OFCOM

FUTURE BROADBAND

CONSULTATION DOCUMENT

RESPONSE OF SOUTH YORKSHIRE DIGITAL REGION

5th December 2007

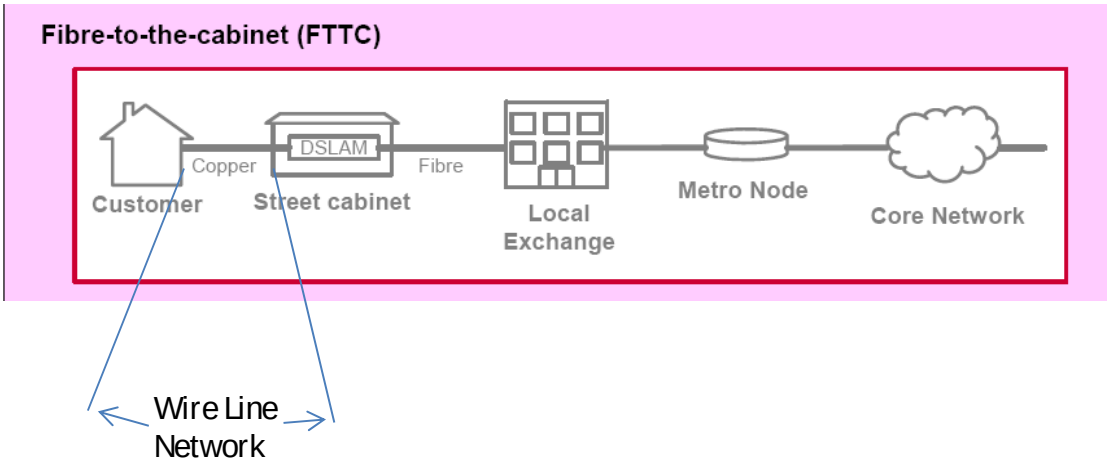
CONTENTS

Section

Section 1. Executive Summary

1.1 One of the effects of convergence in telecommunications is that the same material can be delivered by more than one medium ("substitution"). This has produced the expectation amongst consumers that the services they wish to receive and use can be substituted across different means of delivery. It was partly in recognition of this fact that the three regulatory agencies were merged to form Ofcom, so as to produce a single regulator capable of regulating the content of services, the means of delivery of those services and the radio spectrum which, economically, is a scarce resource.

1.2 A factor which has inhibited the substitution of some services is the limited capacity of the pair of copper wires which run to the consumer/user's premises and allows the consumer /user to connect to a telecommunications network ("the wire line network").



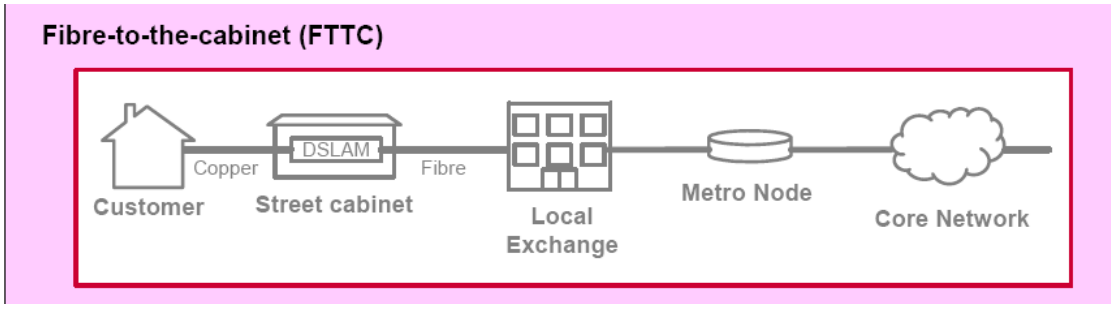
Access to this wire line network is controlled by BT. A further manifestation of the limited capacity of the wire line network is that it is now restricting the development of broadband services ("next generation broadband").

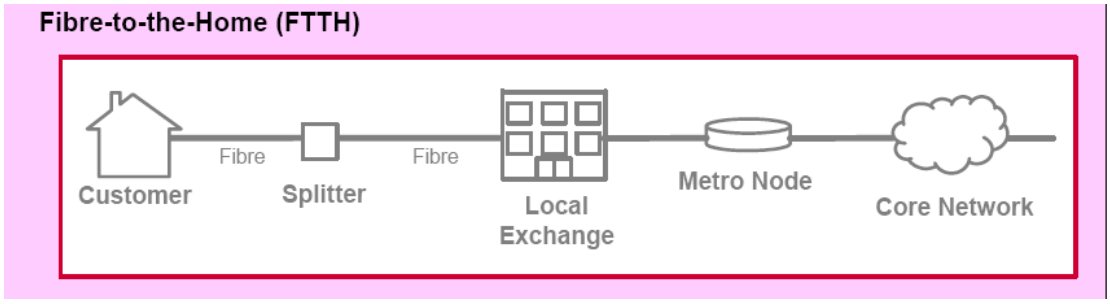
1.3 The VDSL technology is capable of expanding the capacity of the copper pair to effectively overcome the present limitations on its capacity and this will alter the way in which telecommunications networks are used in the future by removing the distinction between wholesale and retail markets. The development of VDSL technology therefore requires a fresh approach to the way in which next generation networks are described and regulated and it is disappointing to see that in its latest Consultation Document ("Policy Approach to Next Generation Access") Ofcom shows no appreciation of this.

1.4 In addition the access to the wire line network must be substantially improved. At the moment BT's pricing is not transparent, the access products (SLU) are ill-defined, bulk ordering is not available and the pre-requisite processes to facilitate ordering are at best described as "substantially immature". It must be assumed that BT will resist any such improvements and seek to perpetuate the control over this access which it has at the moment. If this proves to be the case then this access will have to be regulated more aggressively.

1.5 Section 3 of the Consultation Document is concerned first with an examination of the way in which other countries are introducing next generation broadband and secondly with a discussion of the apparent lack of interest in the UK in developments in broadband. The purpose of introducing this examination and discussion into the Consultation Document is not obvious. In any event, the existence of the Consultation Document is evidence that Ofcom does accept that next generation broadband is an important technological advance for the telecommunications industry and the South Yorkshire Digital Region ("SYDR") is an example of customer demand driving forward the implementation of next generation broadband.

1.6 The Consultation Document does acknowledge the need to overcome the present limitations of the copper pair with the introduction of next generation access but concentrates on only two alternative developments – fibre to the cabinet ("FTTC") and fibre to the home ("FTTH") - and does not consider the extent to which either wireless technologies or VDSL could contribute towards overcoming the present capacity limitations of the copper pair.





1.7 Section 4 of the Consultation Document purports to set out the regulatory challenges inherent in the move to next generation access. Having adopted this unnecessarily restricted view of the technological possibilities which are available the Section was bound to be incomplete but, even accepting this distorted approach, the Section still fails in its purpose because it does not describe any "regulatory challenges" but only various regulatory principles which Ofcom is proposing to use in regulating the move.

1.8 It is submitted that this failure to provide either an examination of each of the alternative technologies which could be used to provide next generation access or an examination of the potential providers will, if left uncorrected during the consultation process, inevitably affect the usefulness of that process.

1.9 Accordingly this response has attempted such an examination (albeit in an abbreviated form) in order to identify some of the regulatory challenges associated with next generation access networks. One such challenge must be the fact that BT has almost 100% penetration of the national market through the ownership of the existing wire line network.

1.10 The Consultation Document places great emphasis on the timing and efficiency of market led investment. This response suggests that the best way of ensuring this is for the regulator to ensure that the regulatory framework is neutral to all available technologies and providers. In this connection BT's present ownership of the existing wire line network is an important consideration. The Consultation Document gives no indication that the regulator intends to tackle this issue at all.

1.11 The Consultation Document refers to *market led* investment and it is to be hoped that this represents a genuine sentiment on the part of the regulator. It will be remembered that the introduction of broadband initially was considerably hampered by the activities of BT and that this uncompetitive behaviour was eventually rewarded by government led investment being given to BT. It is to be hoped that the industry can be sure that these events will not be repeated on the introduction of next generation broadband. But there is nothing in the Consultation Document which indicates how the regulator intends to prevent this.

1.12 It is submitted that Ofcom should recognize the value of the SYDR model in formulating future regulation and the experiences of SYDR in implementing the VDSL technology in the region should be used to inform the consultative process as it moves forward.

Section 2 The Wrong Approach – Selecting the Correct Basis for Regulation of Next Generation Access

2.1 In paragraph 1.2 of its Consultation Document, Ofcom accepts the separation of a telecommunications network into two parts. The first part is the core network and the second part is the access network. Ofcom accepts this separation on the basis that each part of the network has "…very different implications for operators, regulators and consumers." It is submitted that there is no technical basis for the distinction and the underlying reason for the separation of networks in this way is historical because in the early days of deregulation BT, as the incumbent, owned virtually 100% of the national telephone network and this position has remained largely unchanged in respect of the wire line access network. As Ofcom acknowledges in paragraph 2.1 of its Consultation Document:-

> "The only part of a telecom service provider's infrastructure which is directly visible to end customers, is the access network…For the majority of customers, despite the recent changes in circumstances, the underlying network is still based on the same elements as the first telephone networks which were established in the first half of the last century."

2.2 The problem which deregulation exposed is that because the access network makes the connection with the end customer, the owner of the access network had an automatic marketing advantage over other competitors which was largely impervious to the normal principles of competition.

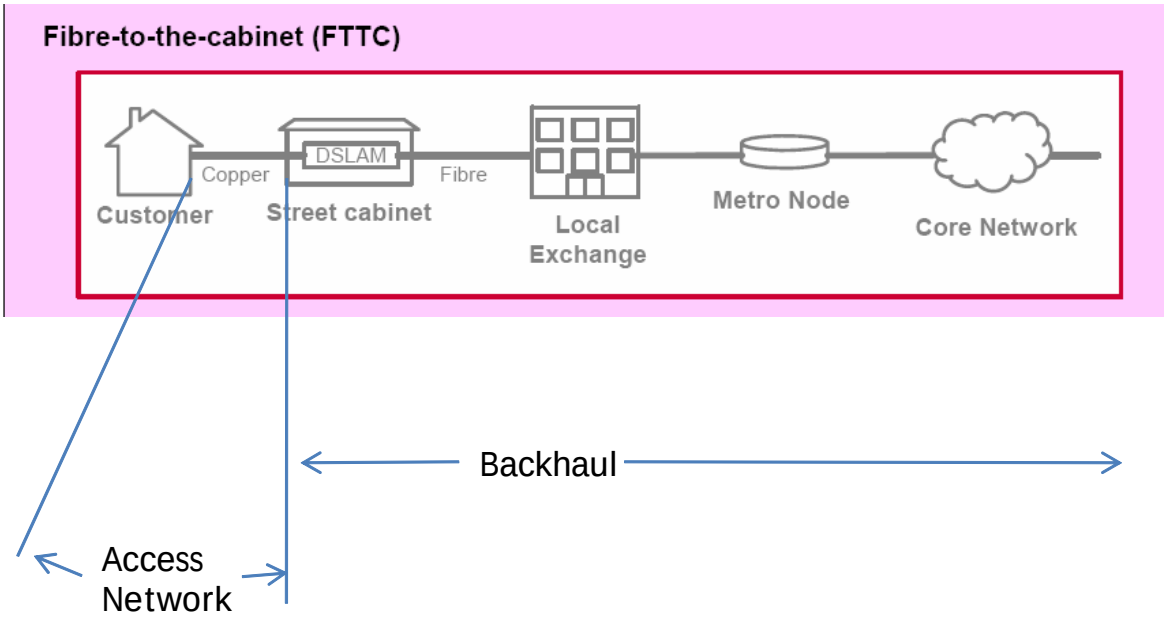
2.3 Unbundling of the local loop helped to promote competition but this has been concentrated in the exchanges. From the regulatory point of view it was fortunate that the wire line networks have proved capable of supporting the first generation of broadband services as well as they have but this has had the effect of masking the lack of investment in the wire line networks which would have avoided the "bottleneck" which they have become.

2.4 Recent technological advances in broadband services have called into question the continuing capability of the wire line network and it is this pressure which has caused Ofcom to address this issue and the regulatory problem of how to promote competition in the access network and thus attract the necessary investment without perpetuating a monopoly situation.

2.5 It is submitted that whatever advantages there may have been in making the distinction between core networks and access networks, this distinction should not form the basis of future regulatory policy. Instead the regulator should review the alternative technologies for the delivery of telecommunications services, including broadband, and shape future regulatory policy in the light of that review. To perpetuate the historical distinction described above carries the risk of perpetuating either directly or indirectly, the advantage which BT still enjoys as a

result of continuing to own 100% of the present wire line access networks.[See paragraph 2.16 of the Consultation Document].

Definition of Access and Backhaul Using VDSL technology



2.6 It is regrettable that the Consultation Document reinforces the historical distinction between core networks and access networks. A consideration of the VDSL technology will demonstrate that the regulator has not paid sufficient attention to the available technologies in framing its consultation. If uncorrected, it must be feared that the same mistake will be made in future regulation.

2.7 VDSL technology

2.7.1 does not require the physical aspects of the existing wire line network to be changed but it will require competent regulation of it to ensure that:-

2.7.1.1 BT is not allowed to erect procedural or economic barriers to protect its present ownership of the access to the wire line network; and

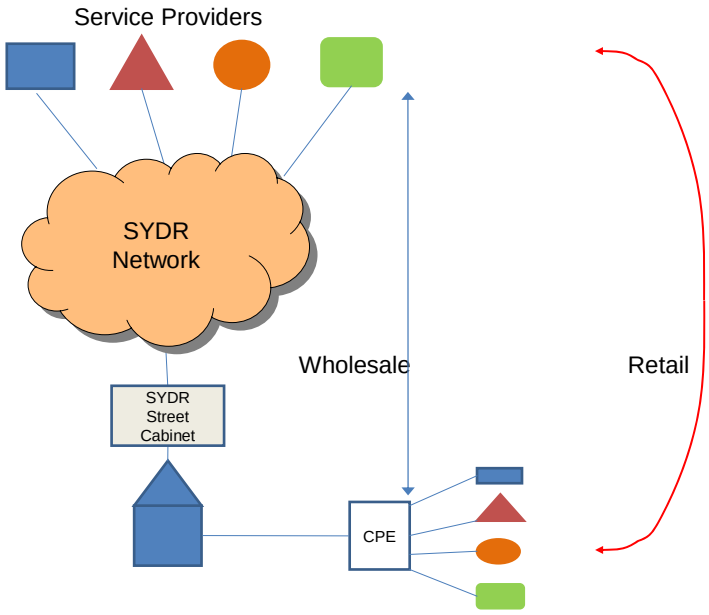
2.7.1.2 Conditions are applied to ensure that access to the retail wire line network is not dominated by any single user.

2.7.2 does need scale for its most efficient operation.

2.7.3 does not need the backhaul to be connected to the BT exchange and since the creation of a separate backhaul will represent a considerable part of the

total investment in implementing VDSL technology BT must not be allowed to insist on this as a condition of access.

2.7.4 represents the possibility of adopting a wholesale model for the delivery of services:



2.8 In summary, the Consultation Document must broaden its view of the access network so as to properly assess the new business model which VDSL introduces and which is diagrammatically represented above. The technology could be used by an existing operator to supplement an existing network ("in-filling") so as to avoid a digital divide or by a new entrant thus providing competition in the next generation access.

2.9 In the past a single line has produced a single revenue stream. In the future the adoption of the wholesale model could produce multiple revenue streams and this market model applies equally to the broadband market.

2.10 In order to achieve the wholesale model it is essential that there is consistent regulation of all the available technologies and the existing market players.

Section 3 - What is the Broadband Challenge

3.1 Increasingly telecommunication services are requiring networks which offer faster transmission speeds and larger capacity. The existing wire line access networks are no longer able to accommodate these requirements without modification.

3.2 The Consultation Document tests this proposition in Section 3 where it discusses first the experiences of other countries in relation to the introduction of the next generation of access networks and secondly the strength of demand in this country for the next generation of broadband.

3.3 It is submitted that the experience of other countries is bound to be of very limited relevance to the UK unless it can be shown that there are compelling similarities of circumstances. The Consultation Document does not go into this level of detail and unsurprisingly paragraph 3.9 concludes that

> "…the reasons behind each country's deployments [of next generation access] are often complex and may involve a combination of different factors. Examples of how these factors may have combined in practice are shown in Figure 3."

Figure 3 shows the distribution of a number of "Key Drivers"(such as "competition" or "cost savings") across the eight countries selected for comparison but Fig.3 only confirms that the comparison does not produce any pattern or principal. The usefulness of the comparison in the context of the Consultation Document is not clear and it is disappointing that only wire line access was considered.

3.4 The treatment by the Consultation Document of the strength of demand in this country for the next generation of broadband is generally negative. Paragraph 3.2.1. of the Consultation Document states that "…it is unclear that the majority of customers are yet demanding significantly higher bandwidths for broadband access." and on page 21 Ofcom notes that there have been no wide scale announcements in relation to next generation access.

3.5 Despite this supposed lack of demand Ofcom seems to accept that there must be a move to next generation access networks. In paragraph 4.1 this move is said to be

"…one of the largest changes facing the UK communications sector and Ofcom."

and it seems that the only real point made by this section of the Consultation Document is that

> "…it appears likely that the UK will witness later deployment of large scale next generation access networks than some other countries."

3.6 The Consultation Document speculates at paragraph 3.13 upon possible reasons why the UK may witness later introduction of next generation access than other countries and lists the following:-

- The high levels of digital and pay-TV take up in the UK;
- Relatively low level reach of cable networks;
- Higher cost of deployment of next generation access in the UK compared with some other countries; and
- The capabilities of existing copper access network infrastructures to deliver services.

3.7 The reference to the level at which digital and pay TV has been taken up in the UK as a possible pointer to the speed with which next generation access will be introduced is not understood. Satellite broadcasting provides high quality images but the present challenge for broadcasting is to permit as well a high level of interaction between the customer/user and the service provider. This is not feasible with services delivered by satellite but could easily be provided by next generation broadband.

3.8 There are two practical issues which will accompany next generation broadband. The first is that the process whereby an individual mac address can be changed must be simplified and speeded up so that the process cannot be used to discourage a customer/user from changing to a different broadband provider. The second issue is that as described above (paragraph 2.9) a single line will be capable of generating several revenues and so the network termination point will become an active component in the next generation access network.

3.9 The reference to cable television as a reason for the delayed introduction in the UK of next generation access is not accepted. Comparisons with Europe are not valid because the provision of cable television in Europe is historically different and as a result far more widespread than in the UK.

3.10 The high cost of deployment is discussed at paragraph 3.17 of the Consultation Document but the effects on those costs of BT's present control of access to the wire line access network are neither explained nor explored.

3.11 Although the existing wire line access has proved capable of delivering broadband services it has been pointed out above that this has only resulted in the postponement of the present regulatory problems surrounding the next generation of access networks. It is submitted that in entertaining the possibility of delayed entry of next generation access into the UK, Ofcom has

3.11.1 under estimated the extent of existing demand for improved broadband services based on exaggerated headline speeds for existing services and frustration with the present operating speeds of that part of the wire line access network that is not fibre; and

3.11.2 apparently not realized the potential expansion in broadband products and services that would result if better operating speeds and increased delivery capacity could be made available.

3.12 There are three initiatives which are mentioned in the Consultation Document;-

- BT's experiment in providing FTTH at Ebbsfleet, and
- The trial being carried out by Virgin Media in Ashford, and
- The creation of the South Yorkshire Digital Region.

The Consultation Document repeats a claim made by Openreach that it intends to provide FTTH on all new build developments where it connects customers from 2008. The pilot scheme at Ebbsfleet may well be of technical interest but cannot, on the grounds of cost alone, be regarded as a national solution to next generation access. Even if this was not the case, the claim by Openreach merely confirms that the regulatory problem which already exists as a result of BT controlling access to the wire line access network would be perpetuated and enlarged.

3.13 Virgin Media operate as a wholesaler of service content, a broadband service provider and as a network operator. Each of these activities would require the regulator to ensure that competition was not excluded at any level. As a wholesaler of service content the regulator would have to ensure that Virgin Media was not allowed to control the provision of broadband services and, at the network level, the regulator would have to take action to make Virgin Media open its network to other users. Like the Ebbsfleet pilot, although the pilot scheme in Ashford will no doubt provide the regulator with useful information, it cannot be regarded as the solution to next generation access.

3.14 The SYDR initiative should be viewed as a valuable experiment in three ways. First like the Ebbsfleet and Ashford pilot schemes it will provide incontrovertible evidence for the demand for next generation access and will encourage the development of next generation broadband services. Secondly it will demonstrate a wholesale model for the provision of next generation broadband and lastly, unlike the other two pilot schemes which positively require the continuation of protective regulation for their success, the SYDR initiative requires the regulator to reduce regulation in next generation access so as to permit, through competition, the widest distribution of the latest developments in technology.

Section 4. - What is the Regulatory Challenge and What Should Ofcom do Next?

4.1 Section 4 of the Consultation Document is headed "The Regulatory Challenges" but fails to set them out. Instead the section sets out a number of regulatory principles some of which Ofcom have already expressed elsewhere (Strategic Review of Telecoms) and which it believes are the proper guides for it to adopt when considering the move to next generation access networks. Since the Consultation Document does not include all of the technological possibilities for providing next generation access it follows that not all of the regulatory challenges are identified either. Consequently any attempt to show whether these regulatory principles are indeed the ones to adopt or not must inevitably be regarded as premature.

4.2 At paragraph 2.24 of the Consultation Document, Ofcom does identify what it considers are its two main challenges in connection with next generation access networks :-

- The first is how to secure timely and efficient investment in next generation access in order to make sure that the demands of the residential consumer and the business customer are met; and
- The second is to ensure, following such investment, that a competitive environment for service delivery is promoted.

4.3 While agreeing with this statement of objectives it is regrettable that the Consultation Document does not clearly state that the correct response to the first challenge is to ensure a regulatory environment that is neutral to the introduction of new technologies and the investment which accompanies them and does not discuss at all the ways in which the second challenge could be approached.

4.4 Ofcom should make it clear that it will not concern itself with investment decisions and that these must and will be left to the industry. Instead Ofcom should declare that it will concentrate on making sure that there is nothing within the regulatory regime which favours a particular entrant or a particular technology and which, as a result, might skew any investment decisions made by industry.

4.5 Of particular concern to the regulator should be the fact that BT continues to control access to the existing wire line network since this fact will inevitably affect potential investment in any of the following ways:-

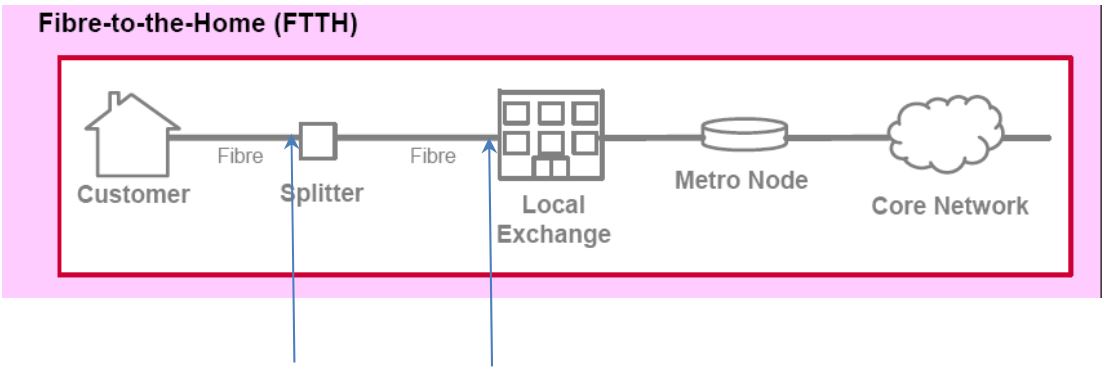
4.5.1 The investment in the Ebbsfleet trial, signals that BT sees the solution to next generation access in terms of it retaining its control <u>of its part of the next generation access in the same way that it controls access to its wire line network. It is submitted that the challenge for Ofcom is to regulate next generation access so as to prevent BT from maintaining or assuming such a controlling position.</u>

4.5.2 While BT continues to control the access to existing wire line network the regulator is powerless to even influence much less direct the speed or direction of any investment BT might decide to make. This would contribute to the digital divide and limit choice for the consumer/user.

4.5.3 An alternative interpretation of the Ebbsfleet pilot is that BT does not expect to have to make the investment itself but, as with the introduction of broadband, it would be the conduit for government led investment. It is submitted that this result would represent a regulatory failure on the part of Ofcom.

4.5.4 The Ebbsfleet pilot proceeds on the basis that neither the next generation access or the existing wire line network will be opened up to competing users.

4.5.5 Consistent with the wholesale model exemplified by SYDR, BT must be required to provide an interface at the exchange; otherwise BT will control not just the choice available to the customer/user but also the interconnection protocol at the wholesale end of the network.



4.6 It is submitted that Ofcom must recognize that BT's ownership of the existing wire line networks will frustrate any regulatory attempts to meet either of the challenges described at paragraph 4.2.

4.7 So far as the second objective is concerned, the Consultation Document does not examine the characteristics of the competing technologies which would have enabled the Consultation Document to invite a discussion of how a competitive environment for the delivery of next generation broadband services could be created and maintained.

4.8 In this connection it appears that while the Consultation Document does include cable operators in its consideration of next generation access hardly any attention

is given to wireless provision. It is submitted that any consideration of the next generation of access networks must include wireless and mobile networks if the objectives listed at paragraph 4.2 are to be achieved.

4.9 VDSL is a technology which enables the existing wire access network to be used to deliver services which require large bandwidth and which hitherto could not have been delivered by existing wire access networks.

4.10 The other providers which are likely competitors to VDSL are:-

4.10.1 Cable operators
4.10.2 BT, if it is allowed to upgrade its wire access network as it has done at Ebbsfleet.
4.10.3 Wireless operators (including mobile operators)

Cable Operators

4.11 The advantage which cable operators have is that their wire access network is already of sufficient capacity to deliver the new generation of broadband services. The disadvantage which they suffer is that they have less than 50% penetration within the UK market and any significant increase in this figure would require disproportionate investment on the part of the cable operators. Because the investment would be disproportionate it may be safely assumed that it will not be made and therefore if steps are not taken in other directions it is inevitable that the cable operators will produce a "digital divide".

4.12 As stated above the VDSL technology is flexible and could be adopted by cable operators. This is unlikely to occur in those areas where cable is already installed since this would undermine the investment in the cable network which had already been made. However, a feature of the VDSL technology is that it requires a large area of operation for effective implementation. Because of the patchy presence of cable operators it can be expected that they will seek to protect that investment by denying access to the VDSL technology or imposing uncompetitive conditions on the grant of any such access to their networks.

Some of the regulatory challenges for the regulator therefore is to ensure that:

- cable networks (including Virgin Media) are made available to other users.
- Cable operators provide interconnections at the head end.

BT

4.13 BT appears to recognize the need, after decades of abuse through neglect of the wire access network which it inherited, to invest in this part of its business. The Ebbsfleet pilot is confirmation of this. To the extent to which BT makes this investment it will place itself in the same position as a cable operator but it must be considered as unlikely that BT will maintain this level of investment across all

of its wire line access network in the face of competition from the cheaper VDSL technology with the result that the same disadvantage will apply. Unlike the cable operator, BT has virtually 100% coverage of the UK and consequently there must be a risk of BT seeking to justify the expenditure on the basis that it would become the only provider in those areas not served by cable operators. For the end users in those areas BT would be the only supplier of second generation broadband services, thereby creating a monopoly.

4.14 Some of the regulatory challenges for the regulator therefore are to ensure that:-

- BT opens its existing wire line access network to competitors wishing to implement VDSL technology;
- The terms demanded by BT are commercial, transparent and are not obstructive;
- BT provides interconnection protocols at its exchanges
- If BT is to be allowed to install new fibre connections to "new build" then it must be made to permit access to this new fibre to other users.

Wireless Operators

4.15 Innovations in the mobile market show that convergence is a reality in these networks and that substitution is possible. It is submitted that wireless networks have a part to play in the provision of next generation access. There would seem to be no regulatory reason why wireless operators should be able to exclude other users from their networks nor any regulatory reason why these networks have not been developed to their full potential.

4.16 Some of the regulatory challenges for the regulator therefore are:-

- To align the regulation of wireless networks with the regulation of next generation access.

What Should Ofcom Do Next

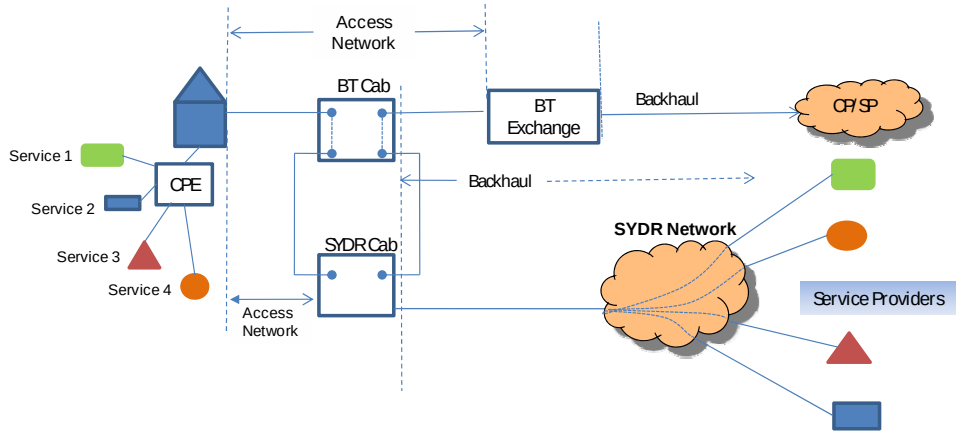
4.17 Ofcom must recognize that BT must not be allowed to control access to its wire line network if it is to achieve its stated aim of achieving a competitive environment for service delivery. (See paragraph 4.2 above).

4.18 Ofcom should recognize that although increased bandwidth is the key to service delivery no single technology will be suitable for next generation access in all circumstances and as a result it should broaden its consideration of the challenge of next generation access networks away from FTTH and FTTC to include at least the issues raised in this Section at paragraphs 4.12, 4.14 and 4.16.

4.19 Ofcom should recognize that new business models are possible and that these will require networks to be looked at afresh, bearing in mind that no one

technology will be universally suitable.

4.20 Ofcom must review the relevant regulatory framework so as to ensure that it is neutral to the various technologies and allows competition amongst different service providers over the same access network. In the past there has been one network or part of a network which generated one revenue stream but the regulatory objective should be to facilitate that, in the future, the same network or part of a network should be capable of generating several revenue streams.



4.21 Having realigned the regulatory framework to ensure that it does not favour a particular technology or a particular provider, Ofcom must then ensure that the framework is then maintained substantially unchanged so that investment is not discouraged.

4.22 So far as SYDR is concerned Ofcom should:-

- Recognize that it is a pilot scheme which reflects a new business model which paves the way for another method of service delivery and connectivity between service providers and consumer/users.
- Be prepared to define a new set of products.
- Be prepared to fix BT's prices for these products and to introduce automated processes for their procurement.
- Be aware that because SYDR is publicly funded it is prepared to try to deal with BT's current demands for access to its wire line network but that market led investors would not. (In this connection please see Annex 1).
- Be open about the regulatory intentions surrounding the Ebbsfleet and Ashford pilot schemes.

Question 1 - When do you consider it would be timely and efficient for next generation access investment to take place in the UK?

- There is substantial public investment planned for SYDR at the moment.

- The suggestion that further investment in next generation access in the UK might be delayed is not accepted.
  See paragraphs 3.6; 3.7; 3.8; 3.9 and 3.10.

- The suggestion that consumer demand is hard to judge is not well made and is anyway to an extent contradicted by the existence of the Consultation Document. There is evidence that there is frustration that the present advertised levels of broadband delivery are seldom matched in practice and there are broadband developments already available (Tesco on line shopping service and You-Tube both of which require high speed broadband speeds to be consistently available) which cannot be deployed properly over existing broadband services.
  See paragraph 3.5

- Ofcom should not be content simply to "..monitor developments and ensure the correct conditions for efficient investment are in place."
  It has been demonstrated that Ofcom needs to widen the scope of this consultative process to include all available technologies and work out in detail the extent to which the regulatory framework must be modified to allow these different technologies to be combined so as to provide the next generation access across the nation and without a digital divide.
  See paragraphs 4.1; 4.5; 4.11 and 4.16 – 4.21

- Now is the time to encourage investment in next generation access.

Question 2 - Do you agree with the principles outlined for regulating next generation access?

- Section 4 of the Consultation Document sets out a number of principles which are stated to be the principles which Ofcom intends to use in regulating the move to next generation access networks.

- Unfortunately the Consultation Document is unnecessarily constrained in its treatment of possible replacement technologies for next generation access networks.
  See paragraph 4.7

- In addition, the principles to which this question refers are not clearly identified in the Consultation Document. Some principles are set out in paragraph 4.6, others in paragraphs 4.7 and 4.13, still more in paragraphs 4.14 and 4.21. The interaction of these principles is not set out in the Consultation Document although it is clear that in some cases principles overlap and in others the principles could be in conflict with one another.

- SYDR believe that the short answer to the question posed is that there has been insufficient analysis of the available technologies and the market position of existing service providers to allow the question to be answered. Accordingly, where specific principles could be identified in section 4 of the Consultation Document specific comments have been advanced.

- The two underlying principles set out in paragraph 4.6 of the Consultation Document are unobjectionable in themselves.

- The principle set out at paragraph 4.7 (i) is highly relevant but the Consultation Document does not promote this principle.
  See paragraphs 2.1, 2.5 and 2.6

- The principle set out at paragraph 4.7 (ii) is relevant and is discussed in greater detail in the **Annex** to this Response.

- The principle set out at paragraph 4.7 (iii) is unobjectionable.

- The principle set out at paragraph 4.7 (iv) is highly relevant but the Consultation Document does not explain how this will be achieved
  See paragraphs 1.10, 4.5 and 4.6

- The principle set out at paragraph 4.7 (v) will be of vital importance if the VDSL technology is widely applied because Significant Market Power would have to be assessed on a regional basis

- The principle set out at paragraph 4.7 (vi) is directly relevant to the SYDR pilot scheme.
  See paragraphs 4.5 and 4.6

- The principle set out at paragraph 4.7 (vii) is unobjectionable although the desirability of light-touch regulation based on competition law and the promotion of interoperability should not be confined to eliminating bottlenecks, nor should it be used to avoid the need for effective regulation.

- The statement concerning competition set out at paragraph 4.13 is unobjectionable as is the recognition that next generation access will almost certainly be provided by a mix of technologies and that competition amongst existing market players is to be encouraged. It is not accepted that cable will be a key driver in providing next generation access unless cable network operators are obliged to open their networks to other service providers.
  See paragraphs 3.13 and 4.12

- Three principles are set out in paragraph 4.14 which in order of importance should be ranked accordingly:-

  Regulatory Certainty
  Contestability

  It is submitted that the principle "Reflecting Risk in Returns" should be left to individual business models to accommodate.

Question 3 - How should Ofcom reflect risk in regulated access terms?

- It is desirable that next generation access will be made up of a mix of different technologies and a business case would obviously have to be made for the potential application of each technology.

- The important factor is that no one market player should have a dominant position in relation to any aspect of the access network.
  See paragraphs 2.7 and 3.10.

- The availability of different technologies should mean that there need be no digital divide.

- However, products are presently constrained by BT's control of access to the wire line network.

- This access must be regulated if necessary so as to produce definition and availability of access products to enable initiatives such as SYDR to be the subject of market led investment in the future.

- SYDR requires other market players to have protections removed (eg. cable networks must be made accessible)

- Market lead investment projects which are similar in nature to SYDR will need forbearance in order to allow their business model to be tried.

- The SYDR model should be of great interest to Ofcom because it represents a test bed for Ofcom's assumptions concerning the possible delay in introducing next generation access in the UK and for the wholesale model.
  See paragraph 2.7 and accompanying diagram

Question 4 - Do you agree with the need for both passive and active access remedies to promote competition?

- Yes

- It is submitted that regulation of both passive and active access is required in order to prevent the creation of a monopoly similar to that which is enjoyed by BT at the moment in relation to the wire line network.

- Passive regulation of ducts and fibre should be applied in a pragmatic context. For example, it may not be economically possible for an operator to declare a 100 year old duct to be available to third parties. Conversely any substantial length of new duct or fibre should be available to third parties on competitive terms.

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Question 5 - Do you consider there to be a role of direct regulatory or public policy intervention to create artificial incentives for earlier investment in next generation access?

- This question is based on the assumption that people do not want the next generation of broadband services and therefore providers must be bribed into providing the necessary access.

- The Consultation Document appears doubtful of the level of frustration felt by users of existing broadband services and appears pessimistic about the level of interest in improving broadband. Nevertheless the Consultation Document is evidence that Ofcom recognizes at least the possible need to encourage next generation access.

- SYDR represents an example of public funding which will allow Ofcom's doubts and pessimism described above to be tested.

- It will be important for Ofcom to avoid its failure in connection with the introduction of broadband and to establish a neutral regulatory framework in order to encourage *market led* investment.
  See paragraphs 1.11 and 4.17

- It is accepted that as with the earlier introduction of broadband, some public funding may be necessary. However if the regulatory framework is seen to be neutral less public funding should be necessary and anyway should be dispersed amongst competing technologies.