



BT OSS Separation

Proposed Amendments to Section 5 (separation of systems shared between Openreach and the rest of BT) of the Enterprise Act Undertakings given by BT to Ofcom

Consultation

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Contents

Section		Page
1	Executive Summary	2
2	Background	5
3	Systems separation and Equality of Access	7
4	Proposals	12
5	Impact of Variation and Next Steps	19
Annex		Page
1	Draft Variation Document	22
2	Responding to this consultation	26
3	Ofcom's consultation principles	28
4	Consultation response cover sheet	29
5	Consultation questions	31

Section 1

Executive Summary

- 1.1 On 22nd September 2005, BT Group plc ('BT') offered and Ofcom accepted a set of undertakings ('the Undertakings') pursuant to Section 154 of the Enterprise Act 2002 in lieu of a reference of certain markets to the Competition Commission. The acceptance of the Undertakings was aimed at addressing Ofcom's competition concerns in these markets through, *inter alia*, the implementation of what has been termed "Equality of Access" for all communications providers.
- 1.2 The physical separation of operational support systems ('OSS') currently shared between Openreach and the rest of BT is a key part of Equality of Access as it reduces the capability and incentive of BT for non-price discrimination. As such Section 5.44 of the Undertakings requires BT to:
 - Physically separate Openreach OSS from the rest of BT by 30th June 2010;
 - Design all new Openreach systems to be separate from the rest of BT;
 - In the interim, until full physical separation is achieved, deliver a logically separate OSS capability for certain product groups according to binding milestones;
 - Review regularly with Ofcom a roadmap for achieving physical separation.
- 1.3 As a result of reviewing this roadmap, Ofcom is proposing to agree with BT a variation to Section 5.44 of the Undertakings and is consulting on this proposed variation. The aim of the variation is to strengthen the effectiveness of the Undertakings in the long term by introducing a series of binding interim milestones from now until the completion date of 30th June 2010. These binding milestones enable progress towards physical separation to be measured at key stages in the programme, thereby providing visibility of, and the opportunity to mitigate, any risks that might jeopardise either the final delivery of full physical separation by 30th June 2010 or the customer experience in the interim.
- 1.4 Although system separation is often seen as a purely technical task, the demands it makes for rigorous examination of business relationships, interfaces, processes, data and organisations are at the heart of running a business and therefore, in the case of BT, what it means to achieve full operational separation. As part of implementing physical separation BT has therefore put in place a wide reaching business change programme that is intended to deliver separation not only of systems but in cultural, business, process and organisational terms as well, leading to real operational separation.
- 1.5 Given the technical complexity of physical separation, the changes it requires to BT's business and the role these OSS play in enabling BT to interact with and manage its customers, there is a risk of detrimental impact on the consumer service experience. A key objective in the development of the roadmap and its review between Ofcom and BT is to understand and mitigate this risk. To this end 'Ready to Mass Migrate' milestones are included in the proposed variation; they mark the point at which the preparation and testing of the operational capability to support mass migration at the required volumes without detriment to consumers will have been completed. Ofcom's view is that the protection of the consumer experience during the migration process

should be one of our primary objectives: customers must have uninterrupted access to service even as data is migrated. Considerable emphasis is therefore placed on balancing the speed of physical separation with minimising the risk of customer disruption.

- 1.6 A primary concern is to ensure that physical systems separation helps deliver the benefits of operational separation to industry and consumers without detriment to the consumer experience. In order to ensure that physical separation is being delivered effectively, Ofcom has examined BT's approach to systems separation. BT are implementing physical separation in accordance with their long term strategy for their systems estate, that is to say they are building new physically separate operational systems for Openreach and the rest of BT, and moving data that is currently in shared systems to these new systems, closing legacy systems where possible. It is our view, supported by independent expert scrutiny, that at this stage, this approach is the most effective in terms of achieving physical separation as early as possible consistent with minimising the risk to the consumer experience.
- 1.7 BT will implement physical separation progressively; volume migration began in June 2006, and peaks in 2008/9 leaving a "tail" to be completed in 2010. It will therefore take several years, but will have to be achieved by 30th June 2010, the date originally set in the Undertakings. In the interim BT will implement strengthened user access controls for EOI products supported on shared systems. Given this, and the increased transparency resulting from the binding milestones, Ofcom no longer considers it necessary to require the implementation of a logically separate OSS capability, previously included to reflect the need to protect against non-price discrimination in the period up to full physical separation. It is our view that, with the appropriate audit measures in place, BT's implementation of user access controls, together with other measures set out in the Undertakings, can provide proportionate protection against non-price discrimination prior to full physical separation on 30th June 2010. These audit measures must include regular internal audit reporting to the Equality of Access Board ('EAB'), which shall report any issues to Ofcom, and external audit on at least two separate occasions.
- 1.8 Ofcom proposes and BT agrees to vary the Undertakings such that the binding milestones indicated in the table below are included. In this table, customer side relates to the migration of data pertaining to real end-customers (e.g. other CPs and consumers) and supply side relates to the migration of BT Wholesale data in its role as supplier to Openreach (e.g. for the supply of electronics used in Openreach products).

Table 1 Binding milestones towards physical separation

User Access Controls	WLR Analogue, SMPF, MPF ¹	WLR ISDN2 ¹	WLR ISDN30 ¹
	30 th June 2007	30 th Sept 2007	30 th Dec 2007
Ready to Mass Migrate	PSTN Customer Side	Featureline Customer Side	
	31 st March 2008	30 th June 2009	
Migration Progress	Customer Side		Supply Side
	50% migrated	90% migrated	50% migrated 90% migrated
	30 th Nov 2008	30 th Sept 2009	31 st May 2009 31 st Jan 2010
Physical Separation Complete	June 2010		

¹ Applicable to EOI products

Section 2

Background

- 2.1 On 22nd September 2005, BT offered and Ofcom accepted pursuant to Section 154 of the Enterprise Act 2002² undertakings in lieu of a reference of certain markets to the Competition Commission (“the Undertakings”). The Undertakings 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 The Undertakings address the competition concerns identified in the Strategic Review of Telecommunications (“the Review”), *inter alia*, through the implementation of what has been termed “Equality of Access” for all communications providers (‘CPs’).
- 2.2 Equality of Access consists of two concepts: Equivalence of Inputs to products for CPs, and operational separation, which includes the creation of a separate division within BT referred to as “AS” in the Undertakings and operating under its brand name Openreach. The Undertakings explicitly recognise the importance of systems in delivering both parts of Equality of Access for CPs.
- 2.3 In the definition of Equivalence of Inputs the Undertakings state:
- “Equivalence of Inputs” or “EOI” means that BT provides, in respect of a particular product or service, the same product or service to all Communications Providers (including BT) on the same timescales, terms and conditions (including price and service levels) by means of the same systems and processes, and includes the provision to all Communications Providers (including BT) of the same Commercial Information about such products, services, systems and processes. In particular, it includes the use by BT of such systems and processes in the same way as other Communications Providers and with the same degree of reliability and performance as experienced by other Communications Providers”.
- 2.4 The second aspect of Equality of Access, operational separation, is mainly concerned with ensuring that Openreach acts as a separate division within BT as required, *inter alia*, by Section 5.23 of the Undertakings. Operational separation includes the effectiveness of “Chinese Walls” between the different parts of the BT organisation, making sure that Commercial Information (“CI”) and Customer Confidential Information (“CCI”), as defined in the Undertakings, is not inappropriately shared across BT, both between Openreach and the rest of BT, and within the rest of BT, as well as the separation of BT’s Management Information and Operational Support Systems.
- 2.5 The Undertakings therefore set out certain requirements and deadlines for the physical separation of operational support systems currently shared between Openreach and the rest of BT as follows:

² <http://www.opsi.gov.uk/acts/acts2002/20020040.htm>

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

BT shall

5.44.1 - ensure that all its Operational Support Systems designed for AS are designed on the principle of separation from the rest of BT systems;

5.44.2 – ensure that AS will have a logically separate Operational Support Systems capability that supports Wholesale Analogue Line Rental, Shared Metallic Path Facility and the Metallic Path Facility by June 2007, Wholesale ISDN2 Line Rental by 30 September 2007 and Wholesale ISDN30 Line Rental by 31 December 2007. The rigour of such separation shall be tested through an external audit.

5.44.3 – 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; and

5.44.4 – review on a regular basis with Ofcom achievement on a roadmap for separation referred to in Sections 5.44.1, 5.44.2 and 5.44.3.

- 2.6 In this consultation Ofcom seeks views on its proposals for varying the above sections of the Undertakings. According to Section 18.1 of the Undertakings, BT and Ofcom may, from time to time, vary the Undertakings by mutual agreement. Section 155 of the Enterprise Act 2002 requires that Ofcom consults where it proposes to amend the Undertakings in a material respect. Ofcom's view is that the proposals do not alter the Undertakings materially because they relate only to a small part of the Undertakings, which only deals with interim measures while physical separation of OSS is being implemented, and that the proposals do not effect the overall operation of the Undertakings in a material way. Consequently, Ofcom does not consider that there is a legal requirement to consult on this occasion. However, because of the level of interest the proposal may generate with stakeholders, it is appropriate to consult. Ofcom does not intend to consult on all non-material amendments to the Undertakings, and will decide whether or not to consult on such amendments in the future on a case by case basis. Given the significance of OSS to operational separation, a six week consultation is appropriate in this case.

Section 3

Systems separation and Equality of Access

Operational Support Systems

- 3.1 OSS are defined in the Undertakings as "those support systems carrying out the functions and processes which help to run a network and business, including (but not limited to) pre-ordering, taking a customer's order, configuring network components, creating a bill and managing faults." They therefore cover (but are not limited to) Sales, Marketing, Pre-Ordering, Order Management, Service Management, Network Management, Workforce Management, Customer Service, Billing and Payments. They are critical to any business but particularly to today's communications providers where every transaction is carried out by or supported by systems with little or no manual fallback: when systems are 'down' customers will often find themselves unable to verify bills, for example, or obtain a date for new service delivery. In many CPs, OSS are undergoing a constant programme of change as new products are launched, new technologies such as IP are introduced, existing systems technologies become obsolete and need replacing, and as processes and organisations are developed and changed. OSS also form a central part of a communication provider's interaction with their customers, the way in which they manage the relationship with their customers, and the provision and ongoing operation of a customers' services. As such OSS underpin all of the interactions and business relationships a customer has with its communication provider resulting in a significant potential for consumer detriment should they fail.
- 3.2 OSS for communications providers are very complex because of the large volumes of customers and transactions they support, the complexity of the services they enable, the requirement for continuous availability and the need for high levels of reliability. For example BT's main OSS, called Customer Support System and known as CSS, typically carries out 150 thousand customer orders and generates 500 thousand customer bills per day. Some OSS are 'proprietary' having been developed within an organisation, often over time and undergoing many changes and modifications to keep them in step with the changing needs of the business. These are often known as "legacy" systems. They may be critical to the day to day operation of the business but difficult to enhance as a result of the many changes they have undergone and the ageing technology on which they are based.

Contribution of physical separation of systems to operational separation

- 3.3 The way in which an organisation operates is, as the nomenclature implies, heavily dependent on the OSS within that organisation. Although physical separation of systems is often seen as a purely technical task the demands it makes for rigorous examination of business relationships, interfaces, processes, data and organisations are at the heart of running a business and therefore, in the case of BT, what it means to achieve operational separation. As part of implementing physical separation for OSS, BT has therefore put in place a wide reaching business change programme that is intended to deliver separation not only of systems but also separation in cultural, business, process and organisational terms as well, leading to real operational separation.

- 3.4 In addition to promoting separation at the cultural, business, process and organisation level, physically separating the OSS ensures clear interfaces to business functions, enabling greater transparency in monitoring non-price discrimination.

Contribution of systems separation to Equivalence of Input

- 3.5 The separation of systems shared between Openreach and the rest of BT also contributes to the delivery of equivalence of input by helping to ensure that CPs receive the same inputs as BT Wholesale, in respect of the same level of access to Openreach systems. This contribution is explicitly recognised in the definition of Equivalence of Input given in the Undertakings and cited in Section 2.3 of this consultation. Until physical separation is achieved, user access controls enable systems separation for the purpose of delivering EOI.
- 3.6 Our main concern with regard to the implementation of physical separation is that it delivers these benefits. In order to form a view as to the viability of the implementation, and the best points at which to monitor progress during the implementation, it is useful to understand at a high level the way in which physical separation is being implemented.

BT's implementation of physical separation

- 3.7 BT's approach to implementing the physical separation of its OSS is to build new physically separate operational systems for Openreach 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').

The main elements of this implementation process are: -

- Build new recipient systems and databases - the new systems and databases to which data from the legacy systems and databases will be migrated - in Openreach, and the rest of BT that are designed to work in the context of a separate Openreach.
 - Redesign the end to end processes to allow for cross business working via gateways replacing the access via shared systems.
 - Re-engineer the donor systems - the legacy systems from which data is migrated to the new systems - to support the new processes and electronic gateways.
 - Train the users (e.g. Service Agents) on the new processes and systems to enable them to deal with new "separated" customer transactions
 - Migrate data and applications to the new or re-engineered systems.
- 3.8 There are two major migration types: "Customer side migrations" where data relating to RoBT products that consume Openreach services is moved from a BT shared OSS to a separate RoBT OSS and "Supply side migrations" where data relating to BT Wholesale in its role as supplier to Openreach (e.g. for the supply of electronics used in Openreach products) is moved from a BT shared OSS to a separate RoBT system. To complete separation BT must carry out over 35 million customer migrations and over 25 million supply side migrations from shared systems. The remaining data is then owned by Openreach exclusively.

- 3.9 A specific example helps to illustrate the distinction between customer and supplier side data. A customer of BT's existing "classic" PSTN will have a customer service record, which currently resides on the shared Customer Support System (CSS). Post separation to the EOI product this service will be provided using WLR Analogue from Openreach. The customer side migration involves separating the associated data relating to BT's retail PSTN service to separate BT Retail systems. The remaining data on CSS relates only to the supply of WLR Analogue by Openreach to CPs. This includes exchange based service data owned by BT Wholesale and used to configure the voice switch as part of BT Wholesale's supplier role to Openreach. To achieve full separation, this BT Wholesale data is migrated to separate BT Wholesale systems via supply side migration. Now separation is complete: Openreach data for the supply of WLR Analogue remains on CSS whereas the associated BT Retail PSTN (customer side) data and BT Wholesale (supplier side) data is on separate systems.
- 3.10 Once a customer service record has been migrated to the new LoB systems the new processes come into operation. The LoB users are then accessing separate applications and data on physically separate systems. Completing over 60 million migrations will take a considerable time and it is not until the last record has been migrated the shared systems finally become fully physically separated.
- 3.11 Physical systems separation is a major business and technology change that has the potential to disrupt customer service. BT's plan for physical separation therefore includes specific activities to ensure that migrations are carefully planned and tested to minimise risk and avoid disruption to customer service: customers must be able to enjoy continued access to service whilst data is migrated.
- 3.12 BT's approach is in-line with their pre-Undertakings strategy for implementation of a service-oriented architecture for each business unit. It therefore has the benefits of minimising incremental expenditure for physical separation as well as the disruption to consumers, which multiple systems change might involve. In Ofcom's view, it represents an acceptable trade off between the speed of implementing OSS physical separation and the risk to consumers.

Alternatives to BT's implementation of physical separation

- 3.13 A number of alternative options have been considered in an attempt to find a faster route to physical separation, including cloning, outsourcing, alternative technology platforms and third party suppliers as described below. These options were re-examined by Ofcom and an expert independent IT consultant.
- 3.14 Cloning would replicate separate instances of systems and applications within Openreach and the rest of BT allowing the data to be separated on each of the cloned instances in-line with the requirements of the Undertakings. As the systems are well understood retraining of operations staff, systems support staff and customer service agents is greatly simplified. However, this cloning and the subsequent separation of data would not deliver physical separation substantially faster than BT's proposed implementation. The duplication of legacy systems, which have high operational and maintenance costs and are due for replacement with the deployment of the 21CN⁴ would represent a waste of investment in the long term.
- 3.15 Outsourcing the development of a set of new Openreach systems from scratch would deliver the objectives for physical separation and has been deployed by BT in some

⁴ 21CN is the name given to BT's deployment of a Next Generation technology in its core network.

areas for specific products. However, this approach would not eliminate the lengthy process of migrating data for Openreach's large customer base. Given that Openreach's operations are ongoing any new systems would have to operate at full scale from day one with this migrated customer data. An outsourced development may deliver a radical and cost effective solution with a more timely deployment than BT's proposed implementation; however this solution may be at odds with BT's overall approach to systems evolution resulting in unforeseen system and process issues at a later date.

- 3.16 The use of a third party supplier or so called "bureau service" to support Openreach business processes on its systems would ensure physical separation of Openreach systems from the rest of BT. The use of such a service would not eliminate the need to separate Openreach customer data from the rest of BT's and then migrate it to the bureau systems, and the initial time required to set up and implement such systems. A high level of integration between a "bureau service" operated system and Openreach's network components, such as line test facilities would also be required. The degree of integration would be manpower intensive, time consuming and costly for both Openreach and the "bureau service" provider. Such a level of integration could lead to contractual tie-in concerns for either organisation entering into a supplier agreement. Given the need to carry out the initial separation and the subsequent migration of data of customer data, it is Ofcom's view that a bureau service does not provide any advantage over BT's chosen implementation.
- 3.17 Ofcom accepts therefore that given the available timeframe and the progress already made on the current approach none of the alternatives offer significant improvements in timescales and some have considerable disadvantages in terms of risk to the consumer experience or stranded investment. The proposed implementation is in-line with BT's overall approach to systems evolution for its 21CN deployment and programme of product rationalisation: build new separate systems, migrate to these systems and closedown old systems. Ofcom's view is that the integrity of the consumer experience must be the priority during the migration process.

Ofcom's approach to the varying of the Undertakings

- 3.18 Section 154 of 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 Stage 2 Consultation Document⁵ ('the Review'). In considering the case for varying the Undertakings, Ofcom must consider whether this solution is materially and negatively affected by the variation in question.
- 3.19 The importance of physical systems separation was reflected in the Undertakings and, until such physical separation for OSS was achieved, an interim solution was included. Since then, BT has implemented a comprehensive review of its systems estate and developed a roadmap for the process to achieve physical separation of all OSS shared between Openreach and the rest of BT by 30th June 2010. The next section proposes how certain milestones in the roadmap can be incorporated into the Undertakings in order to improve the transparency of the progress to physical separation, reduce the risk to the consumer experience, and further demonstrate to CPs that systems physical separation is making operational separation a reality and therefore contributing towards the achievement of real Equality of Access.

⁵ http://www.ofcom.org.uk/consult/condocs/telecoms_p2/tsrphase2/

- 3.20 As stated in Paragraph 2.6, Ofcom does not consider the proposed variation to be material and it therefore follows that the variation does not in anyway materially affect the comprehensive solution that the Undertakings represent. Furthermore Ofcom considers that the variation will not have a negative impact on the comprehensive solution and in particular Equality of Access. In Ofcom's view the variation will strengthen the effectiveness of the Undertakings in the long term: the binding interim milestones increase the transparency of BT's progress to achieving the key Equality of Access requirement of physical system separation. As such, they reduce the risk both to industry of missing the physical separation deadline and to consumers of disruption to the service experience. The user access controls backed by regular internal and independent external audit, provide protection against non-price discrimination in the interim, whilst the increased transparency also helps competitive providers prepare the process and systems changes they must make work with BT's physically separated systems and supporting processes.

Section 4

Proposals

BT's roadmap for physical separation

- 4.1 System separation is both critical to achieving operational separation and represents a significant challenge for BT. Recognising this, the Undertakings required that BT reviewed on a regular basis with Ofcom a roadmap showing progress towards the delivery of physical separation. BT has now developed and shared with Ofcom a near final draft of the required roadmap describing how and when physical separation will be achieved; and established a formal company wide programme and a plan for delivering physical separation. This roadmap will be formally issued at the end of March. As it is detailed, and since it contains information which is commercially sensitive, it is not appropriate to require it to be shared with industry. However, in order to evaluate the appropriateness of the roadmap milestones to be incorporated in the variation to the Undertakings it is useful to have an understanding of the way in which physical separation is being implemented. Additionally, transparency of progress towards physical separation is a necessary part of demonstrating to CPs that operational separation is becoming a reality. For this reason we are including some key points of interest from the roadmap in this section.

BT's programme management

- 4.2 The physical separation of BT's systems involves significant programmes covering business units, products team, company wide management, risk management, and governance processes. These are described below:

Business units

- 4.3 Openreach has a programme of work to develop an independent set of systems that will enable it to operate as a separate operational organisation within BT at the required scale and performance. The Openreach programme also covers the necessary co-ordination with the BT lines of business ('LoBs') to migrate data and applications to the new physically separate systems.
- 4.4 Each of the other LoBs - BT Wholesale, BT Retail, BT Global Services and BT Group - have a programme of work to deliver the changes necessary to implement physical separation. Each line of business programme has strong business and operational involvement. This is essential as the changes required to implement physical separation are not purely technical but require re-definition of business relationships, formal product and service definitions, process re-engineering, retraining and change management.

Product teams

- 4.5 The Product and Portfolio teams are also included within the overall programme since the portfolio will affect the speed and risk of separation. A significant part of the "tail" of the migration process, described in the next section, is due to complex products and their combined use by certain groups of customers.

Company wide management

- 4.6 In order to achieve physical separation the individual LoBs and Openreach need to co-ordinate and cooperate to allow shared data to be migrated to the new separate systems without any disruption to customer service. This alignment is managed by the company wide programme, led by a senior and full-time programme director and supported by a senior full-time programme manager. They have a dedicated programme team who work with the various business teams and technology teams to ensure that all the required activities are planned and executed according to the roadmap shared with Ofcom.
- 4.7 The roadmap sets out significant changes to BT's major OSS. These systems have many other changes taking place to support other business programmes. The company wide programme team has ensured that the changes required for physical separation have been prioritised and built into the change programmes of all the major OSS.
- 4.8 There are many other major change programmes under way within BT, such as the launch of the 21st Century Network, which could overlap or impact on the physical separation programme. The central programme team will continuously monitor progress towards separation and in relation to the other major programmes in order to minimise their impact and where possible leverage synergies between the programmes. The physical separation programme will be sufficiently independent of other programmes to ensure that the roadmap timetable is met.

Risk management

- 4.9 The physical separation programme is complex and has the potential to disrupt customer service. For this reason particular attention has been given to identifying all known risks, their likelihood, and the potential impact on the programme and consumers. A plan has been defined for the mitigation of each identified risk and an owner has been assigned to execute this plan, if required. These risks will be regularly reviewed and reassessed at the planned progress reviews.

Governance process

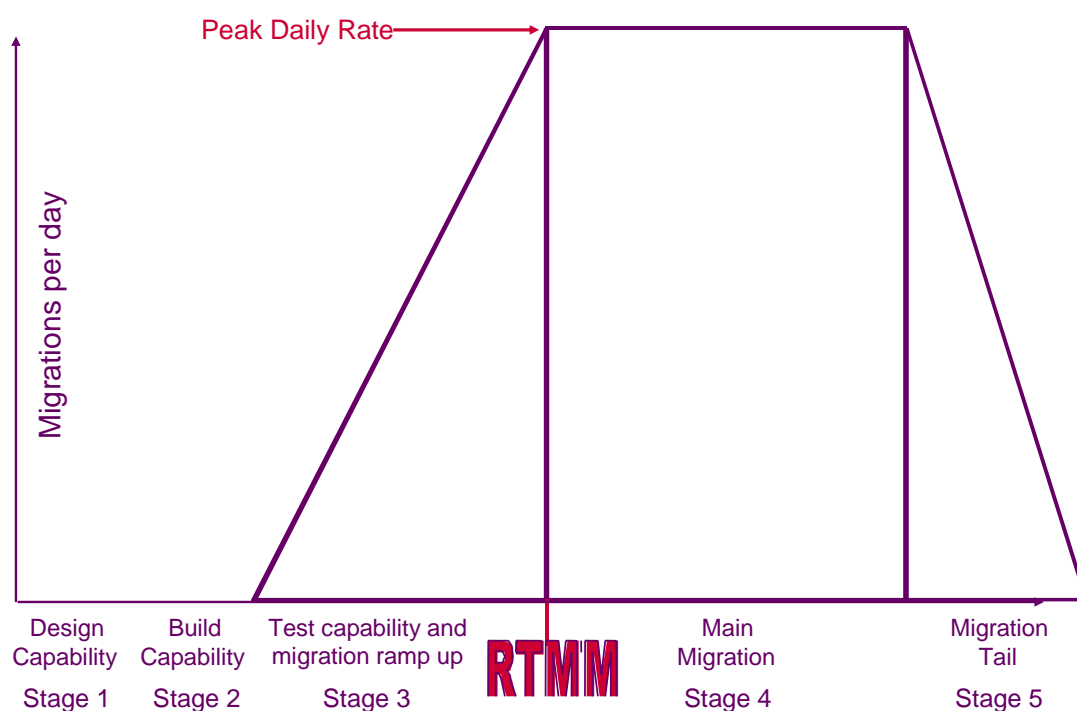
- 4.10 The process for physical separation of OSS has high visibility at the most senior levels within BT. The progress of physical separation will be regularly reviewed by BT's internal systems steering committee and reported to BT Group Undertakings Forum - the steering forum with overall responsibility for setting BT's direction in relation to the Undertakings. Ofcom will review progress against the roadmap with BT on a regular basis.

The process of separation

- 4.11 There are five major stages to achieving physical separation as shown in the diagram below and outlined here:
- 1) Firstly, it is necessary to design the separated systems and supporting processes and interfaces, including those for migration;
 - 2) After being designed, the systems, process and interfaces must be built in each line of business and the users must be trained. This stage ensures the operational capability for separate systems is in place;

- 3) The third stage is to test this capability, including trial migrations, until there is confidence that mass migration can occur without negative impact on the consumer experience. This point is defined as “Ready to Mass Migrate” (‘RTMM’);
- 4) Next, the mass migration stage is entered with automated transfer of data and applications to the new separate systems at high volume. This volume may fluctuate going forward;
- 5) There will usually be a small number of complex customers and legacy services which are not amenable to automated volume migration. These will need special and sometimes manual intervention to successfully migrate. These are managed as a “tail” migration after the main mass migration.

Figure 1: The process of separation (illustrative)



4.12 In addition there are two major migration types: **customer side migrations** where data relating to real end-customers is moved to BT Wholesale, BT Retail, and BT Global Services; and **supply side migrations** where data relating to BT Wholesale in its role as supplier to Openreach (e.g. for the supply of electronics used in Openreach products) is separated between BT Wholesale and Openreach systems. To complete separation, BT must carry out over 35 million customer migrations and over 25 million supply side migrations. Once a customer service record has been migrated to the new LoB systems the new processes come into operation. The LoB users are then accessing separate applications and data on physically separate systems. Openreach generally retains control and exclusive use of the remaining data records, however in some cases these records are migrated to a new separate system also. Completing the over 60 million migrations will take a considerable time and it is only once the last record has been migrated that the shared systems become fully separated.

Measuring progress

- 4.13 The creation of the roadmap supported by a detailed plan has led to the definition of many working level activities and milestones. Ofcom proposes to include a certain number of legally binding milestones from this roadmap in the Undertakings. This will have the benefit of increasing transparency of the physical separation process. The milestones focus on readiness to migrate, mass migration and the implementation of user access controls.

Demonstrating readiness to migrate

- 4.14 Ready to Mass Migrate milestones occur at the end of Stage 3 when the new systems capability is complete, the end to end processes have been re-engineered, the first wave of users have been trained, several pilot migrations of varying volume have been made and any corrective action identified and completed. At this point mass migration can commence. It should be noted however that once commenced the rate of migration may fluctuate as appropriate. These milestones are not only a useful measure of progress but an important quality control checkpoint.
- 4.15 Within the roadmap there are many RTMM milestones for the various product groups and types. It is useful to distinguish between PSTN migration readiness and business product migration readiness as this helps identify the consumer groups who may be impacted during progress. Additionally, BT's business products often use different systems and processes from PSTN. Featureline is proposed as an appropriate product to give visibility of the point at which a volume business product is ready for mass migration. Whilst Featureline is of declining importance in competition terms, as new customers take up IP based services, it has a significant installed base and will therefore provide an important measure of readiness to mass migrate.
- 4.16 We therefore propose to agree with BT the following milestones:
- Ready to Mass Migrate PSTN customer side - 31st March 2008
 - Ready to Mass Migrate Featureline customer side - 30th June 2009

Measuring the rate of migration

- 4.17 During the migration phase, progress is measured by the percentage of migrations that have been completed. It is useful here to distinguish between customer side migration and supply side migration. This is because they are the subject of two separate migration activities and measure two different aspects of the capacity for non-price discrimination. In migrating customer side records, BT Retail and BT Wholesale as a customer of Openreach and competitor to other CPs, are separated. In migrating supply side records BT Wholesale as a supplier to Openreach (e.g. for the supply of electronics used in Openreach products) is separated. There are also different degrees of impact on the BT Service Agents and other users of BT systems. Once Customer Side migration is complete it separates a large number of users from accessing shared data – approximately 16,000. The Supply Side migration, which will occur later in the plan, separates a smaller number of users – approximately 3000. There is also some difference in the number of migrations involved: over 35 million on the customer side and over 25 million on the supply side. Two migration progress measures are proposed:
- Customer Migration Progress - the percentage of customer side migrations that have been completed

- Supply Side Migration Progress – the percentage of supply side migrations that have been completed
- 4.18 There is clearly some burden in identifying and measuring each data record migration as it is completed. For some complex or rarely used products this burden may not justify the contribution it makes to the overall migration progress assessment. We therefore propose to agree with BT that the measure consider the following set of products which make up the vast majority of customer records (98%):
- Wholesale Analogue Line Rental
 - Wholesale ISDN2 Line Rental
 - Wholesale ISDN30 Line Rental
 - Metallic Path Facility
 - Shared Metallic Path Facility
 - Wholesale Extension Service
 - Backhaul Extension Service
 - Wholesale Extension Service Backhaul Product
 - Wholesale Extension Service Access Product
 - Wholesale End-to-End Ethernet Service.
- 4.19 Having determined the measure, the best points in the migration process to monitor progress were considered. Clearly the end of migration process is an important milestone – systems are then separate. However that end will be delayed for some months because of the “tail” of more complex customers and services which may affect relatively few customers and therefore customer records. For this reason it is useful to also mark the point at which 90% or the vast majority, of migrations have been completed. In addition, marking the point at 50% of migrations have been completed, the half way mark is proposed. The following milestones for the migration period are proposed for agreement with BT:
- 50% Customer Side Migration Complete – 30th November 2008
 - 90% Customer Side Migration Complete – 30th September 2009
 - 50% Supply Side Migration Complete – 31st May 2009
 - 90% Supply Side Migration Complete – 31st January 2010
- 4.20 The Undertakings already include a date for all systems to be physically separated and it has been Ofcom's firm intention throughout to retain this milestone:
- All Systems Physically Separated – 30th June 2010

Application of access controls during separation

- 4.21 During the period up to the 2010 deadline for physical separation BT will implement interim measures via user access controls. These controls restrict access to data on applications and systems shared between Openreach and the rest of BT and will only be applied to the following EOI products: Wholesale Analogue Line Rental, SMPF, MPF, Wholesale ISDN2 Line Rental and Wholesale ISDN 30 Line Rental.
- 4.22 BT's implementation of user access controls, in common with standard industry practise, is based on three key features: **user identification** when users access a system, **user profiles** which define what a given user can do and **data tagging** which associates an item of data with a particular Line of Business. Any transaction attempting to access data that is protected will fail without impact to the operation of the system in question and not return the protected data. Any access control system must also include a strict regime policing the means of access. BT has and will put in place measures to ensure that user identification and profiles are kept up to date and that there is a formal procedure for gaining access to user profiles. Whilst this should give reassurance to CPs that there is protection against non-price discrimination whilst separation is being implemented, it should also be noted that BT's cultural and organisational changes also provide protection against non-price discrimination during this period.
- 4.23 Ofcom is satisfied that BT's implementation of user access controls, together with other measures set out in the Undertakings, provides proportionate interim protection against non-price discrimination when supported by a rigorous audit regime and therefore requires that BT's implementation of user access controls should be subject to regular internal audit by BT, reporting to the EAB, which shall in turn report any issues to Ofcom. In addition, the user access controls must be subject to an independent, external audit focussing on risk assessment, solution design, implementation assessment and ongoing controls to be completed by 30th June 2008 and a secondary additional independent, external audit focussing on the ongoing application of user access controls before the end of the interim period. Given this, and the increase transparency resulting from the binding milestones, Ofcom no longer considers it necessary to require the implementation of a logically separate OSS capability, previously included to reflect the need to protect against non-price discrimination in the period up to full physical separation.
- 4.24 Ofcom proposes to agree with BT the following milestones for the implementation of these user access controls for the following EOI products:
- Wholesale Analogue Line Rental, SMPF and MPF - 30th June 2007
 - Wholesale ISDN2 Line Rental - 30th September 2007
 - Wholesale ISDN30 Line Rental - 31st December 2007

Summary of proposals

- 4.25 It is proposed to include the milestones set out in the table below in the Undertakings. The user access controls will be the subject of an audit regime based on regular internal, and at least two external audits reporting to Ofcom and the EAB.

Table 2: Binding milestones towards physical separation

User Access Controls	WLR Analogue, SMPF, MPF ⁶	WLR ISDN2 ⁵	WLR ISDN30 ⁵	
	30 th June 2007	30 th Sept 2007	30 th Dec 2007	
Ready to Mass Migrate	PSTN Customer Side		Featureline Customer Side	
	31 st March 2008		30 th June 2009	
Migration Progress	Customer Side		Supply Side	
	50% migrated	90% migrated	50% migrated	90% migrated
	30 th Nov 2008	30 th Sept 2009	31 st May 2009	31 st Jan 2010
Physical Separation Complete	June 2010			

Question 1: Do you agree with the proposals to vary the Undertakings contained in this Consultation?

⁶ Applicable to EOI products

Section 5

Impact of Variation and Next Steps

The impact of the Variation

- 5.1 In assessing the potential impact of the proposed variation, the impact on the Undertakings has been considered, which as discussed in Section 2.1, form a comprehensive solution to the competitive concerns identified by the Strategic Review of Telecommunications. Ofcom's view is that overall, the proposed variation does not have a material impact on the Undertakings and in this section we set out why this is the case.

Impact on the Undertakings

- 5.2 The proposed variation sets out a series of binding milestones in BT's implementation of the pre-existing Undertaking for physical separation of OSS. This strengthens the effectiveness of the Undertakings in the long term: the binding interim milestones increase the transparency of BT's progress to achieving the key Equality of Access requirement of physical system separation. As such, they reduce both the risk to industry of missing the physical separation deadline and to consumers of disruption to the service experience whilst the increased transparency also helps competitive providers prepare the process and systems changes they must make to work with BT's physically separated systems and supporting processes.
- 5.3 The variation describes how user access controls will be implemented during the separation period up to physical separation, and how they will be backed by regular internal and independent external audits. Together with the organisational and cultural changes which physical separation requires, the variation helps ensure that there is reasonable protection against non-price discrimination by BT until physical separation is achieved.
- 5.4 The variation therefore gives greater confidence that the 30th June 2010 deadline for physical separation will be met and that there will be protection against non-price discrimination in the meantime. It does not change the deadline for physical separation nor the achievement of Equality of Access. Overall, Ofcom does not consider the proposed variation to be material and it therefore follows that the variation can not in any way materially impact the comprehensive solution that the Undertakings represent.

Impact on consumers

- 5.5 Ofcom has a duty to promote the interests of consumers and citizens (where appropriate through competition) and in developing the proposals set out in this consultation document we have sought to ensure that the consumer interest is protected. The process of migrating over 60 million consumer data records to separate systems does represent a potential risk to continuity and quality of the consumer service experience. Minor errors or glitches in the transfer of data could result in consumers not receiving the right services or being billed for the wrong services. The variation helps reduce this risk in two ways:
- The 'RTMM' milestones indicate clear check points at which all operational resources should be ready to receive new customer data and support migrated

customers. By reviewing the results of the migration ramp up test period, BT and Ofcom will be able to assess the risk in moving to mass migration, and

- The ready to mass migrate and progress milestones are divided by customer and product groups, allowing problems to be more easily identified and isolated.

Impact on BT

- 5.6 As BT implements physical separation it will redefine the relationship between Openreach and the rest of BT for all business and residential customers. It will re-engineer legacy processes to use the new separated systems and dismantle the historic integration enabled by access to shared systems. This will contribute to the effective operational separation necessary to make Equality of Access a reality.
- 5.7 BT's implementation of physical systems separation is in line with its pre-Undertakings plans for the implementation of a separate service-oriented architecture for each business unit. This approach therefore minimises the incremental cost of systems separation, reducing the burden on BT.
- 5.8 The roadmap and associated milestones enable BT to monitor progress effectively internally, and ongoing review with Ofcom should encourage focus on the requirements of Equality of Access. The variation also describes the user access control measures to be taken by BT as an interim measure during the period that the systems are being physically separated and requires external audit which should help give confidence to the rest of industry that these controls are adequately enforced.
- 5.9 In addition the roadmap reflects BT's approach to systems separation which, by its incremental nature, promotes stability of systems and should reduce the cost of implementation.

Impact on competitive providers

- 5.10 The milestones will help CPs prepare for the changes to systems, with which they interface, and the supporting processes and interfaces, which are a consequence of the physical separation of BT's OSS. The variation does not impose any additional costs on CPs as these changes would have occurred in any case but the milestones will give clear visibility around which they can plan. Where there are impacts on CPs from BT's separation plans such as closure of shared gateways BT will consult with CPs in advance in accordance with its existing obligations. In addition, there is some interdependency between the rate of migration of data to the new systems and the take up of EOI products by CPs.

Risk management

Disruption to customer service

- 5.11 BT currently relies on shared access to applications and data to enable the flow of information between the various steps of their business processes. This has allowed a high degree of automation particularly around the legacy products such as PSTN. These processes have been developed and refined over many years and are ingrained within the organisation and the people involved in delivering them. Physical separation is a complex and major change that will require up to three sets of users and systems to co-operate and communicate across electronic gateways to achieve the same process steps. Users will only have access to their own data and will not

be able to access shared data to “fix” a stage in a process as they may have in the past.

- 5.12 The potential risks to customer service during separation are significant and in the development of the roadmap they have been comprehensively analysed by BT. This is set out in the roadmap BT has shared with Ofcom together with mitigation actions to address and manage each risk. Ofcom will work with the Equality Access Board to ensure that these risks are appropriately monitored.

Enforcement of access controls

- 5.13 There are a number of ways in which users could bypass the user access control solutions. These are not documented here for security reasons but they have been identified and actions taken to minimise this risk. The effectiveness of the user access controls will be checked by an independent audit.

Failure to deliver to the roadmap

- 5.14 There is a risk given the scale and complexity of the project that BT fails to keep to the plan and misses the required deadlines. This risk has been mitigated by having some small contingency within the plan to allow for unforeseen delays; appointing senior project leads who have the necessary experience to manage complex and large scale projects; and regular progress reviews – including some with Ofcom – to ensure any potential delays are picked up at an early stage and corrective action taken to maintain the timeline defined by the roadmap.

Next steps

- 5.15 Draft proposed wording for the Variation to the Undertakings is set out in Annex 1. This consultation runs until 11th May 2007. Ofcom plans to publish a Statement in June 2007.
- 5.16 Details on how to respond to this consultation, and Ofcom’s consultations process are included in Annexes 2 and 3. Annex 4 provides the cover sheet to attach to your consultation response, and Annex 5 lists the specific questions raised by Ofcom in this document.

Annex 1

Draft Variation Document

Variation of Undertakings given to Ofcom by BT pursuant to the Enterprise Act 2002

Variation Number: [8]

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. 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.
- 1.3 Section 2.1 of the Undertakings (Definitions and Interpretation) is amended to include the following definitions:-

"Customer Service Record" means the set of data which is required to provide a customer with a product or service instance.

"Customer Side Record" means a Customer Service Record relating to BT as a purchaser from AS.

"Featureline" means the products offered by the Downstream Divisions at 31 March 2007 under the names Featureline, Featureline Compact and Featureline Corporate/Embark and as they may evolve, be developed or replaced (whether under the aforementioned or a new name) from time to time.

“Measured Products”	means Wholesale Analogue Line Rental, Wholesale ISDN2 Line Rental, Wholesale ISDN30 Line Rental, Metallic Path Facility, Shared Metallic Path Facility, Wholesale Extension Service, Backhaul Extension Service, Wholesale Extension Service Backhaul Product, Wholesale Extension Service Access Product and Wholesale End-to-End Ethernet Service as at 31 March 2007.
“Ready to Mass Migrate”	means that procedures and processes necessary to enable commencement of the migration of large volumes of Customer Service Records from Operational Support Systems shared between AS and the rest of BT to Operational Support Systems, which are physically separate for AS and the rest of BT, have been completed and such migration of large volumes has commenced. This includes, <i>inter alia</i> , the conclusion of the re-engineering of end-to-end processes and the completion of pilot migrations of varying volume. For the avoidance of doubt, once BT is Ready to Mass Migrate the volume of migrations going forward may fluctuate.
“Residential Customer”	means any natural person who uses or requests a public electronic communications service for purposes which are outside his or her trade, business or profession.
“Supply Side Record”	means a Customer Service Record relating to BT Wholesale in its role as supplier to AS.
“User Access Control”	means the application of user profiles and/or data tagging or authorisation control mechanisms combined with behavioural mechanisms such that users outside AS can only have access to systems or applications or data which is consistent with the Undertakings and which does not lead to undue discrimination against other Communications Providers.

2. Governance of Access Service

2.1 Section 5.44 is deleted and replaced in its entirety by the following new section 5.44 (For ease of reference changes to the Undertakings are marked by striking through deletions and by highlighting insertions in red):-

5.44 BT shall:

5.44.1 ensure that all its Operational Support Systems designed for AS are designed on the principle of separation from the rest of BT systems;

~~5.44.2 ensure that AS will have a logically separate Operational Support Systems capability that supports Wholesale Analogue Line Rental, Shared Metallic Path Facility and Metallic Path Facility by 30 June 2007, Wholesale ISDN2 Line Rental by 30 September 2007 and Wholesale ISDN30 Line Rental by 31 December 2007. The rigour of such separation shall be tested through an external audit;~~

- 5.44.2 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; ~~and~~
- 5.44.3 in the period before the completion of physical separation of Operational Support Systems referred to in section 5.44.2, unless otherwise agreed between BT and Ofcom:-
- (a) implement User Access Controls for Operational Support Systems capability to the extent it supports the Equivalence of Inputs products of Wholesale Analogue Line Rental, Shared Metallic Path Facility and Metallic Path Facility by 30 June 2007, the Equivalence of Inputs product of Wholesale ISDN2 Line Rental by 30 September 2007 and the Equivalence of Inputs product of Wholesale ISDN30 Line Rental 31 December 2007;
 - (b) ensure that it is Ready to Mass Migrate Customer Side Records where those records relate to the consumption by Residential Customers of PSTN voice telephony products by 31 March 2008;
 - (c) ensure that it is Ready to Mass Migrate Customer Side Records where those records relate to Featureline by 30th June 2009;
 - (d) ensure that 50% of all Customer Side Records relating to the Measured Products held on Operational Support Systems shared between AS and the rest of BT are migrated to physically separate Operational Support Systems by 30 November 2008;
 - (e) ensure that 50% of all Supply Side Records relating to the Measured Products held on Operational Support Systems shared between AS and the rest of BT are migrated to physically separate Operational Support Systems by 31 May 2009;
 - (f) ensure that 90% of all Customer Side Records relating to the Measured Products held on Operational Support Systems shared between AS and the rest of BT are migrated to physically separate Operational Support Systems by 30 September 2009; and
 - (g) ensure that 90% of all Supply Side Records relating to the Measured Products held on Operational Support Systems shared between AS and the rest of BT are migrated to physically separate Operational Support Systems by 31 January 2010;
 - (h) in calculating the percentages in section 5.44.3 (d) to (g), include those Customer Side Records and Supply Side Records already separated since 30 June 2006;
- 5.44.4 review on a regular basis with Ofcom achievement on a roadmap for the separation referred to in sections 5.44.1, ~~and 5.44.2 and 5.44.3~~; ~~and~~
- 5.44.5 ensure that the implementation and ongoing application of the User Access Control requirement referred to in section 5.44.3 (a) is:-
- (a) subject to regular audits by BT's internal audit group;
 - (b) subject to an independent, external audit focussing on risk assessment, solution design, implementation assessment and ongoing controls to be completed by 30 June 2008; and

(c) subject to an additional independent, external audit focussing on the ongoing application of User Access Controls.

3. Effect

This variation of the Undertakings takes effect immediately upon signature hereof on behalf of both parties.

Signed for and on behalf of British Telecommunications plc

Signature _____

Name _____

Position _____

Date _____

Signed for and on behalf of Ofcom

Signature _____

Name _____

Position _____

Date _____

Annex 2

Responding to this consultation

How to respond

- A2.1 Ofcom invites written views and comments on the issues raised in this document, to be made **by 5pm on 11th May 2007**
- A2.2 Ofcom strongly prefers to receive responses using the online web form at http://www.ofcom.org.uk/consult/condocs/bt_oss/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 (see Annex 4), to indicate whether or not there are confidentiality issues. This response coversheet is incorporated into the online web form questionnaire.
- A2.3 For larger consultation responses - particularly those with supporting charts, tables or other data - please email: chinyelu.onwurah@ofcom.org.uk attaching your response in Microsoft Word format, together with a consultation response coversheet.
- A2.4 Responses may alternatively be posted or faxed to the address below, marked with the title of the consultation.
- Chinyelu Onwurah
Floor 2
Dept T&SO
Riverside House
2A Southwark Bridge Road
London SE1 9HA
- Fax: 020 7981 3052
- A2.5 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.
- A2.6 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

- A2.7 If you want to discuss the issues and questions raised in this consultation, or need advice on the appropriate form of response, please contact Chinyelu Onwurah on 020 7981 3802.

Confidentiality

- A2.8 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).

- A2.9 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.
- A2.10 Ofcom reserves its power to disclose any information it receives where this is required to facilitate the carrying out of its statutory functions.
- A2.11 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

- A2.12 Following the end of the consultation period, Ofcom intends to publish a statement in June 2007
- A2.13 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

- A2.14 Ofcom seeks to ensure that responding to a consultation is easy as possible. For more information please see our consultation principles in Annex 3.
- A2.15 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.
- A2.16 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 3

Ofcom's consultation principles

A3.1 Ofcom has published the following seven principles that it will follow for each public written consultation:

Before the consultation

A3.2 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

A3.3 We will be clear about whom we are consulting, why, on what questions and for how long.

A3.4 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 version for smaller organisations or individuals who would otherwise not be able to spare the time to share their views.

A3.5 We will normally allow ten weeks for responses to consultations on issues of general interest.

A3.6 There will be a person within Ofcom who 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. This individual (who we call the consultation champion) will also be the main person to contact with views on the way we run our consultations.

A3.7 If we are not able to follow one of these principles, we will explain why. This may be because a particular issue is urgent. If we need to reduce the amount of time we have set aside for a consultation, we will let those concerned know beforehand that this is a 'red flag consultation' which needs their urgent attention.

After the consultation

A3.8 We will look at each response carefully and with an open mind. We will give reasons for our decisions and will give an account of how the views of those concerned helped shape those decisions.

Annex 4

Consultation response cover sheet

- A4.1 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.
- A4.2 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.
- A4.3 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.
- A4.4 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/.
- A4.5 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 5

Consultation questions

Question 1: Do you agree with the proposals to vary the Undertakings contained in this Consultation?