

Ofcom Strategic Review of Telecoms Phase 2 Consultation¹

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1. Summary of BSG's views and proposals

1. The BSG's initial impression of the Phase 2 consultation document was good in that it considered telecommunications networks as a key component of the broadband value chain, it recognised the need to create the environment for investment and innovation in next generation networks and services and it recognised also the value of achieving infrastructure competition as deep as possible into the network.
2. However, it has become clear that different BSG members have interpreted Ofcom's policy intent in different ways. Furthermore, when Ofcom's related consultation programme is taken into account (i.e. next generation access and interconnection, the valuation of BT's copper access network, cost of capital and spectrum liberalisation), the BSG believes that Ofcom is sending mixed messages at a critical time for the industry.
3. The outcome of this Review will dictate the evolution of the market and its structure (i.e. notably the pace of investment and technology deployed) for up to a decade ahead. Therefore, it is essential that Ofcom doesn't initiate a round of intervention to fix shorter-term problems without full consideration of the potential impact on longer term market evolution. The objective should be to enable a natural, market led progression from current generation to next generation networks.
4. In summary, although the BSG recognises the differing needs of its members, it urges Ofcom to focus on the medium to long term and ensure that it does not succumb to any form of regulatory capture by suppliers in any part of the value chain.
5. The BSG agrees with Ofcom that resolving the issue of 'access' is fundamental to the successful operation of the value chain since the access network represents the most problematic bottleneck. However, the impact of local access on the entire value chain is multi-faceted. On the one hand, lack of competition at the local access level may have a knock on effect on innovation in the upper layers of the value chain. On the other hand, lack of investment in local access, and the consequent under-capacity, may have an equally detrimental impact on the value chain. There is high growth potential throughout the broadband value chain. The BSG is seriously concerned that this growth potential may be undermined if regulatory intervention deters investments in the local access or hinders competitive entry.
6. The importance of resolving the access issue is emphasised by developments in different parts of the chain; e.g. at one end of the chain, the capabilities of consumer electronics are improving significantly, in terms of storage and processing power, as are the abilities of

¹ Please note: this response has been produced by the BSG Secretariat on the basis of inputs from a wide range of stakeholders in response to the points raised in the Consultation Document. It does not represent the views of any particular stakeholder or groups of stakeholders but aims to identify some key areas for Ofcom focus and further consideration in the next phases of this Review.

equipment to handle multiple services. At the other end of the chain, content and services are becoming more visual/video rich. The challenge is to ensure that content and services are matched with consumer electronics capabilities so that consumers are not frustrated by insufficient capacity at different points in the chain or by problems of interoperability, etc. At this point in time, there is serious concern that local access capacity will not keep pace with either consumer or content supplier demand.

7. Hence, the BSG believes that the core objective of the 'new settlement' must be to create an investment climate for the successful delivery of next generation networks (and services) that it is as good as those of other leading global economies.
8. The new settlement must ensure that financial returns are high enough to secure next generation access network investment and that existing and potential investors in next generation access networks will be more, rather than less, confident going forward. The BSG is not convinced currently that the outcome of the Review, and related consultations, will achieve this outcome.
9. Resolving the access issue also requires detailed analysis of the structural options identified in Annex I of the consultation document. The BSG has always argued that access networks must be considered in terms of their core components; i.e. the passive, most capitally intensive part, which is the civil infrastructure or duct network, and the active, transmission part. In the BSG's view, the former represents the real bottleneck and major barrier to infrastructure competition 'deeper into the network'.
10. The BSG supports fully the objective to drive infrastructure competition deeper into the network and believes that, if the need to replicate the passive infrastructure in all instances is removed, competition at the transmission level may be much more achievable. This is in the interests of both retail and wholesale competition.
11. The BSG believes that more needs to be done (a) to clarify what 'next generation access' means, (b) to understand what is required at each part of the value chain to deliver 'next generation services' and (c) to assess the potential impact of access network regulation on the rest of the value chain.
12. The BSG believes also that more needs to be done to clarify the potential impact of evolving DSL technologies, wireless options and fibre closer to the customer. Each technology has its advocates and it is probable that next generation access networks (NGANs) will use all of these technologies in future. However, the BSG is conscious that regulatory decisions have an unavoidable impact on technology decisions and it cautions against any particular technology being seen as a panacea for universal broadband delivery. The BSG advocates further analysis of the above options in parallel with work that the BSG has in hand to clarify future bandwidth requirements.
13. In summary, the BSG would reiterate its comment in its response to the Phase 1 consultation *"that regulation will have to tend towards a 'visionary' philosophy (i.e. it must help to create the future rather than fix the problems of today) and address efficient operation of the whole supply chain."* To this end, it will be important for Ofcom to assess the longer term impact of its decisions and ensure that its decisions will allow for a natural progression to next generation broadband.

2. BSG reactions to key messages in the consultation document

1. Ofcom has acknowledged that the current regulatory approach ('intrusive micro management') hasn't delivered adequate competition and innovation in the fixed network market. On the other hand, Ofcom sees the mobile market as one that has developed strong competition and innovation. *The BSG welcomes this acceptance but feels that Ofcom may perpetuate, rather than withdraw from, micro management in the fixed network market. Although it will be argued that less intervention by Ofcom could create uncertainty for entrants, further intervention could undermine investment. This suggests that the balance should be tilted towards the deregulatory option with more emphasis on behavioural regulation of SMP players; i.e. let the market work as effectively as possible.*

2. Ofcom wants to review enduring bottlenecks, not just in networks but also in other parts of the value chain. It recognises that market power could arise at different stages of the value chain. Ofcom wants also to develop a better understanding of broadband commercial models and the real interoperability issues through the supply chain. *The BSG agrees with this objective and believes that the next stage of the Review should focus significantly on this area. However, Ofcom has neither defined, nor set out the rules for determining, an 'enduring economic bottleneck'. Is an enduring bottleneck a product market where there is no contestability or has the term been chosen purposely to allow other contestable markets to be included in this definition? Ofcom should not determine the presence of an economic bottleneck arbitrarily.*
3. Ofcom recognises the need to create an environment to “bring forward investment” in infrastructure, primarily at local access level and wants to see infrastructure competition “deeper into the network”. Ofcom acknowledges that there may be ways to ease the capital expenditure burden and is seeking views on options such as duct sharing, on the grounds that unnecessary replication of civil infrastructure is an inefficient use of capital and deters access network competition. It sees the use of LLU and wireless as ways of providing competitive access, particularly where full infrastructure competition is unsustainable. *The BSG supports this intent but, as indicated above, it is concerned that current activities could be in conflict with this objective. The BSG is concerned that the view that 'there is only one loop' could lead to Ofcom decisions that ensure that only one local loop can be economically justified – but this may not be the case if conditions for investment deeper into the network are appropriate.*
4. Ofcom has to conduct a USO Review but doesn't see the need to change the definition at present. This is linked to the upcoming European Commission review of the Universal Service Directive later in 2005; the current UK position is that it is too early for a broadband USO but Ofcom needs to review future options for range and funding. *The BSG agrees with the current Ofcom position.*
5. The BSG believes that the seven principles laid down by Ofcom are sound but questions whether Ofcom is currently applying them across its wide remit.

3. Is Ofcom's policy intent clear?

1. In its Phase 1 response, the BSG noted that the Government had agreed that there should be “strong competition between broadband platforms” and that “sustained investment in existing networks and the rollout of alternative technologies should be encouraged”.
2. However, some BSG members believe that Ofcom has already drawn conclusions about a policy direction – with a tilt towards the service competition model (via more explicit support for LLU), rather than infrastructure competition, despite the references towards encouraging infrastructure competition deeper into the network. The BSG would be concerned if this were the case since the market will be best served if there is effective retail and wholesale competition in both services and infrastructure. In support of this view, we note that OECD has highlighted the link between broadband success and the availability of alternative, competing infrastructures.
3. Whilst broadband achievements to date have been encouraging, it is important to be clear about future objectives and bandwidth requirements. Some would argue that, with 99.5% coverage of a basic 512k service expected by the end of 2005, little more needs to be done. On the other hand, the BSG is aware of many parties that argue for significantly more; i.e. much wider availability of multi-megabit services. The growing exchange of video rich material, together with recent announcements from Google (of a search facility for clips from TV programmes and film), and from IBM, Toshiba and Sony (of a chip for use in home broadband content servers), highlights the dynamic nature of 'broadband'.
4. The BSG's definition of broadband (below) recognises a dynamic, ever changing situation; in other words, targets will continually be reached and new targets set. It sees no reason to

change this definition and believes that each component of the value chain must be allowed to keep pace with consumer needs in terms of both capacity and choice.

'Always on access, at work, at home or on the move provided by a range of fixed line, wireless and satellite technologies to progressively higher bandwidths capable of supporting genuinely new and innovative interactive content, applications and services and the delivery of enhanced public services.'

5. This is why the BSG would urge OFCOM to think through whether the various policies currently contemplated will allow for such a dynamic transition to progressively higher bandwidths or whether there is a risk of hindering this development.

4. Is Ofcom's 'convergence thinking' sufficiently developed?

1. Although the Phase 2 consultation document considers the future of the telecoms sector in the broader context of convergence, the BSG anticipates that the focus of responses to the consultation will be tilted towards equality of access/equivalence. Although this is important, it could lead to the issues of the telecoms sector being considered in a vacuum. This does not imply that the BSG underestimates the importance of equality of access but the outcome must not undermine the essential investment and innovation required by either BT or other operators over the next decade such that consumer demand for both current and next generation services can be efficiently met.
2. It is essential that other issues, such as the impacts of change elsewhere in the value chain, are not sidelined by the debate over equivalence.
3. In the Phase 2 consultation document (sections 4.9 to 4.13 refer), Ofcom has provided a good illustration of the components of the broadband value chain and, in Annex J, it provides a number of examples of scenarios and new alliances that could emerge and outlines their potential impact (sections J.7 to J.14 refer).
4. Section J.20 also recognises that *"what we currently think of as telecoms networks will play an increasing role in delivering content which is at present mainly delivered via broadcast networks"* and *"as these new content distribution networks emerge, there is the potential for greater competition in content distribution; for example between terrestrial, cable, satellite and online platforms"*. It is because of these convergence trends that the BSG has argued that telecoms and PSB policies need to converge as public and commercial service content will increasingly be delivered across multiple platforms. This is reflected also by Ofcom's thinking around the PSP concept.
5. However, whilst Ofcom has acknowledged that it is important, in determining the appropriate regulation for physical network businesses, that it has regard for the consequences that this regulation could have on the evolution of the wider value chain, we are not convinced that this is currently happening.
6. The BSG agrees with Ofcom's statement, in section 4.18, *"there may be emerging sources of market power elsewhere which make the analysis and the appropriate regulatory response more complex"* and, in section 4.23, where it states that *"these new potential sources of market power do not necessarily require any specific regulation in addition to the normal application of competition law"*. These various technological and competitive bottlenecks may exist or emerge within this value chain arising, for example, from technological incompatibility related to proprietary equipment standards or, at the competitive level, the desire to protect commercial interests, which may lead to limitations imposed by, for example, network owners on third party access and content and rights owners on content distribution, etc. However, many of these bottlenecks may be transient and some may be beyond the scope of Ofcom's powers.
7. The BSG agrees with Ofcom's conclusion in section 4.18 but believes that more work is required to achieve a better understanding of what bottlenecks might emerge, whether they might be enduring and whether Ofcom's powers under either the Communications Act or competition law extend to all areas.

8. The BSG agrees also with Ofcom's conclusion, in section 4.24, Ofcom concludes *"the scope for competitive forces to be unleashed throughout the extended value chain makes fixing the core problem of access to bottleneck assets even more critically important."* However, the BSG would reiterate the point at 1.5 above that this bottleneck may also be created by lack of investment and not by a simple refusal of BT to provide access. It is thus critical for OFCOM to consider carefully how to create competition in local access while at the same time encouraging new investment.
9. Consequently, the BSG agrees with the comment in section J.22 that *"the right focus of policy at this stage is to ensure that there are no artificial barriers or impediments to the roll-out of the networks"* that will support next generation services.
10. In BSG's view, **Ofcom's regulatory role in the wider value chain should be to ensure that regulation does not undermine economic efficiency and investment at all stages in the chain. It must aim to minimise the unintended consequences of regulation, in particular the potential impact of access network regulation on the development of other parts of the value chain.**
11. There is a sense also that Ofcom needs a better understanding of the economics of the content market, with its different types of content provider (including, for example, the PSBs, independent producers, film studios, games developers, newspapers, etc) and intermediaries (such as ISPs, DRM providers, search engines, content aggregators, etc.). The BSG would like to see more work on developing a good understanding of this sector's needs for bandwidth and how consumers will interact with content providers. It will be pleased to work further with Ofcom on these issues.

5. Is Ofcom's definition of 'next generation access networks' clear?

1. As already stated, the BSG sees the next generation access issue as one of the most significant that Ofcom has to resolve because it is still not clear what consumers will demand of 'access'. What is clearer is that, unless a balance can be achieved between the requirements of high bandwidth content and high specification consumer equipment, the broadband value chain will not operate efficiently.
2. In terms of the network elements of the chain, it is likely that the core networks, where traffic aggregation is possible, will develop in line with demand. It is less likely that access (first/last mile and middle mile) capabilities will develop in line with all individual consumers' demands, as these will vary widely from those individuals that are currently content with 256Kbs or 512Kbs to those seeking 10Mbps or more. The issue is how far access networks will be able to cater for significant peaks in demand and what investment risk is involved in access network upgrades.
3. Risk arises from a lack of clarity on probable bandwidth demand. In addition, uncertainty arises from the fact that there is no clear understanding of what is meant by 'next generation access networks'. For example, in section 8.49, Ofcom defines next generation access networks (NGANs) as *"those that go beyond the capabilities of the existing copper, cable and wireless public networks that exist today"*. It also states that *"next generation access networks have not yet been deployed on any scale in the UK"*. The BSG disagrees with this latter statement on the grounds that today's HFC cable networks, which deploy fibre to the cabinet, could be defined as NGANs in line with Ofcom's Figure 20 on page 89 of the consultation document. The BSG would like to know why Ofcom does not consider today's hybrid fibre/coax (HFC) cable networks, which deploy fibre to the cabinet (FTTC), as NGANs.
4. In section 8.53, Ofcom states that *"many of the services which could be provided over a next generation access network would be the same as those which can be provided over the current narrowband and current generation broadband networks. For the purpose of delivering those services, the new network would form part of a broader economic market that also included the legacy networks"*. This implies that NGANs should be viewed as a

natural progression from current access networks and that returns on legacy networks will be expected to support investment in network upgrades to next generation capabilities.

5. In section 8.50, Ofcom states “*that operators are likely to take a phased approach to deployment of next generation access networks ... as shown in Figure 20*” and that “*operators are likely to deploy improvements to DSL and other current generation technologies which do not require major new network roll-outs*”. It recognises also that “*if operators are to offer increased bandwidths to a reasonable proportion of customers, they will need to roll fibre out beyond the local exchange to the cabinet. Ultimately, fibre may be deployed to the kerb or the premises for some customers*”. The BSG agrees with these statements but would urge OFCOM to make a realistic assessment of whether such a natural progression is likely to happen if regulation removes or restricts incentives to invest in infrastructure roll out.
6. It is important to be clear on the definition of NGANs because, if we extend the line of thinking to a situation where BT might deploy fibre closer to the customer, i.e. FTTC, will this be considered next generation? If so, what are implications for future regulation of BT’s NGAN in relation to a cable or even wireless NGAN?
7. In essence, the BSG believes that, in terms of investment signals and incentives for NGANs, Ofcom’s messages are mixed. Whilst Ofcom acknowledges, in the consultation document, the high risk attached to network investment, these appear to be contradicted by specific statements made by Ofcom in the copper loop valuation consultation as follows:
 - In the SRT, Ofcom refers to de-regulation of areas where there is competition in the local loop at the access level. The BSG supports this position.
 - In the copper loop valuation consultation, Ofcom states that the only way forward is to recognise that there will only be one local loop and that the focus must be to set conditions to allow for retail competition.
 - In the SRT, Ofcom refers to sufficient returns on investment in infrastructure and access. The BSG sees this as one of the most essential components of broadband success.
 - In the copper loop valuation consultation, Ofcom specifically proposes to lower the rate of financial return earned by BT in its wholesale local loop network activities. In other words, in the copper loop valuation, Ofcom appears to take it as given that there will be no further entry into the local loop. The BSG view is that, if Ofcom’s downward financial valuation of the BT copper loop is too extreme, there will be no incentive to enter the local loop with new investment. This is contrary to the apparent objective of the Review, which centres on promotion of NGANs.
8. The BSG is encouraged that, in section 8.1, Ofcom accepts that “*next generation access networks pose a different set of imperatives and opportunities to the regulation of existing infrastructure*” and that “*it is important that regulation does not delay efficient and timely investment in these networks*”. In addition, the same section says that “*the deployment of a new access infrastructure offers the opportunity to develop competitive structures that avoid the regulatory battles of the last twenty years*”. The BSG agrees with these statements but they emphasise the need to be very clear about what we mean by NGANs, particularly if it is Ofcom’s intent to trade off lower returns on BT’s copper assets for less regulation on any BT NGAN.
9. The BSG believes that Ofcom must ensure that the outcome of the Review and associated consultations will be that the financial return is high enough to secure next generation access network investment and provides incentives for market entry as well as incumbent network upgrades.
10. As a final comment on this theme, the BSG believes that Ofcom’s statement in section 8.11 “*we propose to continue the strategy, set out in our earlier statements on broadband policy, of promoting competition within DSL at the deepest level of infrastructure where it will be effective and sustainable*” adds to the confusion over policy objectives. In this respect, the

BSG notes the reference in section 8.11 “to achieve the target of operational capability for a million unbundled lines per year”, but believes that using such a metric as a measure of success could lead to decisions by Ofcom that create market distortions and compromise technological neutrality.

6. Enhanced DSL, wireless, or fibre closer to the customer?

1. The other area where attitudes differ widely relates to the potential for different technologies. Ofcom has identified a range of technology and topology choices for the provision of fixed network NGANs and has noted the potential promise of “wireless” access, particularly in the context of the Spectrum Review. The BSG acknowledges that Wi-Max and other “4G” technologies offer a promising route to broadband service delivery within a foreseeable future but it is argued that the economics are little different to those for fixed networks, i.e. density is essential. Therefore, although wireless will play a role, it is not a panacea for universal coverage.
2. There is also significant support for newer variants of DSL technology that will be able to deliver higher bit rate services. In particular, it is argued that ADSL 2+ can deliver 10 to 15 Mbs to a significant proportion of the population for little incremental investment. Third generation DSL line cards are already being deployed in a number of markets, such as France. Therefore, subject to ongoing technical analysis and standards, there is the prospect for higher bit rate service deployment at relatively low incremental cost in the current access networks.
3. However, there are those that see no option but the accelerated deployment of FTTC and, in this respect, upgrades of ADSL to VDSL are likely to require deeper deployments of fibre in access, which could lead to problems for LLU implementations, i.e. new entrants will face problems in deploying next generation broadband services and, if BT decides to deploy VDSL, this will undermine the business models of existing LLU operators.
4. If the biggest bottleneck of local access infrastructure investment, i.e. the cost of the civil infrastructure, was to be addressed, competitive pressure could well provide sufficient incentive to drive investment and provide product differentiation. If this investment occurs by normal market forces sooner rather than later, it should be possible to reach similar conclusions to those of the FCC in the USA with respect to forbearance. Clearly, regulatory signals need to be carefully selected, but it is important that incumbent or new entrant investment is not deterred by premature imposition of “cost oriented” wholesale service obligations, where “cost” does not include a suitably attractive profit margin.
5. Taking the above comments into account, the BSG suggests that a better focus should be on addressing this major access bottleneck, rather than on next generation access per se, in parallel with assessing the needs of next generation services in terms of bandwidth and interoperability. A focus on next generation access in isolation could be counter to the objective of technological neutrality. It will be next generation services that determine bandwidth requirements in access networks and the transition to higher bandwidth, next generation access networks should be a natural progression. The issue is, as suggested by the BSG in its earlier response, the extent to which bandwidth can be justified ahead of the demand curve – to allow for the launch of bandwidth hungry, innovative services.

7. Structural options to support local access competition

1. In its response to the Phase 1 consultation, the BSG commented that it regarded the European Commission’s view of the ‘broadband bottleneck’ as ‘the last mile connection to the final user’ as too simplistic. Over the past two years, the BSG has viewed the local loop as having two separate components of (a) passive infrastructure, i.e. ducts, poles, masts and buildings, and (b) active infrastructure, i.e. the cables, the wireless spectrum and the associated equipment housings. The reason for this division is that the former has a much higher cost but much longer life expectancy (e.g. 25-30 years) than the latter (say 5-10 years) and each has a different earning capability. Only by making this distinction, is it possible to more closely define the enduring economic bottleneck.

2. Therefore, the BSG welcomes the fact that Ofcom wishes to address this issue and notes the comment, in section 8.67, that *“one way to avoid some of the problems associated with many of the options would be a structurally separate entity providing next generation local access”*.
3. Ofcom has suggested that there are five ways that such an entity could come about, each with different ownership structures and sources of assets. They are non-telco or public sector ventures; use of alternative civil infrastructures; an industry joint venture; divestment of dark fibre and duct assets by BT; and different structures for new-build housing.
4. The BSG believes that all options for reducing final ‘drop’ costs need to be considered since, the lower the costs and, hence, the risk, the more likely that true infrastructure competition can be delivered without the need to replicate every component of the last mile.
5. Therefore, the BSG advocates further analysis of the above options in parallel with (a) further analysis of the role of different technologies and topologies, such as DSL evolutions, the need for fibre closer to the customer and wireless based solutions and with (b) more work to clarify future bandwidth requirements.

8. Broadband USO?

1. Ofcom is currently addressing the USO in a separate consultation, although this does not address the overall scope of the USO, but rather its delivery and funding. This is because (a) the scope of the USO is not within its remit, as it is defined in the EU Universal Services Directive and (b) the SRT is addressing this specific issue.
2. The BSG notes Ofcom’s comments in sections 4.38 and 4.39 of the SRT consultation document that *“whatever services are available for sophisticated telecoms consumers, many responses to our Phase 1 consultation emphasised the importance of certain basic services being available to all”* and that *“the benefits of inclusivity via social, cultural and network externality effects are large ... and there are a number of reasons why individuals’ need for basic access may not be met by competitive forces.”* The BSG is sympathetic to the latter view but indications are that the market will deliver more than basic access to a very high percentage of the population within the near to medium term.
3. Hence, the BSG supports the Ofcom view that there is no sustainable case to be made for a broadband USO at present because, currently, there is no evidence that there are serious gaps in the roll out of broadband, or that there are any significant problems of social inclusion caused by a lack of broadband take-up or availability. With availability of ‘first generation’ broadband likely to approach 99.5% of the population in the near future, but with penetration running at around 20-25%, the BSG agrees that this is the right position to take at this time, although this must be kept under review.
4. The BSG recognises the need to work with Government in support of the commitment made by the Prime Minister at the Labour Party Conference in October 2004, where he stated that the Government would *“bring the benefits of broadband technology to every home that wants it by 2008”*. This is the subject of ongoing discussions with Government.

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