



OFCOM

*REVIEW OF THE WHOLESALE LOCAL ACCESS MARKET: CONSULTATION ON MARKET  
DEFINITION, MARKET POWER, DETERMINATIONS AND REMEDIES*

*TALKTALK GROUP RESPONSE*

June 2010

## A. INTRODUCTION

1. This is TalkTalk Group's (TTG) response to Ofcom's Consultation regarding regulation in the Wholesale Local Access (WLA) market.
2. TalkTalk Group is the largest provider of broadband services to UK homes. We serve over 4 million residential and business broadband customers under the TalkTalk, AOL, Tiscali, Opal and Pipex brands. We are the UK's biggest local loop unbundler and operate the UK's largest next generation network (NGN).
3. The conclusion that Ofcom reaches in this market review will have a profound effect on our customers and our business and more broadly on the effectiveness of competition and consumer benefits.
4. TTG also sponsored the report by Catalyst Communications Consulting and we support its conclusions.

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## B. SUMMARY

5. This WLA market review, which effectively sets regulation of wholesale NGA products, will have a profound and significant impact on the development and success of superfast broadband over the next 5 to 10 years as well as the nature and success of competition based on current generation networks (e.g. LLU).
6. Though demand for superfast broadband is currently relatively low<sup>1</sup> it is likely to increase in the coming years with increasing awareness, wider availability, reducing price premium and the introduction of more bandwidth hungry applications such as TV over broadband.
7. In this new world, consumers' and the UK's interests will be best met through customers enjoying an innovative and competitive retail market. However, BT's control of critical bottleneck assets and the likely limited level of network based competition will inhibit competition and innovation unless other operators have effective wholesale access to BT's network to allow them to provide competitive services to customers.
8. The existence of the equivalence (EOI) obligations on BT's NGA wholesale product (called GEA), the functional separation of Openreach, BT's relatively low retail market share<sup>2</sup> and competition<sup>3</sup> will to some degree provide important and welcome incentives for BT to provide a good wholesale product and will constrain their incentive and ability to discriminate. This is significantly different to the situation with (say) LLU in 2003 where BT had strong and unambiguous incentives to ensure that wholesale access via LLU product was ineffective.
9. However, these features (EOI, separation, low retail share, competition) though very welcome, are insufficient to deliver an adequately innovative and competitive market since BT's interests are misaligned with those of consumers. For example:
  - BT has an incentive to 'capture more of the value chain' by extending the product downstream and bundling into it elements that could be competitively supplied. This will also tend to limit flexibility for other operators and weaken competition against BT Retail
  - BT has an incentive to, in developing this product, favour WLR over MPF<sup>4</sup>. This is both because Openreach captures more of the value chain by providing WLR (than MPF) and also because BT Retail use WLR

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<sup>1</sup> For example, only 1.5% of Virgin's broadband customers take the 'superfast' 50Mbps product as against the 10Mbps and 20Mbps products

<sup>2</sup> The low market share and high scale economies mean that there is an incentive for BT to provide wholesale services to non-BT ISPs in order to build scale i.e. countervailing buying power

<sup>3</sup> Competition is both from current generation broadband products as well as superfast broadband based on cable networks

<sup>4</sup> Ofcom recognises this e.g. §6.30 "Where vertically integrated SMP providers like BT and KCOM are required to provide network access to third parties, there are incentives for them to provide the requested wholesale network access services on terms and conditions

- BT has an incentive to margin squeeze between the price of GEA product and the downstream / retail product. Their ability to discriminate is particularly high since there is no price control (or cost orientation obligation) on the GEA product
  - BT has an incentive to limit the ability of the product to compete with high priced leased line type products (such as PPCs, WES and EAD)
  - BT has an incentive (and ability) to restrict the effectiveness of passive remedies such as PIA and SLU
10. These risks are not simply conjecture or theory - some are already happening with GEA (e.g. unjustifiable delay on wires-only, approach to VoNGA, poor MPF migrations) and similar problems have happened in other areas (e.g. higher MPF migration prices than WLR). Therefore, robust regulatory intervention is necessary if consumers' interests are to be met.
11. We are pleased that in Ofcom's overall strategy for regulation of the GEA product recognises some of these risks. For instance, Ofcom has set a clear objective for the GEA product to be flexible: "*VULA would provide access to the NGA network in a way that is similar to how LLU provides access [and] would provide a virtual connection that gives OCPs a dedicated link to their customers and substantial control*"<sup>5</sup>. However, Ofcom's actual proposals to achieve this fall short of the aspiration. Further, there are some risks that Ofcom has failed to identify or begin to tackle (for instance, in relation to pricing). Below we summarise the main areas where change is required.
12. More and more specific obligations for BT's GEA product to allow flexibility and control for other operators including:
- Wires-only
  - Greater control of line features (virtualisation)
  - Removal of all unnecessary speed constraints
  - Ability to serve needs of business customers e.g. faster repair times
13. Assuming Ofcom continue to allow BT price flexibility on the core GEA product, then Ofcom must (as an essential counterbalance) introduce a number of other price controls to prevent anti-competitive discrimination and other forms of price manipulation that work against consumers interests. In particular:
- Margin squeeze protection between GEA and retail (downstream) products
  - A 'price consistency' obligation that requires (say) MPF and WLR variants of GEA products<sup>6</sup> to be priced the same to avoid BT using pricing flexibility on GEA to discriminate in favour of WLR and BT Retail

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*that discriminate in favour of their own downstream activities in such a way as to have an adverse effect on competition"*

<sup>5</sup> Consultation §1.19

<sup>6</sup> For example MPF to MPF+GEA migration compared to WLR+SMPF to WLR+GEA migration

- Possibly a cost orientation obligation on certain migration products to avoid BT creating unnecessary or inappropriate barriers to switching
14. More generally in respect of product variants, though it is important that Openreach should have a large degree of flexibility it should not be allowed to use this to 'ghettoize' variants that it dislikes through, for instance, discriminating in terms of price, specification or performance. For instance:
    - They may make MPF to GEA migrations available but make them slower and less smooth than the equivalent WLR to GEA migration
    - They may make a product variant (say wires-only) available but without any assurance or SLA/SLG (e.g. any commitment on repair times)
    - They may price operator-install at only a small discount to Openreach install thus making operator-install unviable
  15. Also, Ofcom needs to be wary of allowing a 'parallel equivalence' environment to develop where the rest of BT uses one variant of GEA and other operators use another (as has happened with LLU where BT use WLR+SMPF and all other operators are migrating to using MPF). This will undermine the effectiveness of EOI in preventing discrimination.
  16. More robust regulation to ensure that a suite of fit for purpose passive products are developed that can realistically be used to allow other operators to efficiently invest in NGA networks. In particular:
    - A rapid improvement in the SLU product which is simply not fit for purpose in either specification, performance or price. For instance, the SLU connection charge is £50 more than for GEA (even though less resource is required), orders are made via Excel spreadsheet and there are no performance targets or penalties in the case of poor performance
    - Development of the duct access and pole access products
    - Imposition of a 'dark fibre' remedy to complement the other passive remedies
    - Reservation of powers to require fibre unbundling of GPON networks when technically feasible
    - More clarity on how prices should be set (under a cost orientation obligation) and a 'pseudo-EOI' requirement on all passive products (not just some)
  17. More generally the reservation of adequate powers for Ofcom to impose additional requirements on BT as the market or technology develop without recourse to a slow and potentially ineffective dispute process or having to wait until the next market review
  18. These requirements must be addressed at this stage. If these measures are not introduced early not only will the market suffer in the short term but it may take some time to implement these new measures and unwind the harm done.

19. Our response is structured as follows
- B. Product flexibility discusses the areas where greater product flexibility / capability is required on GEA
  - C. Pricing approach explains why some limited price regulation on VULA / GEA is proportionate and necessary and how it can be implemented
  - D. Passive remedies discusses our view on regulation of PIA, SLU, dark fibre and fibre unbundling
  - E. Other issues addresses a number of other questions / issues that are part of the market review
  - F. Summary of proposed changes
20. Attached to TalkTalk's response is a technical paper by Catalyst Communications Consulting. This technical paper was prepared for a group of major Communications Providers consisting of BSkyB, Cable and Wireless Worldwide, Orange, O2 and TalkTalk. We asked Catalyst Communications Consulting Limited to analyse the regulatory remedies proposed in the Ofcom WLA market review consultation document against both the collective aspirations of the group members in terms of regulated service inputs and the current Openreach NGA related portfolio. This work was undertaken in collaboration with representatives of the paper's sponsors, drawing on their individual and corporate knowledge and understanding of NGA product, service and network technology issues. The objective of this paper is to establish a clear technical framework for the evolution of NGA wholesale access services.
21. The paper has been referenced directly in a number of the individual companies responses to the consultation, and has also generally informed those responses. We therefore thought it was important that the paper as a whole was visible publicly as part of the consultation process."

## B. PRODUCT FLEXIBILITY

22. Competition and innovation will be greatest if other operators have the maximum degree of flexibility to change and adapt their retail propositions. This is for two reasons: firstly, ISPs are 'closer' to the customer and have a far better understanding of their needs. Secondly, competitors have far greater incentives to innovate than does a monopoly provider<sup>7</sup>.
23. For this innovation to be possible, the wholesale product needs to be designed in such a way that does not constrain the flexibility of other operators. It was this concept that underlay the basis and success of network-based competition where, rather than ISPs selling very similar retail products based on a 'resale' wholesale product, ISPs were able (using LLU) to differentiate and innovate their product.
24. Outside of the telecoms world a cooking analogy (hopefully) articulates the issue:  
*Imagine BT are the monopoly provider of eggs. Competitors run restaurants and would like BT to provide some eggs so they can serve omelettes. However, BT won't provide the raw ingredients but rather they want to 'add value' by offering omelettes and have three on offer - plain, ham or tomato. Clearly customers will be better served if the competitors had access to the eggs and so could innovate their own omelettes with new and different ingredients and different mixes of ingredients or branch out into fried eggs. By BT 'adding value' and moving downstream it inhibits innovation.*
25. However, providing a raw product is not in BT's interests or instincts. This is for a number of reasons:
- Extending downstream effectively allows BT to monopolise elements of the value chain that could be open to competition e.g. modem provision, home installation services
  - A wholesale product that allows little flexibility will limit the degree to which the product could be used to compete against with high priced leased line type products (such as PPCs, WES and EAD)
  - Openreach have expressed a desire to position GEA as a 'premium product' (which is one explanation as to why they constrain use don't offer low speed GEA)<sup>8</sup>
  - A wholesale product that allows little flexibility is probably in BT Retail's interests since (versus their ISP competitors) they are less able to innovate
  - It is perhaps a natural engineering approach to build an end-to-end product so allowing full control and avoiding risks

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<sup>7</sup> Openreach sometimes suggest that rather than other operators having the ability to innovate in their domain they could request Openreach to develop variants. This is vastly inferior. Firstly, it adds in delay, second it might not be in Openreach's commercial interest to innovate and thirdly, given Openreach have limited ability to do bespoke developments the ability of the innovator to gain first mover advantage will be reduced diminishing the operators incentive to innovate

<sup>8</sup> Whilst it is a laudable aim to aim for high performance, constraining use is not acceptable. We do not see it is appropriate for Openreach to maintain VULA as a premium product like a Louis Vuitton handbag might be positioned

26. We have already seen this type of behaviour of moving downstream and unnecessarily restricting the ability of other operators to innovate. For example:
- Openreach have imposed unnecessary speed constraints
  - Openreach have refused to discuss wires-only for 3 years even though it is feasible today
  - Openreach's model for voice was a 'land grab' where they only initially offered a bundled voice product (VoNGA) and no upstream input
27. We were pleased that Ofcom have recognised the importance of product flexibility. For instance, it said:
- "VULA would provide access to the NGA network in a way that is similar to how LLU provides access [and] would provide a virtual connection that gives OCPs a dedicated link to their customers and substantial control"*<sup>9</sup>.
28. Also the attributes Ofcom outlines for the VULA product (localness, minimum functionality included, service agnostic, uncontended<sup>10</sup>) are clearly for a product that is as 'raw' as possible and offers the '*greatest possible freedom*'<sup>11</sup> and '*should only be constrained by the inherent [technical] capabilities*'<sup>12</sup>
29. Disappointingly though, the detailed proposals that lie behind this 'aspiration' fall substantially short. There are areas where Ofcom has been too unspecific (e.g. wires-only) and there are others where Ofcom has laid out no requirement at all (e.g. speed constraints).
30. We outline our concerns below.

#### **WIRES-ONLY**

31. Openreach's GEA product currently includes a bundled modem and Openreach have said they will not even consider a wires-only option for three years.
32. A wires-only presentation (as against the current alternative where GEA includes a bundled modem) enables a great deal of additional innovation and other benefits such as:
- Allows single box solution e.g. modem+router in one unit rather than standalone modem and separate router. This is overall cheaper to produce, requires less power, involves less wiring (e.g. plugs, connectors), is less susceptible to faults and allows easier performance monitoring and fault diagnosis

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<sup>9</sup> Consultation §1.19

<sup>10</sup> See Consultation §§3.135 and 7.233

<sup>11</sup> Consultation §7.245

<sup>12</sup> Consultation §7.240



- Allows service innovation that relies on functionality in the modem e.g. 3G failover, voice services which depend on the ATA (analogue voice adaptor), one touch password set-up and syncing modem / PC
  - A single box solution is the current operating model for DSL-based broadband across the UK. Consumers expect a single box in their home. Deviation from this core principle is likely to lead to confusion
  - Complements CP-install / self-install option
33. It is notable that current generation DSL services (i.e. ADSL) are delivered wires-only<sup>13</sup> and we understand that wires-only models are used in New Zealand and Germany for VDSL/FTTC.
34. Ofcom has effectively said that the decision on whether to require Openreach to offer wires-only should be deferred. Ofcom says:
- "Our starting point here is to ensure that CPs are provided with sufficient control of the CPE. In this regard we consider that an Ethernet presentation goes a long way to achieving this."*<sup>14</sup>
- "It is our current understanding that the standards are not sufficiently mature, for either FTTC (VDSL) or for FTTP (GPON), to enable a wires-only presentation to be readily implemented ... However, it is possible that things may change in the future making wires-only more viable. If this is the case then the situation can be reassessed"*<sup>15</sup>
35. This approach and indecision is disappointing for a number of reasons.
- Firstly, the objective here is not to give CPs *sufficient* control but the *maximum* level of control that is technically feasible. Ofcom should not be placing itself as the arbitrator of what is 'sufficient' (and if it was it should explain how it determines 'sufficient')
  - Secondly, it is clear that there is a significant benefit to a wires-only delivery and wire-only delivery is consistent with Ofcom's vision and therefore there would be no need to 'reassess' in the future
  - Thirdly, Ofcom are incorrect when they suggest that standards are not currently mature enough for FTTC wires-only and it is not certain whether they will become mature enough e.g. *"it is possible that things may change in the future"*. The standards are certainly sufficiently mature to run wires-only trials which are a necessary step to a fully stable model. We accept that FTTP wires-only standards are further away
36. The situation is sufficiently clear that wires-only is or will become technically feasible and that there are significant benefits from wires-only. Therefore, we believe that Ofcom should:

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<sup>13</sup> IPStream was initially delivered with a bundled modem. It moved to a wires-only / unbundled modem around 2003 which coincided with a sharp increase in uptake. Today it is inconceivable that an ISP would go back to a bundled modem as part of IPStream. That in itself should indicate that a bundled modem approach is inferior.

<sup>14</sup> Consultation §§7.277

<sup>15</sup> Consultation §§7.278-7.279

- as a general principle Ofcom make it plainly clear that wires-only must be provided as soon as technically feasible (i.e. where inter-operability standards allow<sup>16</sup>)
  - and specifically in the case of FTTC wires-only, require that Openreach commit to trialing wires-only and a road-map for its implementation
37. It is important that wires-only is done early. The later it is done will not only reduce the innovation capability but will require more transition and complexity.

#### CONTROL OF FEATURES

38. FTTC is not a 'singular' product. On any given line a number of parameters can be adjusted to provide different performance. For instance, the parameters can be adjusted to provide a more stable service (but often with a reduction in speed), alternatively upstream and downstream speed can be traded off.
39. Openreach's approach has been, rather than allowing operators to control each of the parameters, to allow operators to select from one of three pre-defined sets of parameters (known as profiles) and on each line to use Openreach's own dynamic line management (DLM) to optimise the performance. Openreach have also indicated that operators could ask for additional profiles.
40. Ofcom have said of Openreach's approach:
- "[Openreach's approach] would appear to offer the interconnecting CP with a reasonable level of control. However, should additional profiles or greater control be required by CPs we would expect BT to met reasonable requests"*<sup>17</sup>
41. We think that greater control can be provided than just additional profiles and it is possible for CPs to more directly monitor and control the parameters and operate their own DLM as though it was their own equipment. Whether this would be supported by Ofcom is unclear since it is unclear what is meant by a 'reasonable' request. We think that a request should only be deemed unreasonable if it was technically unfeasible and/or threatened network stability.
42. If such a capability is developed we think that should it not be charged separately for. We think that provided the capability is not just for one operator that it should not be charged separately for but become part of the core product and the cost of development recovered within the standard rental / connection charge.

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<sup>16</sup> Openreach have raised the difficulty in developing an 'operational model' to support wires-only. This can easily be overcome (as it has for current generation DSL e.g. IPStream). This is not a question of technical feasibility. Openreach have also suggested that they do not want to offer wires-only on FTTC else the presentation will be different to that for FTTH where wires-only may take longer to deliver. This is an empty reason and immaterial and is effectively a 'race to the bottom' with everything going at the pace of the slowest

<sup>17</sup> Consultation §7.272

## CONSTRAINTS

43. Both the FTTC and FTTP GEA products include constraints that are not innate to the technology but are imposed by Openreach. For example:
- GEA (FTTC) is capped at either 40/10 or 40/2 even though the line may be able to support a higher speed
  - GEA (FTTC) will not be offered on a line if the initial line test shows that the line is unable to support more than 15Mbps
  - GEA (FTTP) is capped at either 40/10 or 40/2 even though the GPON will be able to support far higher speeds. A current generation GPON with a 32 way split would provide a 75 Mbps down/37.5 Mbps up uncontended service, falling to 37.5 Mbps down/18.75 Mbps up with a 64 way split.
44. From a technical perspective it is unclear why Openreach are arbitrarily constraining the product in this way - we do not think that it is necessary for network stability. Openreach have suggested in previous discussions that they wish to maintain a 'premium' positioning though it is unclear as to why trying to maintain a 'premium' position using constraints in this way is in consumers' interests. It may be that Openreach is restricting it to prevent it cannibalising certain business products.
45. Clearly removing any artificial constraints would be good for consumers. For lines that can support over 40Mbps then the speed will be higher (at no additional cost). And for lines below the artificial floor of 15Mbps, customers will have the option rather than none at all. It is nonsensical to deprive customers of a choice when some customers (particularly those with low speed from current generation broadband) would be willing to pay the premium<sup>18</sup>.
46. Openreach's approach is also inconsistent with Ofcom's overall objective to allow the maximum level of control and flexibility
- "[VULA] would seek to replicate many of the features of a physical access remedy, such as LLU, and accordingly should be flexible and capable of supporting innovation"*<sup>19</sup>
- "VULA should therefore only be limited by the inherent capabilities of the access technologies deployed"*<sup>20</sup>
47. Openreach's constraints are akin to not offering SMPF on a line unless the copper was able to support (say) 1Mbps broadband or restricting the line so that it cannot support more than (say) 15Mbps. Such an approach would be unacceptable on LLU

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<sup>18</sup> It is instructive in relation to this that customers unable to get current generation broadband (i.e. in 'not-spots') are willing to pay a higher price for superfast broadband. For instance, £32,000 was raised by a village of 200 homes to get FTTC. Assuming 50% uptake that equates to £300 upfront plus a £30 per month rental per home connected (£30 based on premium over standard voice plus broadband)

<sup>19</sup> Consultation §7.215

<sup>20</sup> Consultation §7.240

and similarly is unacceptable on VULA/GEA. We also believe that such constraints mean GEA is not truly 'service agnostic' which is one of Ofcom's central aims (see §7.239) since they limit the downstream services that can be offered.

48. Therefore, we believe that Openreach should provide the raw access service without arbitrary and unnecessary constraints. More generally, BT should not tier the products (particularly with GPON) as the cost of operation is no different.

#### *CONTENTION*

49. In order to meet the basic VULA attributes identified by Ofcom, the product must be un-contended and fundamentally controlled with regard to performance by the downstream CP. This is not the case at the moment, particularly with the FTTP proposal and the lack of clarity over the Openreach management layer being deployed across the GPON. The uncontended bandwidth available could be defined by the Maximum Stable Rate (for VDSL) or the aggregate bearer speed divided by the split ratio (for GPON). Ofcom needs to have Openreach confirm that its GEA product is un-contended.
50. There is also a concern with traffic prioritisation over the GPON. For example it has already been intimated by Openreach that multicast traffic would be marked with a higher priority tag with lower priority traffic being delivered as a best efforts service. Whilst this may not, depending on design, affect the GPON spoke it would certainly impact the head-end traffic and not meet the criteria of a CP controlled uncontended service.
51. Links further back in the network, between the initial CP point of interconnect at the first stage Ethernet switch and the last access network element (FTTC street cabinet based DSLAM or FTTP splitter) should be uncontended between both users and CPs. It is not clear from current published Openreach product and network documentation that this is the case. This may require enhancement of the current FTTC cabinet to handover site backhaul as penetration rates rise, but there appears to be no specific network technology reason why this is not achievable.

#### *OPEN ATA / MULTIPORT*

52. The issue of ATA (analogue telephony adapter) relates to the question of how voice over broadband services are offered i.e. where there is no baseband voice.
53. Openreach's original plans were plainly unacceptable and it has taken months to get to a sensible place:
  - Openreach's original plan (in June 2009) was that Openreach would offer a wholesale voice service (VoNGA) that included voice servers. This was unacceptable since it represented a wholly unnecessary downstream expansion by Openreach into competitive services.

- After some pressure Openreach agreed to provide an upstream input ('open ATA') that allowed other operators to offer voice services using their own servers. However, this was also unacceptable and not in consumer interests since the plan was that this open ATA would be launched after VoNGA and it used what was called a 'closely coupled' model
  - Finally in May 2010 Openreach agreed to a model where Openreach only offered open ATA (loosely coupled) and would not offer VoNGA. Further, they also abandoned the approach of offering a multiport ATA that would support multiple voice CPs which would have added unnecessary cost and complexity (especially for businesses)<sup>21</sup>
54. This series of events is a salutary tale and illustrates well Openreach's approach which is to design something that suits them and not competition or consumers. Fortunately in this case, consumers interests have won the day. It is just a shame that so much time and effort was wasted persuading Openreach to do the right thing when it was blindingly obvious on day one.
55. Ofcom (in §8.75) discuss the way in which VoNGA might be developed / offered in future which (though rather unclear) seems to suggest that BT itself might not use GEA/open ATA as the basis to offer certain voice services. Our view is that all and any part of BT must use GEA/open ATA as the basis to offer voice services. There must not be any means of circumventing equivalence requirements else BT is likely to exploit it to discriminate against competitors.

#### *NON-OPENREACH INSTALL*

56. At the moment the GEA product includes a 'bundled' install by an Openreach engineer (which includes, for instance, modem installation, service set-up, home wiring modifications). This is an element of the product that could be done by others (e.g. a Qube engineer [that TTG use] or a Sky engineer) probably combined with the installation of other equipment. In time it could be a 'self-install' by the customer.
57. We understand Openreach have offered this as a possibility. However for this to be viable it is both necessary that the pricing is reasonable (see §82 below) and also that, for instance, the engineer can coordinate with Openreach (who complete the cabinet jumpering) so that the install can be smooth.

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<sup>21</sup> The problems with multiport included: added cost, reduced ability for a CP to modify the ATA, difficulty in migrating to a wires-only model, less efficient network capacity management and the downsides of BT extending downstream. The benefits were likely to be very limited - we know of no discernible demand for separate voice CPs and the trend is towards more (not less) bundling of services

### *DIFFERENT LINE CARDS*

58. Currently the GEA FTTC product is restricted to only using VDSL access technology.
59. We think that Ofcom's objective of ensuring maximum flexibility and making GEA akin to LLU will be best met if other operators have the ability to use MSAN linecards of different access technologies such as SHDSL, combi VDSL/voice cards and combo VDSL/ADSL cards. This would enable consumers to gain access to a wider range of services than is currently possible from Openreach who restricts the range of capabilities offered to a small subset of what is possible. For instance:
- Different services would be offered
    - Voice could be offered from the cabinet on a combi card
    - ADSL2+ and combo card (i.e. both VDSL2 / ADSL2+ on a single card) could be used which reduce the need for modifying home wiring
    - Ethernet First Mile (EFM) could be offered which provides a more business grade service
  - Allows for more competition in supply of line cards
  - Chassis sharing also allows operators greater ability to control and manage the card to for instance: offer different port profiles, monitor line performance and provide better diagnoses and fault resolution
60. The line cards could be installed and owned by Openreach (in which case the products would become variants of GEA). Alternatively, the cards could be owned by operators who rent space in the MSAN chassis in the cabinet (referred to as 'chassis sharing').
61. We are aware that in practice, the introduction of new access technologies in the cabinet may have implications for the future capabilities attainable via VDSL2 specifically in relation to vectoring. Hence the inclusion of alternative technologies would need to be subject to standards, the capabilities of the MSAN vendor(s) and the ANFP. There is therefore room for further constructive debate on the relative merits and trade-offs before proceeding further on this requirement.

### *ABILITY TO SERVE BUSINESS GRADE NEEDS*

62. Business customers require different broadband products to those needed by residential customers. For example, they require (and are willing to pay for) faster repair, quality of service guarantees (e.g. low / no contention, traffic prioritisation) and service level guarantees. These type of capabilities are available on other telecoms products.
63. The current GEA product is not well suited to meeting business customers' needs. For instance:
- There is no fast repair capability (e.g. enhanced care)
  - The current Openreach battery backup solution for FTTP only provides 4 hours standby time which is insufficient for business use

- There are no service level guarantees
64. Whilst we accept that these type of features may not be the top priorities for launch they should be provided in time. It might be hoped that Openreach would develop these capabilities in time at its own instigation to increase the use of the network. However, it may be that Openreach's incentives to provide these services is distorted given its desire to protect and prevent cannibalisation of other business products such as PPCs, WES and EAD against consumers interests.
65. We suggest that Ofcom is mindful of this risk.

#### *MIGRATIONS*

66. It is likely that Openreach has a good incentive to ensure a reasonable migration experience since if the experience is poor there will be low uptake.
67. However, there are a certain number of aspects of migrations where Openreach's interests are not aligned. For instance:
- Openreach will favour migrations that involve WLR over those involving MPF since Openreach has a clear incentive to favour WLR. We are already experiencing an example of this where there is a 'simultaneous provide' migration from WLR+SMPF to WLR+GEA in a one step process but for WLR+SMPF to MPF+GEA it is a two step process which involves a potential 5 day period without any broadband<sup>22</sup>
  - Migrations involving MPF may have a higher failure rate (as they did for LLU when TalkTalk launched)
  - Openreach may create unnecessary barriers to migrations away from GEA e.g. WLR+GEA to WLR+SMPF
68. Potential measures to address this are described below (see §68)

#### *STANDALONE VULA*

69. Ofcom highlight (§7.261) that Openreach's GEA product should be offered 'standalone' - we understand this to mean that provision of MPF or WLR is not required as a prerequisite. We agree with this unbundling approach since it removes unnecessary restrictions on use. Obviously, in the case that MPF or WLR was not purchased the CP / customer would need to purchase a product that recovered the relevant common cost of the copper loop (e.g. d-side cabling).

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<sup>22</sup> The migration is carried out as follows: WLR+SMPF to MPF and then (5 days later) MPF to MPF+GEA. This requires the customer to set up broadband on MPF (and the ISP incur a modem cost) or be without broadband until GEA is delivered

## SUMMARY

70. Above we outlined many ways in which we think the product flexibility and capability could be improved to enable more effective competition. Though Openreach might in time introduce variants to allow this greater flexibility they could make them ineffective and unattractive through the use of excessive price, inferior specification and poor performance. For instance:
- They may make MPF to GEA migrations available but make them slower and less smooth than the equivalent WLR to GEA migration
  - The repair time on MPF+GEA might be inferior to that for WLR+GEA
  - They may make a <15Mbps product variant available but without any assurance (e.g. any commitment on repair times)<sup>23</sup>
  - The migration away from GEA may be slower and more expensive than the migration to GEA
  - They may price operator-install at only a small discount to Openreach install thus making operator-install unviable
  - SLA/SLGs may be offered on the GEA variant with bundled modem but no such commitment is made on the wires-only variant
71. In order to guard against this and help ensure that all variants are treated even-handedly and that BT does not use price and other flexibility to favour product variants that it prefers, we suggest the following:
- Openreach must be discouraged from prevaricating in the product development / SOR process and be required to give early, clear and reasoned responses to requests
  - Any price differences should be objectively justified and there should be 'price consistency' (see §§80-84 below)
  - Differences in product specification (e.g. migration times, assurance) must be objectively justified
  - KPIs are introduced for the product and variants so differences can be easily identified
  - Products must have meaningful SLGs so as to discourage performance discrimination
72. Lastly, we note three other issues:
- the legal definition of VULA (FAA11.5(k)) is fairly unspecific and that Ofcom intends to rely on the statement to provide the detail. In this case, it is critical that the statement is clear and precise

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<sup>23</sup> During the trial Openreach offered to allow lines that were estimated to be able to support less than 15Mbps but said that the product would not be assured (e.g. no repair time commitment). Whilst obviously they could not assure that the line would support over 20Mbps there is some assurance that can be made. Alternatively in the case where an operator applied own parameters, Openreach might refuse to assure the service. However, certain aspects can be assured – such as the underlying copper. Alternatively, Openreach could revert the service back to one of their profiles for testing of a line that shows a fault and 'repair' the fault based on that profile.



- the VULA product should adopt ALA standards
- as Openreach's GEA product evolves (e.g. from bundled modem to wires-only) it may be necessary for the boundary of Openreach to move and for assets (e.g. modems) to be transferred from Openreach to BT Wholesale

## C. PRICING APPROACH

73. We broadly agree with the concept of pricing flexibility for the GEA product given the nascent nature of demand (and therefore difficulty in estimating the unit cost). However, even though the product is nascent there is a clear risk of anti-competitive behaviour by BT favouring its own downstream operations in a variety of ways and to the detriment of competition and consumers (that cannot be prevented by EOI or functional separation). For instance, they could make wires-only unattractive by pricing it more than with a bundled modem. Or, they could price migrations to/from GEA involving MPF more than those involving WLR.
74. Therefore, we see the need for a several additional measures to prevent such damaging discrimination.
- measures to prevent margin squeeze with downstream products
  - 'price consistency' obligation to prevent discrimination
  - possibly cost orientation obligation (or charge control obligations) on certain migrations to prevent creating unnecessarily high barriers to switching
75. These measures are a necessary counterbalance to the broad price freedom provided on GEA.

### *MARGIN SQUEEZE PREVENTION (VERSUS DOWNSTREAM PRODUCTS)*

76. There is a risk that BT will margin squeeze between VULA / GEA and downstream products (either WBC/WBCC or the retail product). They could effect this by either reducing the retail price (without reducing the GEA price) or, more likely, raising the GEA price so that the margin between the products is insufficient for an efficient operator to compete.
77. It might be considered that EOI requirements could prevent this since EOI requires that BTW/BTR purchase the GEA product at the same price. However, in reality this transfer price is merely notional and BT could set the downstream prices with reference to the actual costs not to the published wholesale price. Therefore, in effect, raising the wholesale price would not affect BT's actual costs or retail pricing behaviour. Obviously, if Openreach was *structurally separate* then this would not happen.
78. There are a number of ways of preventing a margin squeeze
- At one extreme a minimum margin rule with precise numbers could be specified at the outset e.g. price difference between GEA and retail should be £10.70. This approach was done with the IPStream DataStream margin in 2004<sup>24</sup>

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<sup>24</sup> See [http://www.ofcom.org.uk/consult/condocs/adsl\\_price/statement/statement.pdf](http://www.ofcom.org.uk/consult/condocs/adsl_price/statement/statement.pdf)

- At the other extreme an '*ex post*' approach could be used using Competition Act where nothing is laid out in advance - this appears to be the approach suggested by Ofcom (see §7.254)
  - In the middle may be an approach where Ofcom lays out the principles that it would likely apply in the case where a margin squeeze test was carried out.
79. We think that both of the extremes are inappropriate. We explain why below.
80. Setting out a specific margin at this point would be excessive given that the costs are not well understood and there might be unintended consequences such as unreasonably restricting BT Retail's pricing freedom.
81. Doing nothing now and effectively relying on the use of Competition Act powers would be insufficient and would not provide sufficient certainty to all parties and would not be adequate to promote sustainable competition. Competition Act cases take an unacceptably long period to resolve - for example, the Freeserve case for broadband is still incomplete after more than 7 years. Competition Act powers are so slow as to be almost worthless. Further, it is unclear on what basis a margin squeeze test would be carried out - for instance, would it use BT's market share or an efficient new entrant, would it use actual costs or forward looking LRIC+.
82. On balance we think the most appropriate approach would be one in the middle. This would include:
- Ofcom reserving the power to investigate and remedy a margin squeeze under *ex ante* powers. This could be based on the 'reasonable pricing' condition (in Condition FAA11.2) or where under this condition a margin squeeze would be deemed as a 'constructive refusal to supply' GEA on reasonable terms. Ofcom should outline which legal basis it would anticipate using to address a margin squeeze
  - Ofcom should also outline the analytical basis on which it would assess a margin squeeze. For instance, the cost of the retail product should be based on using the GEA product at the published wholesale price. In addition, Ofcom should articulate the major assumptions used to derive the minimum margin (such as market share and cost standard - e.g. forward looking LRIC plus an EPMU mark-up)

#### **PRICE CONSISTENCY OBLIGATION - PREVENTING DISCRIMINATION**

83. Openreach could use the high degree of pricing freedom that it has to discriminate and act against consumer interests in other ways. For instance:
- Openreach could render certain GEA product variants (that it does not favour) ineffective through price manipulation. For instance:
    - It could price GEA 'self-install' options at an inadequate price difference to Openreach-install options to force operators to use Openreach install
    - It could price options where the operator has a high degree of control at an excessive price over the 'standard' product

- It could price MPF and WLR variants of GEA products<sup>25</sup> to discriminate in favour of WLR and BT Retail. For instance, the migration from WLR to WLR+GEA could be priced lower than MPF to MPF+GEA. Openreach currently operates such price discrimination and abuse between MPF and WLR. For instance, the new provide price for WLR is substantially lower than MPF and Openreach is increasing the difference (even though the costs are very similar)
  - Openreach might use price flexibility to create barriers to switching by, for instance, setting the price for migrations *away* from GEA at an unreasonably high level (either in absolute terms or relative to migrations *to* GEA)
84. One approach to address these risks could be to apply charge control obligations and/or cost orientation obligations. We think that such an approach might be inappropriate at this stage (though may be appropriate before the next market review).
85. Instead we think a much lighter touch measure could be used to address risk of discrimination. This could be called a 'price consistency' obligation whereby though Openreach has flexibility over the absolute price of GEA services it much ensure that variants of GEA services should be priced consistently. This would mean that prices for variants should only differ to the degree that the cost differs. So for instance,
- A WLR to WLR+GEA migration should be priced the same as MPF to MPF+GEA unless the cost differs (and in that case the price difference should equal, or be similar to, the cost difference)
  - A migration *from* GEA should be priced the same as a migration *to* GEA
  - The price of GEA self-install should be equal to the price of the Openreach-install GEA product less the avoided cost where Openreach does not install the service
  - The difference in price of different speed options e.g. 40/10 versus 40/2 should reflect the cost difference<sup>26</sup> in providing the services<sup>27</sup>.
  - The price of additional bandwidth (i.e. bandwidth charges) should reflect the cost of provision of the additional bandwidth

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<sup>25</sup> For example MPF to MPF+GEA migration compared to WLR+SMPF to WLR+SMPF migration

<sup>26</sup> Openreach's current pricing approach (where the 40/10 products costs £5 more per year even though the cost is the same) is akin to charging more for an LLU line that supports a higher speed than one that supports a lower speed

<sup>27</sup> It may be economically efficient for higher speed variants to be priced at greater than the (incremental) cost difference. This is known as 'Ramsey pricing'. However, we believe that such Ramsey pricing at the wholesale level is inappropriate in this case. First, it is worth noting that (for current generation broadband) there is no such price differentiation at the retail level. There is basically a flat price for best efforts delivery. Second, Openreach understands little of the retail market and therefore is unlikely to price efficiently - if there is retail price differentiation to be done it is best decided by ISPs unconstrained by what Openreach does (Openreach can follow later). Third, there is a risk that such pricing might be discriminatory and/or lead to excessive pricing. Forth, premium pricing in this way is inconsistent with the overall philosophy of a 'raw' product like LLU when the product costs reflect cost to provide rather than retail willingness to pay

86. A price consistency obligation would therefore allow Openreach to maintain its ability to set overall price levels but cannot use this flexibility to discriminate.
87. It may be that other obligations on BT – such as ‘reasonable charges’ (in FAA11.2) or ‘no undue discrimination’ (FAA3) – are sufficient to effectively prevent this type of discriminatory behaviour. However, their effect is unclear (unless Ofcom provides clear guidance that their intent and effect is to prevent such discrimination) and untested (we are not aware of either of these being used in this way). Therefore, we think that it would be appropriate to either explicitly include a ‘price consistency’ obligation within the existing obligations (FAA11.2 and/or FAA3) or create a new obligation and be clear about the expectations of BT’s behaviour.

#### *COST ORIENTATION OBLIGATION - PREVENTING EXCESSIVE BARRIERS TO MIGRATION*

88. In addition to the price consistency obligation, it may be appropriate to impose a cost orientation (or even charge control obligation) on certain migrations. If not, BT could raise the price of migrations and make switching excessively expensive undermining customer interests. Ofcom has previously (in the case of DataStream in 2004) effectively imposed a charge control on migrations in the case where there was no cost orientation on the product itself<sup>28</sup>.
89. There is little risk that imposing cost orientation or charge control obligation on certain migrations would result in under-recovery since the cost is predictable<sup>29</sup>.
90. A similar barrier to switching could arise from the use of a minimum contract term – we understand the current GEA has a minimum 12 month contract. These terms are used in retail contracts as a means of minimising the risk of under-recovery of incremental upfront costs (that are not recovered in the connection charge). However, they generally are not used for wholesale telecoms services because the incremental upfront cost for wholesale services (e.g. line migration, home visit) are fully recovered in the connection charge.

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<sup>28</sup> A £11 migration charge for IPStream to DataStream was imposed through resolution of a dispute even though there was no charge control or cost orientation obligation on DataStream and IPStream was not in a market where BT had SMP

<sup>29</sup> since it is largely variable and so the cost does not depend on, for example, GEA uptake

## D. FIT FOR PURPOSE PASSIVE PRODUCTS

91. Achieving both maximum coverage of NGA (in areas where BT does not roll-out) and providing competitive pressure to Openreach's GEA product (in areas where BT does roll-out) will be best realised by effective passive products that allow other operators<sup>30</sup> to efficiently build their own networks.
92. Though Ofcom has taken important steps on passive remedies (for instance proposing the imposition of a duct access obligation on BT), there is much more that can and needs to be done if other operators are to get fair access and so be able to efficiently build their own NGA networks.
93. It is important to recognise that no single passive remedy is a 'silver bullet'. To allow other operators to build their own networks efficiently and effectively will require a suite of complementary passive remedies in the same way that LLU need a range of remedies to be effective. These include:
- For FTTC:
    - sub-loop unbundling (i.e. access to d-side copper)
    - cabinet sharing
    - solutions to provide fibre backhaul from cabinet to exchange e.g. duct access and/or dark fibre and/or Ethernet
  - For FTTH:
    - Duct / pole access
    - Fibre unbundling e.g. multi-fibre GPONs
    - Wavelength unbundling
94. We accept that some of these may not be technically feasible today (e.g. wavelength unbundling). However, we do not believe that Ofcom's proposals in this review go far enough. In particular we think Ofcom should impose additional obligations on BT including:
- Rapidly improve SLU and make fit-for-purpose (including looking at cabinet sharing)
  - On duct/pole access maintain close oversight of product specification progress and proactively provide guidance on pricing
  - Requirement to offer dark fibre in certain circumstances where it is more effective and efficient than duct access
  - Ofcom to reserve powers to impose a 'fibre unbundling' remedy for GPON networks during the period of this market review
95. At the moment, without this comprehensive approach Ofcom's imposition of PIA obligations will have little impact since, for instance, they will be effectively useless to help deploy FTTC unless SLU is also made fit-for-purpose. These are discussed briefly below.

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<sup>30</sup> Either existing ISPs or third parties such Digital Region in Yorkshire

96. BT have 'voluntarily' committed to provide duct access and it may seem that they are supportive of passive access. However, this is clearly against BT's interests and once you dig down it seems that BT's heart is not behind making this a success quickly. Therefore, Ofcom must remain vigilant.

#### *SUB LOOP UNBUNDLING - SLU*

97. Sub-loop unbundling is an essential input for other operators to be able to deploy an FTTC network. The current product is woefully inadequate to be used to offer attractive services and is a long way from being even close to fit-for-purpose. For example:
- Ordering is done by Excel spreadsheet
  - They are no performance targets
  - Some prices are highly inflated - for instance, the connection charge is £125 versus £75 for GEA which involves less activity<sup>31</sup>
  - SLU is only compatible with WLR and is not compatible with MPF
  - The cost of a tie cable is based on a 100m long cable even though the cable will typically be less than 5m long
  - There are no service level guarantees
98. Whilst this situation might have been reasonable when there was no demand, this situation has now changed. For example, Digital Region are part way through rolling out a FTTC network to over 600,000 homes and business in Yorkshire. It is likely that (particularly with the implementation of the Universal Service Commitment) that there will be other third party deployments of FTTC<sup>32</sup>. Without an effective SLU product set, it will be almost impossible for other operators to compete with BT<sup>33</sup>. Therefore, lack of SLU will mean that BT will be the only operator able to provide these networks (using FTTC) and so will monopolise the bids and so make it difficult for the Government to achieve value for money.
99. Therefore, it is urgent that the SLU product is rapidly improved.

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<sup>31</sup> A GEA connection involves jumpering in the cabinet and a home visit. SLU only involves jumpering in the cabinet

<sup>32</sup> This will be in areas where the most cost effective mechanism of providing a 2Mbps service will be using FTTC

<sup>33</sup> We note that Ofcom seems to question the viability and efficiency of SLU (§§7.77-7.82 and Annex 9). If BT's FTTC deployment is a viable monopoly in a particular area then it follows that SLU (with PIA) will be viable as a monopoly (provided the products are designed efficiently). There is a separate question of how many operators might be viable. We note that Ofcom's analysis ignores fact that other operators will almost certainly be more efficient than BT and the cost savings and benefits that will accrue elsewhere in the business as a result on operating the infrastructure

100. The Variation agreed by BT and Ofcom<sup>34</sup> last year set out a clear commitment to provide fit-for-purpose SLU. For instance, §5.57 of the Variation said:
- (i) In providing any FTTC Passive Inputs [e.g. SLU], AS [i.e. Openreach] shall use the same components, processes and systems it uses itself for the purposes of its BT Active FTTC Product [i.e. GEA] where reasonably practicable and on the most cost-efficient basis.*
- (ii) Where AS cannot provide FTTC Passive Inputs in accordance with sub-para (i), it shall provide FTTC Passive Inputs as far as possible to the same specifications with the same functionality and performance as the inputs it uses itself for the BT Active Product.*
101. Ofcom in its statement accompanying the Variation (§3.52) outlined what this means:
- "... BT's commitments in paragraph 5.57 should give the same level of confidence in equality of access to potential investors as Eol might have done. For example, in ongoing operations of the passive inputs, such as connection of end-users' copper wires to ports in the electronic equipment in street cabinets, we consider that it should be practicable and cost-efficient for Openreach to perform such operations for competing CPs no differently from how it performs them for itself"*
102. It seems clear that BT is not meeting this commitment.
103. As a matter of urgency, Openreach should rapidly develop the SLU product to make it fit-for-purpose. If Openreach doesn't Ofcom should take proactive action to require it to do so. The improvements should include, *inter alia*:
- Fit for purpose plan and build processes (including whether and how BT should BT share its cabinets as suggested in §8.24 and backhaul options)
  - A range of SLU migration capabilities (e.g. transfer from WLR/MPF, new provide, stopped line restart) consistent with those provided by GEA<sup>35</sup>
  - A proper ordering interface (probably through EMP) with the same capabilities as those provided for GEA
  - A clear set of SLAs (backed up by SLGs) and published KPIs
  - A transparency obligation on SLU / GEA to make the differences between the products transparent (this is akin in some respects to the obligation in BT's Undertakings – section 4)
  - Prices that are consistent with GEA (i.e. prices only differ where the costs differ) and are cost-orientated
104. This review is envisaged in the variation to the Undertakings<sup>36</sup>. However, it is not required until the earlier of BT themselves have 1m customers on GEA or 'at the

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<sup>34</sup> Variation to BT's Undertakings under the Enterprise Act 2002 related to Fibre-to-the-Cabinet 11 June 2009.

<http://www.ofcom.org.uk/consult/condocs/fttc/statement/statement.pdf>

<sup>35</sup> And for the avoidance of doubt that means that there should be no discrimination between WLR and MPF i.e. GEA and SLU should be compatible with MPF and the migration types provided should be the same



latest during the course of 2011'. It is highly unlikely that BT will have 1m GEA customers before the end of 2011. Thus, according to the Undertakings, BT are not required to carry out this until late 2011. That is simply too late. There is no justification to wait until then.

#### *DUCT / POLE ACCESS - PIA*

105. We agree with Ofcom's proposal to require BT to offer duct and pole access (referred to as 'passive infrastructure access', PIA). We think it will not only allow other operators to roll-out FTTC and FTTH networks in areas where BT has not rolled out but will also provide some competitive tension with BT in areas where BT has rolled out.
106. We also broadly agree with the proposed form of the requirement (§7.145) and the suggestion that there will be a 'pseudo-EOI' requirement (§8.65) though we are concerned that this later point has not been made fully clear (or better included as a Variation or as a regulatory obligation).
107. Developing a PIA product set will be something that is both complex and something that BT has little incentive to do well or quickly:
  - The products have similarities with other cases where BT shares its physical assets such as LLU co-mingling (provision of space in BT exchanges). However, this will likely be far more complex: it has few real world parallels like hosting; there is little experience of it from other countries; the product will vary significantly depending on circumstances (e.g. whether space available, whether new build); scope; and the 'ordering' process is complex.
  - BT has a strong incentive to design the PIA remedy to be ineffective<sup>37</sup> in order to limit competition to their own deployments and to limit competition for public-funds. They are also likely to use any price flexibility afforded them to set excessive prices.
108. Therefore, there is a high risk that BT will game the process and render the PIA products nugatory. We recently met with Openreach to understand their plan to move PIA forward and it seems (although Openreach is initiating some workshops) that there is not the senior level leadership that will be necessary if such a complex product is to be successfully delivered quickly.
109. Because of this it is critical that Ofcom both maintains oversight of progress and reserves itself the powers to intervene quickly and decisively in the case of 'foot dragging'.

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<sup>36</sup> §5.55 of the FTTC Variation

<sup>37</sup> One example of the 'gaming' that BT might use is the exchange allocation process they (with Oftel) designed to allocate co-mingling space for LLU which succeeded in delivering operators limited amounts and fragmented allocations

## *DARK FIBRE*

110. Ofcom has not proposed that BT has any obligation to offer dark fibre – in fact, the whole consultation only mentions the phrase ‘dark fibre’ once (§8.18) and in the context of FTTH. Given the proposed obligations for BT to provide products upstream of dark fibre (i.e. duct access) as well as downstream of dark fibre (i.e. Ethernet cabinet backhaul and GEA), this exclusion and lack of any consideration seems strange.
111. In many cases, dark fibre may be a preferable remedy over duct access. For instance:
- If there is existing dark fibre available then using that fibre is likely to be lower cost than using duct access since less complex intervention is required and expensive handover points are not required
  - Even in cases where there is not existing dark fibre, it may be better for BT to deploy additional dark fibre (and rent that to other operators) rather than for other operators to use a duct access product
    - Less requirement for surveys
    - Operationally, less intrusive / disruptive and lower risk of, for instance, the other operator disturbing other cables in the duct
    - Overcomes complexities where there is limited capacity (e.g. need for capacity reservation) since more capacity can be provided by BT installing dark fibre than multiple operators installing their own fibres in micro-ducts
    - In cases where no space was available (e.g. due to congestion or collapsed ducts) deploying dark fibre would remove the need for additional chambers to connect operators own ducts (to bypass the congested portion) to BT’s
112. In our view, dark fibre should be actively considered. It would form an effective complement to duct / pole access both allowing passive access in cases where duct / pole access is not appropriate and/or being more cost effective.

## *OTHER PASSIVE REMEDIES FOR FTTH - ‘FIBRE UNBUNDLING’*

113. Whilst duct access might provide a passive remedy as a means for other operators to efficiently deploy FTTH networks, it may be that other ‘fibre unbundling’ remedies would also be beneficial.
114. One option would be to require BT to effectively deploy point-to-point fibre (PTP) in which case the fibre could be unbundled in much the same way that LLU occurs today. However, this form of unbundling is not possible given BT’s plan to deploy a

shared PON type architecture<sup>38</sup>. A shared network could also be unbundled by for instance, deploying multiple fibres in different portions of the network or wavelength unbundling. Ofcom has outlined a number of these options in the consultation (§§7.39-7.50).

115. As Ofcom reasonably points out there is little demand today for these options – in part reflecting the lack of deployment by BT to date.
116. Ofcom proposes that given these circumstances there should be no specific obligation on BT to offer any particular service and that they would rely on the general access obligation.

*“We therefore propose that fibre unbundling is not a viable main tool for competition in the period covered by this review, and that there should be no related specific access requirement on BT. However, we note that OCPs would still be able to seek fibre access products, under BT’s general access obligation to meet reasonable requests for network access (which we are proposing should continue).” (§8.21)*

117. Though we broadly accept that fibre unbundling is not appropriate today we do not agree that it will not be a ‘viable’ tool in the period covered by this review. More particularly we fundamentally disagree with Ofcom’s analysis that fibre unbundling is likely to result in a reduction in the incentive to roll-out FTTH – *“perhaps the most likely and severe risk [of fibre unbundling], in practice, is the impact on BT and the disincentive BT may face in investing in its FTTP network in the first place”* (§7.66). This is nonsense. Provided that BT is fairly recompensed for the ‘at-risk’ investment it makes (in duct and fibre) then it should be agnostic as to whether it recovers that investment through fibre unbundling charges or through the GEA product (or for that matter a retail FTTH product). The suggestion made by Ofcom is simply false and is in fact an argument against any form of unbundling.
118. Regarding the approach to developing a product, in the case where there is a requirement (during the period of this review) for a product and an operator requests BT for access under the general access obligations in WLA (FAA1) it is unlikely that BT would provide access on reasonable terms since it would not be in BT’s interests to do so. Therefore, in order to be able to get a reasonable product an operator would have to submit a dispute to Ofcom to resolve under its dispute resolution powers (using probably the ‘network access’ obligation). We think that this would be a very ineffective route to specify a fibre unbundling obligation: first, it would require a long time to resolve and secondly, Ofcom may end up having to impose a ‘quick and dirty’ resolution (given the 4 month deadline). The upshot is that we may have no effective fibre unbundling remedy for 5 or more years<sup>39</sup>.

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<sup>38</sup> Where effectively a group of homes share the capacity on one fibre e.g. a GPON type network.

<sup>39</sup> the next market review may be in 4 years time (the gap since the last one was 6 years) and then it may take 1-2 years for the remedy to be developed

119. Therefore, we believe that there is a clear need for Ofcom to reserve the power to impose a remedy during this market review period. Other countries in Europe are forging ahead with a variety of fibre unbundling obligations. It would be very strange for the UK (considered by many to be the most pro-competitive environment), to have no effective remedy until 2015. As competition commissioner Neelie Kroes recently said "[VULA] *is not a long term alternative to physical fibre unbundling, which should be imposed as soon as possible.*"<sup>40</sup>

#### GENERAL ISSUES WITH PASSIVE REMEDIES

120. We have a number of other issues with passive remedies that are common to several of the products - downstream use restrictions, price controls and EOI/transparency. They are discussed below.
121. Ofcom has suggested (§7.150) that there will be downstream use restrictions on passive remedies e.g. that PIA could not be used to deploy fibre used to provide business connectivity services. We believe that such downstream use restrictions will unnecessarily restrict the ability to gain economies of scope and operate on a level(er) playing field with BT which will reduce the benefits and uptake of passive remedies. One option may be that rather than a blanket ban would be to require that the passive remedy is *predominantly* used to provide broadband / telephony services and so allow efficient reuse of the asset for to serve other markets. Similarly, the duct / pole assets that are in scope needs to be considered (§7.149).
122. With regard to pricing Ofcom has suggested that cost-orientation is the most appropriate remedy and that would require that prices are based on LRIC plus an 'appropriate contribution to common costs' (§7.188) with the return being risk adjusted. We broadly agree that a more proscriptive charge control remedy might be excessive at this point. However, a cost orientation obligation allows BT huge discretion since the floor and ceiling set by the obligation are very wide particularly in the case of, for instance, PIA where much of the cost is common.
123. Therefore, we welcome the clarity provided on duct that the common cost allocation should be based on cross-sectional area. We also welcome the commitment to a formal review of PIA prices if BT and CPs may not be able to reach agreement.
124. However, we think that a similar formal review mechanism should be imposed on SLU with the clear backstop of setting a charge control in the case where BT's prices are not agreed.
125. Given that these passive remedies will not be subject to an EOI requirement two alternative measures should be taken to reduce the risk of discrimination:

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<sup>40</sup> [http://www.theregister.co.uk/2010/06/02/bt\\_fibre\\_eu/](http://www.theregister.co.uk/2010/06/02/bt_fibre_eu/)

- a 'pseudo-EOI' requirement should be imposed (as was done for SLU in Variation \$5.57). This was suggested in respect of PIA (\$8.65) though it has not been made fully clear (or better included as a Variation or as a regulatory obligation so that it is enforceable). The same requirement should be imposed on other passive remedies such as fibre unbundling and dark fibre
- a transparency requirement should be imposed that makes clear and explicit the specification of the internal wholesale product that BT consumes that is analogous to the passive product – for example, the provision of cabinet migrations compared to SLU. This is similar to the transparency obligation in the Undertakings (Section 4)

## E. OTHER ISSUES

126. In this section we comment on a number of other aspects of the Market Review.
127. With respect to the market analysis we agree with Ofcom's approach and conclusion (questions 1 to 3).
128. We agree with the inclusion of VULA as a remedy in the WLA market (i.e. market 4).
129. We agree with the strict no undue discrimination obligation for VULA (\$7.262) which mirrors the EOI requirement. We believe it useful to bring the concept of equivalence within the *ex ante* framework.
130. In respect of BT accounting information (provided in the regulatory financial accounts) we regard the current obligation and / or current approach as failing and of little practical use. For instance: there is woeful transparency, allocation methods are unclear and different to those used in charge controls, the audit provides little useful comfort, it has basic and material errors and allows BT too much discretion. Though this market review is not the place to address these flaws in detail, the regulatory obligation should be drafted to allow improvements to be imposed on BT.
131. Though it is anticipated that this market would be reviewed again in 4 years it may be that there is a requirement for change in remedies before then. Given this it might be prudent for Ofcom to reserve powers to intervene prior to the next market review.
132. In regard of obligations in respect of LLU we see there two areas that may be appropriate for Ofcom to consider within this market review.
133. First, TalkTalk has experienced a very poor performance on the delivery of certain components that has prevented TalkTalk migrating customers to its network in certain exchanges. The problems have included blocked frames, lack of tie pair capacity and unavailable TAMs which has had significant commercial impact. Currently there is not an adequate SLA SLG regime that provides the correct and

adequate commercial incentives on Openreach to deliver the appropriate level of quality. In the same way that Ofcom imposed a SLA SLG regime on Openreach in respect of line provisioning and faults<sup>41</sup> we believe that a similar obligation may need to be imposed in this case.

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<sup>41</sup> <http://www.ofcom.org.uk/consult/condocs/slg/statement/statement.pdf>

134. Second, TalkTalk and the increasing number of LLU operators that use MPF suffer discrimination against BT Retail due to MPF variants of LLU products being priced more than the WLR/SMPF variants. For instance:

- Connection / migration
  - MPF (WLR to MPF): £38.64
  - WLR (MPF to WLR): £34.86
- New provide
  - MPF: £75.01
  - WLR: £55.74
- Cease
  - MPF: £5.09
  - WLR: £0.00

135. This is discriminatory and anti-competitive. It could be prevented by a 'price consistency' obligation whereby prices for variants should only differ to the degree that the cost differs.

## F. SUMMARY OF PROPOSED CHANGES

136. Below is a list of the main suggestions by TTG in this Market Review.

### VULA features

- Wires-only mandated when technically feasible
- Greater control of features for operators
- Removal of artificial speed and other constraints (and flat price)
- Provision of a truly uncontended service
- Commercially viable non-Openreach install option
- Road-map towards provision of different access technologies
- Roadmap for capabilities to meet business grade needs
- Suite of (non-discriminatory) migrations
- Measures to prevent price / specification / performance discrimination of product variants

### VULA pricing

- *ex ante* measures to prevent margin squeeze with retail
- 'Price consistency' obligation to prevent price discrimination
- Cost orientation on certain migrations and no minimum contract term

### Passive remedies

- Rapid development of 'fit-for-purpose' SLU
- Ofcom oversight of PIA development
- Introduction of dark fibre obligation to complement PIA
- Reservation of powers to impose fibre unbundling in this review period
- Clarity on cost orientation and/or formal review of SLU and PIA pricing
- 'Pseudo-EOI' obligation on all passive remedies

### Other

- Obligation to offer meaningful SLA SLG regime on all LLU products
- 'Price consistency' obligation to prevent price discrimination on LLU