to ensure that the solution has some important safeguards that mean BT has no competitive advantage. The introduction of Service Level Information ensures that all BT business units are treated exactly the same as other communications providers. Shared access is kept to the minimum number of users for specific tasks – this access will be controlled by user access controls and subject to regular internal and independent audit.
- 3.58 We do not consider this change to be material. We explained in our statement that agreed to variation number 9¹⁴ that we had included a sub-clause (Section 5.44.2 of the Undertakings) to allow for the possibility that separating fibre inventory systems may carry a high risk of impacting customer experience and that we would therefore work with BT to investigate other solutions. Therefore, this proposed variation adds to the previous sub-clause. We do not believe this proposed variation has a negative impact on the Undertakings because this added clarity will increase transparency to communications providers of the solution that will be provided by BT.

Variation text

- 3.59 The variation will add a new section, Section 5.44.6 to the Undertakings. Section 5.44.6(a) requires BT to put in place User Access Controls to limit access to the fibre inventory systems to only those employees within BT Design and BT Operate that need access to the systems. The specific systems will be listed in a new Annex to the Undertakings, Annex 6.
- 3.60 Section 5.44.6(b) requires BT to provide a physically separate system to provide access to Service Level Information data for the rest of BT. This system will also be subject to User Access Controls.
- 3.61 Section 5.44.6(c) will provide for the EAB to audit the fibre inventory systems listed in Annex 6 of the Undertakings to ensure access is limited to users in BT Design and BT Operate with a strict requirement to access the Physical Layer Information.
- 3.62 In addition, Sections 5.44.1 and 5.44.2 will be updated to reflect the agreement that the fibre inventory systems will not be completely physically separated.
- 3.63 For the avoidance of doubt, the new section 5.44.6 does not vary BT's obligation under sections 5.38, 5.39 or 5.46 of the Undertakings and nothing in the Undertakings shall prevent Openreach from accessing a rest of BT Operational Support System for the purpose of ordering components required for the supply of Openreach services.
- 3.64 We therefore propose to agree to this variation. The proposed wording of the variation is provided in Annex 6.

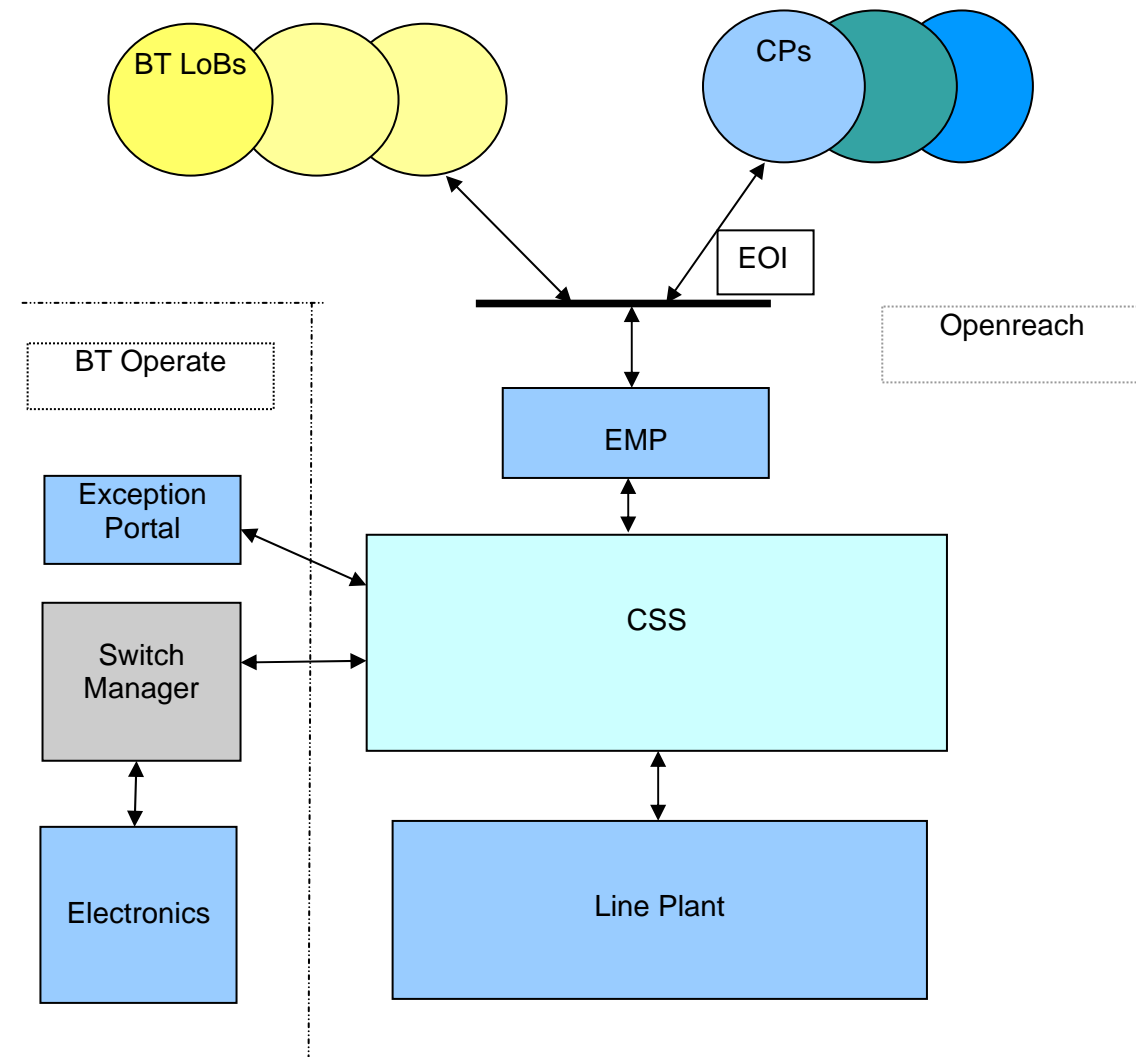
Question 3: *Do you agree with the proposed variation in respect of BT's fibre inventory management systems? If you do not, please explain why.*

¹⁴ http://www.ofcom.org.uk/consult/condocs/bt_oss/statement/statement.pdf

Supply Side Separation of Voice Services

- 3.65 Voice services are supported and managed by BT's largest system, the Customer Support System (CSS). Separating this system means removing all data which is not owned by Openreach: i.e. data owned by BT Retail, BT Global Services, BT Wholesale and BT Operate. Some of the data to be removed refers to the voice products components that BT Operate supplies to Openreach – such as the electronics. This is referred to as supply side data and the separation of this data as supply side separation.
- 3.66 Supply side separation requires the migration of 28 million data items and the separation of CSS from Switch Manager (the network management system that configures the voice elements in BT's network). BT registered concerns that there could be significant disruption to customer service in going ahead with the planned re-engineering of this complex, high volume interface. Ofcom considered these concerns legitimate.
- 3.67 A new solution has now been developed which significantly reduces the risk of customer disruption while still delivering full physical separation. The new approach retains the existing electronic interface between CSS and Switch Manager. Already around 97% of transactions between these two systems are handled automatically, without the need for user access.
- 3.68 BT Operate users historically needed access to CSS to progress the remaining 3% of transactions, consisting of a limited number of exceptions:
- Faulty Exchange Equipment – allocated equipment missing or faulty;
 - Numbering – problem with number or number range; and
 - Non automated, low volume, complex products – e.g. ISDN30.
- 3.69 The need for this access will be removed by a two pronged solution:
- by transferring selected people with the appropriate skills from BT Operate into Openreach so that Openreach can deal with some of the exceptions; and
 - the remaining exceptions which still require intervention by BT Operate people will be sent to a new BT Operate Portal system separate from CSS.

Figure 1: Proposed Supply Side Systems solution



3.70 Implementation of these solutions will make CSS an Openreach only system accessed only by Openreach users. Switch Manager will become a BT Operate only system accessed only by BT Operate users. Figure 1 shows how the new solution will be used by Openreach to meet the needs of both BT and all communications providers, so that all communications providers will benefit from the reduced risk and disruption that the new approach provides.

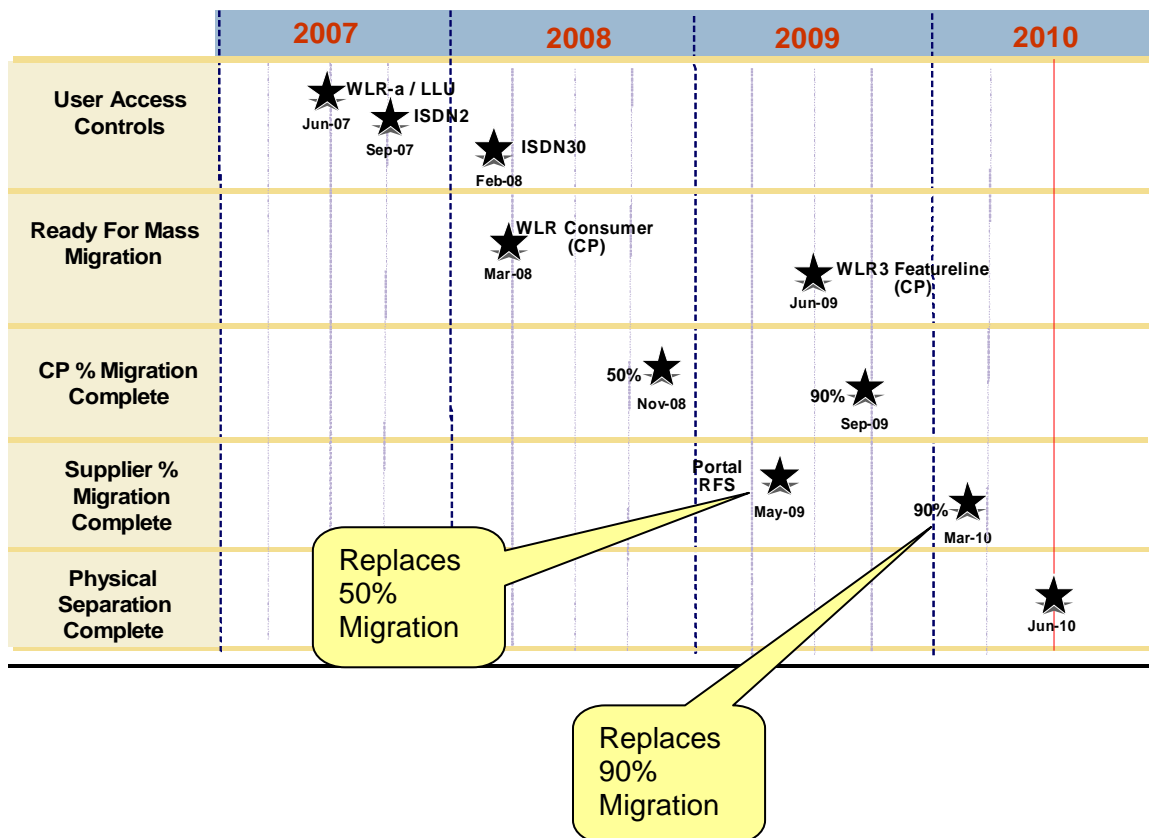
3.71 Section 5.44.3 (e) of the Undertakings (as amended by variation 9)¹⁵ currently requires BT to migrate 50% of Supply Side Records onto physically separated systems by 31 May 2009. Section 5.44.3 (g) of the Undertakings (as amended by variation 9)¹⁶ currently requires BT to migrate 90% of Supply Side Records onto physically separated systems by 31 January 2010.

¹⁵ http://www.ofcom.org.uk/consult/condocs/bt_oss/statement/statement.pdf

¹⁶ http://www.ofcom.org.uk/consult/condocs/bt_oss/statement/statement.pdf

- 3.72 In the revised approach described in this Consultation, records are no longer migrated and therefore rate of record migration is not a valid measure of progress. A new measure is required - users migrated.
- 3.73 The variation proposes to replace the 50% supply side migration complete milestone in section 5.44.3(e) of the Undertakings with a ready for service milestone for the new portal that will allow BT Operate users to be moved off CSS. The date remains 31 May 2009.
- 3.74 The variation also proposes to replace the 90% supply side migration complete milestone in section 5.44.3(g) of the Undertakings with a milestone for the migration of 90% of users to the new portal. The date is changed from 31 January 2010 to 31 March 2010.
- 3.75 Figure 2 below shows the updated Systems Separation Variation milestones, with the new milestones in place of the two Supply Side Migration Progress Variation milestones.

Figure 2: Updated Milestones



- 3.76 This new solution still delivers full separation of systems between Openreach and the rest of BT whilst avoiding re-engineering the complex and high volume interface between Switch Manager and CSS. Ofcom believes this removes a major risk to service for all communications providers as well as BT customers.
- 3.77 We do not believe this variation to be material because it does not vary the date by which physical separation of supply side systems separation for voice

services must be achieved. The change is to make the interim milestones reflect the proposed approach towards achieving this separation, which we believe reduces the potential risk for customer impact of the process of separation.

Variation text

- 3.78 The variation text updates section 5.44.3 of the Undertakings. In Sections 5.44.3(e) and 5.44.3(g), the wording "Measured Products" is replaced with the following list of products: Wholesale Extension Service, Backhaul Extension Service, Wholesale Extension Service Backhaul Product, Wholesale Extension Service Access Product and Wholesale End-to-End Ethernet Service. The purpose of this change is to remove voice services from the list of products subject to the milestones for migration of supply side records onto physically separated OSS in Sections 5.44.3 whilst maintaining the requirement for the listed products.
- 3.79 Two new subsections will be added to Section 5.44.3. Section 5.44.3(i) requires BT to have in place the exception handling system described above by 31 May 2009. Section 5.44.3(j) will require BT to have migrated 90% of users off the shared systems and onto the new exception handling system by 31 March 2010. The completion of this migration will be required to meet the 30 June 2010 date already included in the Undertakings in Section 5.44.2 so no further variation is required to bring this into effect.
- 3.80 We therefore propose to agree to this variation. The proposed wording of the variation is provided in Annex 6.

Question 4: *Do you agree with the proposed variation in respect of separation for supply side systems for voice services? If you do not, please explain why.*

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 30 July 2008**.
- A1.2 Ofcom strongly prefers to receive responses using the online web form at <http://www.ofcom.org.uk/consult/condocs/variatioons/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 cover sheet 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 cover sheet.
- A1.4 Responses may alternatively be posted or faxed to the address below, marked with the title of the consultation.
- Steve Perry
Floor 4
Ofcom
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 5. It would also help if you can explain why you hold your views.

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 (when respondents confirm on their response coversheet that this is acceptable).

- A1.9 All comments will be treated as non-confidential unless respondents specify that part or all of the response is confidential and should not be disclosed. Please place any confidential parts of a response in a separate annex so that non-confidential parts may be published along with the respondent's identity.
- A1.10 Ofcom reserves its power to disclose any information it receives where this is required to facilitate the carrying out of its statutory functions.
- A1.11 Please also note that copyright and all other intellectual property in responses will be assumed to be licensed to Ofcom to use in order to meet its legal requirements. Ofcom's approach on intellectual property rights is explained further on its website at <http://www.ofcom.org.uk/about/accoun/disclaimer/>

Next steps

- A1.12 Following the end of the consultation period, Ofcom intends to publish a statement in September 2008.
- A1.13 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

- A1.14 Ofcom seeks to ensure that responding to a consultation is easy as possible. For more information please see our consultation principles in Annex 2.
- A1.15 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.
- A1.16 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. In general the summary will be of no more than two pages, although in this Consultation we have included sufficient detail in the summary to outline the issues and Ofcom's proposed course of action for each of the proposed variations, resulting in a slightly extended summary. 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. In this case, given the scope of the consultation we believe a period of 6 weeks is sufficient.

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, we will publish all consultation responses in full on our website, www.ofcom.org.uk, unless a respondent specifies that all or part of their response is confidential. We will also refer to the contents of a response when explaining our decision, without disclosing the specific information that you wish to remain confidential.
- 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 by allowing you to state very clearly what you don't want to be published. We will keep your completed coversheets confidential.
- 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 confidential parts of your response in a separate annex to your response, so that they are clearly identified. 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 coversheet 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

What do you want Ofcom to keep confidential?

Nothing	<input type="checkbox"/>	Name/contact details/job title	<input type="checkbox"/>
Whole response	<input type="checkbox"/>	Organisation	<input type="checkbox"/>
Part of the response	<input type="checkbox"/>	If there is no separate annex, which parts?	

DECLARATION

I confirm that the correspondence supplied with this cover sheet is a formal consultation response. It can be published in full on Ofcom's website, unless otherwise specified on this cover sheet, and I authorise Ofcom to make use of the information in this response to meet its legal requirements. 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

Impact Assessment

A4.1 We have explained in section 3 our position on why we believe the proposed variations should be agreed. These arguments are summarised below.

Variation related to consultation principles and plan of record publication for BT's Next Generation Network

A4.2 The proposed variation provides obligations on BT to follow published principles when it consults on its 21CN deployment. We believe this is in the interest of all communications providers, including BT, in order to ensure consultations are clear and the opportunity for misunderstandings or misrepresentation is minimised. Given that consultations carried out by BT in relation to 21CN deployment may be complex in nature, we believe clarity of information and purpose is essential.

A4.3 We believe this variation will provide transparency to the consultation process and will act to ensure the design of 21CN and 21CN products meet the requirements set out in section 11 of the Undertakings.

A4.4 The requirement to publish a plan of record on a regular basis further supports this objective. This will ensure all communications providers have access to all the up to date information they require in order to be able to plan their services and interconnects with BT's 21CN.

A4.5 We therefore believe this variation is in the interest of all communications providers including BT and the consumers of services offered by these providers.

Space and power Variation

A4.6 Access to accommodation in BT's local exchange is essential to LLU providers to allow them to deploy their equipment. Several issues with gaining such accommodation were flagged in our TSR Review. These issues were flagged to us by LLU operators during the data gathering for that review.

A4.7 The proposed variation addresses each of these issues. We believe it will make the accommodation allocation processes more transparent to CPs and will result in fewer orders being rejected. It will also allow CPs to use the space they are allocated more efficiently because, subject to consultation by Openreach with communications providers, the Openreach co-mingling portfolio will be more flexible in the products and equipment it supports.

A4.8 Therefore, we expect that the variation will have a positive impact on communications providers, allowing them to continue to provide products to consumers based on their own equipment rather than on the BT network where they choose to deploy their own networks. Competition at the local exchange level is consistent with Ofcom's policy of promoting infrastructure competition at the deepest level where it is efficient and sustainable.

OSS Variation

A4.9 The changes proposed in the variation have not compromised the level of physical separation set out in the original undertakings. It was always anticipated that a

minimal level of sharing would be required to avoid major disruption to service on the shared fibre inventory. The change of approach to supply side separation still delivers full systems separation but with a much reduced risk of disruption to customer service. Any disruption to service would have impacted all communications providers.

- A4.10 The agreed approach for managing the shared fibre inventory is a pragmatic solution to a complex issue. The solution does allow for some limited sharing of systems but Ofcom believes this is more than offset by the much reduced risk of service disruption that would have affected all communication providers.
- A4.11 Ofcom has taken care to ensure that the agreed solution has some important safeguards that mean BT has no competitive advantage. The introduction of Service Level Information ensures that all BT business units are treated exactly the same as other communications providers. Shared access is kept to the minimum number of users for specific tasks – this access will be controlled by user access controls and be subject to regular internal and independent audit.
- A4.12 The new solution that has been developed for supply side separation of telephony services still delivers full separation of systems between Openreach and the rest of BT but avoids re-engineering the complex and high volume interface between Switch Manager and CSS. Ofcom believes this removes a major risk to service for all communications providers as well as BT customers.

Annex 5

Consultation questions

Question 1: Do you agree to this proposed variation which will commit BT to publish guidelines for its Consult21 consultation process and to publish its NGN plan of record on a quarterly basis? If you do not, please explain why.

Question 2: Do you agree to this proposed variation to provide more control of space and power products and processes to Openreach and to require BT to consult on a more flexible co-mingling portfolio? If you do not, please explain why.

Question 3: Do you agree with the proposed variation in respect of BT's fibre inventory management systems? If you do not, please explain why.

Question 4: Do you agree with the proposed variation in respect of separation for supply side systems for voice services? If you do not, please explain why.

Annex 6

Proposed legal wording for variations

Proposed variation related to consultation principles and publication of the plan of record in relation to BT's Next Generation Network (NGN)

WHEREAS:

- (a) British Telecommunications plc ('BT') has given Ofcom certain undertakings ('the Undertakings') which took effect on 22 September 2005, pursuant to the Enterprise Act 2002;
- (b) by virtue of section 18.1 of the Undertakings, BT and Ofcom may from time to time vary and amend the Undertakings by mutual agreement;
- (c) BT and Ofcom have agreed to vary the Undertakings as hereinafter appears.

NOW THEREFORE:

It is hereby agreed between BT and Ofcom pursuant to section 18.1 of the Undertakings that the Undertakings are varied as follows:

- 1. Definitions and interpretation
 - 1.1 Words or expressions hereinafter appearing have the same meanings as in the Undertakings.
 - 1.2 References hereinafter to section numbers are references to section numbers in the Undertakings.
- 2. Variations to the Undertakings
 - 2.1 Section 11.14 is amended by deleting the word "existing" before the word "Consult21".
 - 2.2 A new section 11.14A is inserted as follows:
 - a) BT will set out in published guidelines the consultation principles it will follow for consultations related to BT's NGN.
 - b) These principles will include the setting out of the objectives of each consultation and the questions it will ask, the decisions they will inform, the timescale and process for responses, and how responses will be considered to ensure

transparency. They will provide for a minimum consultation period of two weeks, other than in exceptional circumstances. They will also provide for publication of a statement explaining the decisions made, with clear linkages to the questions raised in the consultation.

- c) BT will publish its NGN plan of record every three months, with the first plan of record to be published within the first 15 calendar days of October 2008. This will include information on points of interconnection, migration plans (on an exchange by exchange basis) moving from the current network to its NGN, and indicative non-binding roadmaps over two years for SMP products linked to BT's NGN.
 - d) BT will announce projected launch dates at least three months before launch of SMP products over its NGN, unless other regulatory obligations impose a different lead-time or as otherwise agreed with Ofcom.
- 2.3 Section 10.9 is amended by replacing the words "and the operation of AS" with the words ", the operation of AS and the process set out in section 11.14A".
- 2.4 Section 11.20 is amended by adding at the end of the section a new sentence: "Nothing in these Undertakings shall impede the flow of information reasonably required to allow BT to comply with its obligations under section 11.14A."
- 2.5 Section 11.14A shall only apply during the period in which BT will design, build and implement its NGN.

3. Effect

- 3.1 These variations of the Undertakings take effect on [to be inserted] 2008.

Signed for and on behalf of British Telecommunications plc

Signature _____
Name _____
Position _____
Date _____

Signed for and on behalf of Ofcom

Signature _____
Name _____
Position _____
Date _____

Proposed variation related to space and power

WHEREAS:

- (a) British Telecommunications plc ('BT') has given Ofcom certain undertakings ("the Undertakings") which took effect on 22 September 2005, pursuant to the Enterprise Act 2002;
- (b) By virtue of section 18.1 of the Undertakings, BT and Ofcom may from time to time vary and amend the Undertakings by mutual agreement; and
- (c) BT and Ofcom have agreed to vary the Undertakings as hereinafter appears.

NOW THEREFORE:

It is hereby agreed between BT and Ofcom pursuant to section 18.1 of the Undertakings that the Undertakings are varied as follows:

1. Products and services supplied by Access Services

New sections 5.49 and 5.50 shall be inserted as follows:

"Exchange space and power

5.49 In relation to space and power:

- (a) AS will develop and launch a space-only-allocation product on an Equivalence of Inputs basis which will enable Communications Providers to pre-book and have Metallic Path Facility, Shared Metallic Path Facility and/or Backhaul Product space allocated to them in an MDF site for an appropriate charge. The maximum duration of the space-only-allocation product is 18 months, after which time the space will be released if the Communications Provider has not placed a firm build order for space for either its Metallic Path Facility, Shared Metallic Path Facility and/or Backhaul Product equipment.
- (b) AS will develop and publish guidelines detailing the approach it will adopt for the space and power allocation process for Metallic Path Facility, Shared Metallic Path Facility and/or Backhaul Products. The approach for allocating space and power will be on an Equivalence of Inputs basis, subject to this being on a "first come first served" basis. The guidelines will include a description of the space and power allocation process for Metallic Path Facility, Shared Metallic Path Facility and/or Backhaul Products, and the roles of AS and BT Operate (acting on behalf of AS).
- (c) The guidelines will also set out the process for reviewing Metallic Path Facility, Shared Metallic Path Facility and/or Backhaul Products space availability on a proactive basis where space is in short supply with a view to verifying the space records and identifying options to free up space (the "Proactive Review"). Space

allocated to be used for BT's NGN within the next 18 months will be included in considering MDF sites where space is in short supply.

- (d) BT Operate will carry out the Proactive Review based on planning instructions provided by AS, which will decide which options to implement to free up space. The Proactive Review will focus on a list of MDF sites agreed between Ofcom and BT, from time to time, as the most probable locations for Metallic Path Facility, Shared Metallic Path Facility and/or Backhaul Products space demand. This list of MDF sites will be published in accordance with the space and power allocation guidelines.
- (e) Communications Providers whose Metallic Path Facility, Shared Metallic Path Facility and/or Backhaul space requirements have not been met under the space allocation process may raise concerns with the EAB about the outcome of the Proactive Review, including where the Proactive Review occurs pursuant to section 5.49 (g).
- (f) The EAB will periodically monitor the Proactive Review process and in particular review those MDF sites where space is constrained. The EAB's initial review will also include 20 randomly selected MDF sites where space records indicate that there is sufficient space. Subsequent periodic reviews will be based on a random sample of MDF sites. The EAB also has the right, if necessary, to audit the operation of the Proactive Review process.
- (g) Where AS identifies a conflict for Metallic Path Facility, Shared Metallic Path Facility and/or Backhaul Product space between BT's NGN and other Communications Providers' requirements for space, and the BT NGN date as published in the NGN plan of record is more than 18 months away, the BT NGN space allocation will be released provided the space is needed to meet a Communications Provider's earlier Metallic Path Facility, Shared Metallic Path Facility and/or Backhaul Product space requirement firm build order.
- (h) Other divisions of BT will not be required to use the Equivalence of Inputs space-only-allocation product for space allocated in connection with the initial deployment of NGN as documented in the NGN plan of record. All other allocations for Metallic Path Facility, Shared Metallic Path Facility and/or Backhaul Product space by BT will be required to use the Equivalence of Inputs space-only-allocation product.

5.50 AS will consult with industry with regard to changing the scope of the existing co-mingling product within the definition of Associated Services and/or launching a new space product to allow for a more flexible use of space specifically to enable Communications Providers to house in that space either their Metallic Path Facility, Shared Metallic Path Facility and/or Backhaul Product equipment connected to the BT network and used in connection with AS' regulated Metallic Path Facility, Shared Metallic Path Facility and/or Backhaul Product services. Following industry consultation, AS will make such changes to the existing Metallic Path Facility and Shared Metallic Path Facility co-mingling product within the definition of Associated Services and/or launch a new Metallic Path Facility, Shared Metallic Path Facility and/or Backhaul Product space product, unless there is no reasonable demand from one or more other Communications Providers for such a space product or unless otherwise agreed with Ofcom.

2. Other modifications to the Undertakings

- A. Section 2.1 "Definitions" is amended by adding the following new definitions:

“**MDF site**” means a BT site at which one or more Main Distribution Frames is located.”

and

“**Proactive Review**” means the AS process set out in section 5.49(c)”.

- B. Section 10.11 on the EAB’s role is modified by inserting a new paragraph 10.11.8 as follows:

“10.11.8 shall review reports of the EAO on its periodic monitoring of the Proactive Review process relating to space as set out in sections 5.49(e) and (f), including the conclusions of any investigations into Communications Providers’ concerns relating to the space allocation process;”

3. Definitions and interpretation

Words or expressions in this Agreement have the same meaning as in the Undertakings.

References in this Agreement to section numbers are references to section numbers in the Undertakings.

For the avoidance of doubt, processes for the actual provision of Associated Services are not subject to Equivalence of Inputs insofar as that provision is carried out by a part of BT other than AS.

Notices

Notices to be given under this Agreement shall be in writing.

Signed for and on behalf of British Telecommunications plc

Signature _____

Name _____

Position _____

Date _____

Signed for and on behalf of Ofcom

Signature _____

Name _____

Position _____

Date _____

Proposed variation related to physical separation of certain Operational Support Systems

WHEREAS:

- (a) British Telecommunications plc ('BT') has given Ofcom certain undertakings ('the Undertakings') which took effect on 22 September 2005, pursuant to the Enterprise Act 2002;
- (b) by virtue of section 18.1 of the Undertakings, BT and Ofcom may from time to time vary and amend the Undertakings by mutual agreement;
- (c) BT and Ofcom have agreed to vary the Undertakings as hereinafter appears.

NOW THEREFORE:

It is hereby agreed between BT and Ofcom pursuant to section 18.1 of the Undertakings that the Undertakings are varied as follows:

1. Definitions and interpretation

- 1.1 Words or expression hereinafter appearing have the same meanings as in the Undertakings
- 1.2 References hereinafter to section numbers are references to sections numbers in the Undertakings.

2. Variations to the Undertakings

Variation on supply side separation of voice services

- 2.1 In section 5.44.3 (e) delete "Measured Products" and replace with "Wholesale Extension Service, Backhaul Extension Service, Wholesale Extension Service Backhaul Product, Wholesale Extension Service Access Product, and Wholesale End-to-End Ethernet Service".
- 2.2 In section 5.44.3 (g) delete "Measured Products" and replace with "Wholesale Extension Service, Backhaul Extension Service, Wholesale Extension Service Backhaul Product, Wholesale Extension Service Access Product, and Wholesale End-to-End Ethernet Service".
- 2.3 Insert the following new sub-sections into section 5.44.3:
 - "(i) implement physically separate Operational Support Systems for users within BT divisions other than AS who access Operational Support Systems to deal with manual exception tasks for Wholesale Analogue Line Rental, Wholesale ISDN2 Line Rental, Wholesale ISDN30 Line Rental supply functions. These physically separate Operational Support Systems shall be available for first use by no later than 31 May 2009;

(j) ensure that 90% of users within BT divisions other than AS who access Operational Support Systems to deal with manual exception tasks for Wholesale Analogue Line Rental, Wholesale ISDN2 Line Rental, Wholesale ISDN30 Line Rental supply functions are migrated to physically separate Operational Support Systems by 31 March 2010."

Variation on Operational Support Systems containing Physical Layer Information and Service Level Information

2.4 Insert into section 2.1:

"Physical Layer Information" means information about Physical Layer assets either under the control and operation of AS for the purposes of section 5.12 or which is managed by AS on behalf of the rest of BT.

"Service Level Information" means information required for the operational management of a service or product, or a Transmission Layer input into a service or product."

2.5 Delete and replace section 5.44.1 with "ensure that all its Operational Support Systems designed for AS are designed on the principle of separation from the rest of BT systems except for those Operational Support Systems listed in Annex 6, in accordance with section 5.44.6".

2.6 Delete and replace section 5.44.2 with "physically separate its Operational Support Systems such that these systems are run physically separately for AS and the rest of BT by 30 June 2010 other than those Operational Support Systems listed in Annex 6, in accordance with section 5.44.6".

2.7 In section 5.44.5 insert after "in section 5.44.3(a)" the words "and section 5.44.6".

2.8 Insert the following new section 5.44.6:

"Unless and insofar as an alternative solution is agreed with Ofcom, on or before 30 June 2010:

- (a) implement User Access Controls to those Operational Support Systems listed in Annex 6 that contain Physical Layer Information or Service Level Information such that access to that information is limited to BT employees:-
 - (i) working for AS; or
 - (ii) working for BT Operate or BT Design to ensure the efficient design, planning, building, maintenance and removal of the Access Network, BT's Backhaul Network and BT's other electronic communications networks, efficient network incident management and resolution, or for the provision of Transmission Layer assets utilised by AS in the provision of its products; or
 - (iii) who are nominated individuals (if any), or individuals occupying the roles and functional areas (and their relevant external advisers, subcontractors and agents) listed in Part A and Part B of Annex 2.

For the avoidance of doubt AS shall be responsible for and control the Physical Layer Information contained in those Operational Support Systems listed in Annex 6.

- (b) ensure that where there is an operational need for BT people other than those referred to in sub-section (a) to access Service Level Information contained in an Operational Support System listed in Annex 6 that the information shall only be accessed via a physically separate Operational Support System and BT shall implement User Access Controls to such Operational Support Systems.
- (c) The EAB shall carry out periodic checks on a quarterly basis, unless BT and Ofcom agree in consultation with the EAB to extend the periodic review interval up to a maximum of 6 months, to monitor access to the Operational Support Systems listed in Annex 6, in accordance with sub-paragraphs (a) and (b) above, to ensure that there was a valid reason for access. The EAB will also, at the same time, confirm the total number of users who have accessed the Annex 6 systems at that specific time and report this figure to Ofcom.

2.9 Insert a new Annex 6 to the Undertakings which will list BT's Operational Support Systems the subject of this variation as follows:

“Annex 6

List of shared Operational Support Systems

OSS Name:	OSS Description:
Exchange Records in BT (BerT)	BerT is used to record the physical inventory of Transmission and 21CN related equipment in BT exchange buildings.
Core Cable Management System (CCMS)	CCMS holds fibre Core Cable records for the whole of the UK, it provides data into systems like NETRISK to support separacy checks.
Fibre Repair Analysis Centre (FRAC)	FRAC is a fault report database that tracks information pertaining to fibre optic faults.
Integrated Network System (INS)	INS supports planning, assignment and maintenance of the Analogue and PDH network. Used for the planning and routing of Wideband provisions and BT's PSTN Core Network. This includes the SDH Physical Bearer Network, WDM Bearer Network, and 21CN Networks. Provides facilities to design, repair and route circuits, record transmission equipment and fibre information and check seperacy/diversity requirements.

The National Cable Database (NCD)	NCD holds all data relating to the design, planning and provision of network cables.
The Network Decision Support Database (NDS)	NDS provides scheduled and ad-hoc operational management information reports and data extracts relating to the network and switches. It is widely used for provision, problem management, network management, and resource management purposes.
NETRISK	NETRISK records inter-exchange fibre cable routes down to duct level (i.e. box to box records), and reports the results of physical separacy checks as risk ids between specific routings or cable ids passing though a given duct structure.
Physical Inventory Planning E-Records (PIPeR)	PIPeR will in time hold all BT's internal and external physical inventory in support of the planning process.
Planning And Recording Modernisation (PRM)	PRM is used by BT's planners to plan network changes. It contains scanned raster images of BTs external network overlaid on a geographic map base of UK.
Mobile Infrastructure Planning Tool (MIPT)	MIPT is a planning tool used for 3rd Generation Mobile networks. It overlays information about BTs network onto UK maps to support shared infrastructure planning decisions.
Common Infrastructure System (CIS)	CIS is a web based tool which provides reports based solely on CCMS information. These may include e.g. the core cables in a particular manhole or duct.

Or such successor or replacement Operational Support System, or such additional Operational Support Systems as may be added by agreement between BT and Ofcom.”

Notices

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Signed for and on behalf of British Telecommunications plc

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Name _____

Position _____

Date _____

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Signature _____

Name _____

Position _____

Date _____