



# **Broadband Speed**

**Business and Enterprise Committee**

**Inquiry**

Response from BT - 29 September 2009

## **Business and Enterprise Committee Inquiry into Broadband Speed**

### **- *comments from BT***

1. BT is pleased to provide these comments on the questions raised by the Committee around the topic of broadband speed and related matters. There is no doubt that the communications sector has a vital role to play in helping the UK sustain its position as a leading digital economy and society.
2. The Government's Digital Britain Report of 16 June sets out a broad range of proposals related to the future development of the digital economy. BT is supportive of the Government's plans in the area of fixed network developments and is keen to work with others in pursuit of them.
3. This paper focuses on the questions the Committee has asked around the topic of broadband speed. In doing so we touch on some of the related issues covered in the Digital Britain report itself, but this input does not constitute a response to that report. We would, of course, be happy to elaborate on any of the topics if the Committee wishes.

### ***Question 1: Is the target for universal access to broadband at a speed of 2Mbs by 2012 ambitious enough?***

4. Achieving universal access to broadband at 2Mbs by 2012 will require significant investment using a mix of technologies and a considerable planning effort. The role of the proposed Network Design and Procurement Group will clearly be a key factor in achieving the most efficient use of the planned £200m in public funds to support the commitment and we await further details of how this new body will operate.
5. When achieved, this availability of a 2Mbs service would represent a threshold minimum access entry to enable people in some 2 million households that are currently unable to achieve broadband at such speeds to benefit from a full range of services beyond general internet browsing and email, such as faster music downloads, BBC i-Player, and real time standard definition TV streaming (e.g. BT Vision on demand and the proposed Canvas joint venture involving BT, BBC, ITV and Five). These are the services that will drive demand and are all made possible with a 2Mbs link provided it is stable, consistent and uncontended.<sup>1</sup> Of course, many customers already enjoy speeds much greater than this and consumer behaviour and demands will change over time. Expectation over what constitutes an essential minimum speed is likely to evolve.
6. BT is continuing to develop the technology that lies behind existing broadband, and has recently announced details of a trial at eight locations across the country of its Broadband Enabling Technology (BET), which delivers broadband (with a minimum downstream speed of 1Mbs) over much longer distances than has been possible previously. This could play a major role in delivering broadband to current "not spots" – i.e. homes that are currently too far away from their local exchange to receive a broadband service. The cost of providing 2Mbs service to the last few customers would be prohibitive and make the achievement of 100% coverage highly unlikely. However, if there is funding to help meet the additional costs involved in deploying the technology, BET could offer a reliable and cost-effective solution to

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<sup>1</sup> Contention in the access layer, where multiple customers share an access link resulting in lower speeds at busy times, is generally a feature of the cable and mobile access technology. ADSL is typically un-contended at the access layer, whereas cable TV is contended within the local access link and mobile and satellite access services are contended across all customers within the given mobile footprint.

assist the Government's ambition of delivering a minimum 2Mbs service to virtually all UK homes by bonding two copper lines over BET wherever possible.

7. This Universal Service Commitment forms part of an ambitious set of measures to improve digital inclusion and participation across the UK. It compares favourably with initiatives elsewhere in Europe.

**Question 2: Is the Government right to propose a levy on copper lines to fund next generation access?**

8. The move to next generation access, which in practice means the move to the installation of fibre, as a means of providing for even faster broadband speeds in the future, is now generally seen as a critical part of the UK's future economic and social well-being. In 2008, before the Digital Britain process itself started, BT committed to investing £1.5 billion to make super-fast broadband available to around 40% of the UK (10 million homes and businesses) by 2012. This is the UK's biggest single investment in fibre broadband and BT will offer access to service providers on an open, wholesale basis thereby supporting a competitive market in consumer services. Virgin Media have also committed to upgrade parts of their network to provide significantly faster speeds to households within their network footprint.
9. The Government concluded in the Digital Britain Report that there is a case for public investment to ensure that super-fast broadband is rolled out further and faster than would be feasible purely on commercial grounds. We applaud this **policy** ambition since it is likely that such investment will be good for the economy as a whole, including stimulation of the creative industries.
10. Most countries that have deployed fibre networks have either benefited from direct government intervention in the form of loans and/or tax breaks or a very different regulatory philosophy that recognises platform based competition and the realities of wider converged communications and TV market. We have always made clear that we believe in a pro-competitive approach and we are committed to offering fibre access on an open, wholesale basis, whilst acknowledging that this approach can make the business case for rolling out fibre more challenging.
11. As with all revenue raising measures, there are always alternatives and this case is no exception. If the policy ambition is for the UK to have fibre deployed further and faster than current commercial models allow, then some form of catalyst funding from Government is necessary. We believe the policy ambition is the right one, given the significance of high speed networks to economic and competitive growth and strength.

**Question 3: Will the Government's plans for next generation access work?**

12. The UK must have a world-class communications network in order for the economy to remain competitive and succeed in the challenging environment that will follow the current financial difficulties. It is essential for the UK to have appropriate regulatory conditions if companies are to be encouraged to commit to the significant investment in next generation access that is needed.
13. We have already announced that we will invest £1.5 billion in rolling out super-fast broadband to around 40% of the homes and businesses in the UK by 2012. This does not represent the

limit of our ambitions in this area, but it does show the extent to which there is a major gap to be bridged between our aspiration to go further and commercial realities. Whilst we would expect to see the gap close over time and more investment made, experience elsewhere suggests that significant public funding can be a helpful and in some areas a necessary stimulus to infrastructure investment and associated economic development and growth. We cannot be sure that the Government's plans will be 100% effective in delivering the outcomes being sought but they are surely worth pursuing given the UK's strong established position on broadband investment and take-up.

14. NGA infrastructure requires significant investment and the returns are as yet uncertain. Some have suggested that there should be a requirement to provide so-called 'passive' services, whereby the wholesale service takes the form of access to a network element such as duct, or dark fibre i.e. without any enabling electronics attached. A requirement to provide 'passive' services would make it more difficult for any existing network operator to justify the investment case. This could jeopardise the Government's hopes for Digital Britain. Instead, we believe that whoever deploys an NGA infrastructure should make available from it appropriately priced wholesale active line access services on a non-discriminatory basis, using industry standard interfaces. In this way the Government can ensure the continuation of the competitive landscape that has made the UK a world leader in broadband availability today.

***Question 4: Are companies providing the speed of access which they promise to consumers?***

15. Ofcom has recently published a report on its research into broadband speeds for the 6 months to April 2009. This shows that on average customers are receiving 4.1Mbps as against an average headline speed of 7.1Mbps. BT's standard offering currently is of up to 8Mbps and we are making even higher speed broadband available over copper using ADSL2+ technology. This new service, which will increase average speeds by up to three times what is possible now over copper, is currently available to 40% of the UK. By the spring of 2010, this availability will rise to 55% and, subject to market demand, to around 75% of the UK by the spring of 2011.
16. BT believes that customers should know what they are getting when they sign up for broadband. We believe in total transparency for the customer and, therefore, provide a customised speed estimate on their lines to consumer customers before they sign up for broadband from us. It is, of course, impossible for BT or any other ISP to guarantee speeds since these will depend on a number of factors, including home wiring, the number of customers accessing broadband at the same time, etc. All networks operate on the basis of shared resource amongst customers and at peak times speeds will be slower than at quieter periods. A simple analogy is that the average speeds possible to achieve when driving on motorways reduces during 'rush hour' as the motorway lanes become congested.
17. It is also important to remember that speed using DSL technology is a function of line length and line quality. BT has been at the forefront of technological improvements over many years that have seen broadband extended to ever greater distances from exchanges, bearing in mind also that the key measurement is line length and not distance from the exchange as the crow flies. The new trials of BET (see para 6 above) are but the latest manifestation of this technical evolution.

**Question 5: To what extent does current regulation strike the right balance between ensuring fair competition and encouraging investment in next generation networks?**

18. A regulatory regime to reflect the dynamic competitive market we have in the UK, to provide the right framework for that competition to flourish, and to encourage the level of investment needed to keep the UK as a leading digital economy, should embrace some basic principles:-
- wholesale access to enduring bottleneck facilities, focussing on the deepest levels of network infrastructure where competition is economic and sustainable
  - a level playing field between market participants
  - technological neutrality
  - rates of return that reflect the investment risk involved
19. Regulation must be forward looking and should reflect the reality of the wider converged communications market rather than a narrower focus on traditional telecommunications. To do anything else would be to misunderstand the way that technology and markets have changed and will continue to evolve. The UK has led the way in developing competition between service providers, who vie with each other to offer consumers innovative, value for money packages. But we have reached the stage now where this needs to embrace the convergence of fixed, mobile and broadcasting markets, rather than treating each of them individually. Technology now allows, and customers demand, a new way of consuming services that does not recognise these outdated market distinctions, and the regulatory environment needs to keep pace with this fundamental change.
20. As an example, we are, therefore, encouraged that Ofcom's long drawn-out investigation into the pay TV market has concluded that competition and innovation have suffered as result of Sky's monopoly and has published its proposed remedies for this distortion, requiring Sky to offer its premium channels in the wholesale market. The outcome of this consultation will impact on every consumer who would like a choice of suppliers, lower prices and access to premium sports or movie channels.
21. However, it is very important that Ofcom stands by its plan to make a full set of channels available and to set clear prices for them: competition will not be enabled if only a few channels are made available. A successful conclusion to this consultation will send a very clear message to the industry and to users about the way in which the markets have changed and about how things will develop in the future. In doing so, they would provide a stimulus to innovation in applications and services and help to support the vision for next generation access investment. In other countries, pay TV and access to attractive content have been important drivers to facilitate investment in next generation access. At the moment, the UK is disadvantaged in this respect by Sky's continuing monopoly of such content. For example, Verizon in the US deploy their FiOS fibre to the home service primarily to deliver their vertically integrated TV channels, with 80% of the bandwidth on the resulting fibre service reserved for this video distribution service. Similarly in Norway, the deployment of FTTH by local/regional electricity companies is largely funded by additional revenues from the premium TV content packages offered over the resulting service.

**Question 6: Are there any other views stakeholders think the Committee should be aware of?**

22. In all the talk about broadband speed and where the UK lies in comparison with other countries, the underlying truth is that modern communications networks are vital to the economic and social well-being of nations in the 21<sup>st</sup> century. They provide the conditions for

countries to be competitive in the global economy and they provide the framework within which competition and innovation can provide customers, both businesses and consumers, with real benefit in terms of new services and value for money. This is not, therefore, an academic issue for the UK and it is important for the current debate to focus on the facts about the current situation as well as considering the more uncertain issues around how the future might unfold.

23. Operators around the world are investing in 'super-fast broadband' - usually fibre - to provide speeds in tens or even hundreds of Megabits per second. As mentioned earlier, BT plans to invest £1.5 billion in fibre-based, super-fast broadband to as many as 10 million homes and businesses by 2012, and this will deliver services with top speeds ranging from 40-100Mbps with the potential for even higher speeds in the future. BT wants to extend this coverage as far and as fast as possible, but the commercial case for doing so at present is difficult to make.
24. Identifying the services that will drive demand for super-fast broadband is, therefore, important and as these develop then the commercial case will become easier. People have, for some time, talked about and been searching for, the 'killer application' – so far without success. But we can summarise some important principles:-
  - super-fast broadband and the increasing number of network-connected devices will move the internet beyond the bedroom or study and into the main living spaces;
  - modern communications are vital for economic and social reasons;
  - video, in particular HD video, is a key application, requiring increased bandwidth for multiple, concurrent users in the home to simultaneously see, hear, and share high quality content;
  - community and social networking will become quicker, richer and more inclusive;
  - there is already good social acceptance of new media and communications;
  - IPTV (streaming and on-demand) will also be a primary application driver.

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