Future broadband challenges – the long-term view

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Brief: "to provide an update of the policy and regulatory developments and propose different investment models aimed at deploying high capacity broadband at local and regional level".

Good afternoon ladies and gentlemen. I've been asked today to provide a brief overview of some of the challenges that lie ahead as we start to consider what broadband might look like as it approaches its second decade. But before I do that I should perhaps just explain a little about the Broadband Stakeholder Group.

First established in 2001 the Broadband Stakeholder Group (BSG) provides an independent forum for a very wide range of organisations from the private, public and third sectors to come together and debate and discuss key issues related to the development of broadband in the UK. Over the years we have published many studies and reports and have provided an advisory role to the UK government - all of which means that my comments today will be somewhat UK centric.

I hope there are some general themes that have a wider European relevance, but I think it is important to point out from the outset, that broadband markets in the different member states are indeed very different. Differences in geography and demographics, legacy infrastructures, commercial structures, broadcast markets and regulatory and policy approaches all mean that although there is a common regulatory framework in place, national broadband markets have tended to evolve quite differently. I think this means that while there may be

some common challenges that lie ahead, it is likely that the commercial, regulatory and policy solutions best suited to meet those challenges will vary between member states.

Having said that I'd like to go on and address three main themes. Firstly to explain why we think it will be necessary to invest in a next generation of broadband services over the next few years. Secondly explain why making those investments might prove difficult, and thirdly highlight the challenges that lie ahead for policy makers and regulators.

1. Why we're likely to need better broadband

I think the UK's new Communications Minister, Stephen Carter summed up the importance of broadband quite well when he described it as being "commercially, socially, culturally, economically and politically transforming". Perhaps the most potent example of this transformational impact was provided by the recent US elections. Could Barack Obama have won the presidency without broadband? The internet was clearly key to his campaign, enabling him to mobilise grass roots support and develop an entirely new model of political fundraising. Whether that won him the election is for the historians to decide, but it is not hard to see why this was the first election where the internet was used so decisively. Quite simply it was the first US election to take place in a world of mass broadband adoption and web 2.0 services. In 2003 just 25% of US households had broadband whereas by the end of 2007, 64% of households had a broadband connection – critical mass had been achieved. The Obama online campaign would simply not have been able to harness the internet so effectively in a dial up world.

Quite simply, broadband has made the internet work the way people thought it should. As a result we've seen broadband being adopted at an unprecedented speed around the world. Even mobile phones took longer to reach the adoption levels we are now seeing with broadband. But does broadband risk being the victim of its own success? Are today's networks capable of supporting the growing volumes of traffic being generated? Can they support the next generation of innovative applications and services that are now being conceived across the worlds of commerce and public services?

In the short term, to borrow the Obama phrase, yes they can. Predications about the internet grinding to a halt due to the flood of new video rich traffic are overblown. There is still sufficient capacity in both core and access networks. Bottlenecks are emerging, but they are currently primarily in backhaul – the links between the access network and core networks – and these are relatively easy to fix. ISPs may complain about the cost – but those costs are within their CAPEX capabilities. Improved compression technologies, more intelligent traffic management and the use of new content delivery networks will mean that we will continue to squeeze greater performance out of our centuries old copper networks. But it will not be possible to mend and make do forever. If traffic continues to grow at the compound annual growth rates we have been seeing over the last ten years then it will soon start to exceed the capacity of today's copper networks.

But the case for next generation broadband isn't just about keeping up with demand for bandwidth. It is also about quality of service. The nature

of DSL technology means that services are provided on a best efforts basis and the broadband experience can vary for a myriad of technical reasons. It is often thought that next generation broadband is just about download speed, but it is the other value attributes: greater consistency; higher upload as speeds; greater reliability; lower latency; lower error rates and freedom from radio frequency interference that mean that next generation broadband can improve the user experience and enable the next wave of innovative services and applications to be delivered.

What those services might be is open to speculation. But just as first generation broadband enabled a wave of transformational innovation, so will the next generation of services. The need for innovation to drive new forms of environmentally sustainable economic growth has never been greater. Next generation broadband clearly underpins the shift towards a low carbon knowledge economy.

So why don't we just get on with it?

2. Why delivering next generation broadband will be difficult

As I mentioned at the beginning, the prospects for next generation broadband deployment around Europe look very different – depending largely on local factors. There are some markets where there have already been some significant fibre deployments and others where prospects for deployment look positive. However, there are other markets, not least being the UK, where NGA deployment sill looks quite uncertain.

The primary cause of this uncertainty is cost. Deploying fibre networks is capital intensive. In the UK we estimate that a full national deployment of fibre to the cabinet would cost £5.1 bn. To deploy fibre to the home on a point to point basis – what many consider to be the broadband nirvana – would cost over £28 bn. However valuable you believe these services might be, these are still very large sums of money. The lack of a clear business model and investor scepticism about the ability of operators to generate new revenues from these services means that NGA investment is difficult at the best of times. But clearly, these are not the best of times.

Having been closely involved in the broadband debate in the UK for several years, I can't remember a time when the prospects for next generation broadband looked more uncertain. On the positive side, Virgin Media (the UK Cable operator) and BT both announced plans earlier in the year to start upgrading their networks. If implemented their combined plans would lead to the deployment of competitive broadband infrastructures across just over 40 per cent of UK households – a very positive start. However, there were a number of caveats placed on these announcements and there are many in the UK who believe that the combined effect of the financial crisis and wider economic recession mean that next generation broadband deployment will inevitably be put on hold.

So far there has been no indication that either operator intends to pull back, but the industry is watching closely and we should know one way or another in the next few months. So what are the implications for policy makers and regulators.

In the positive scenario that assumes that we will start to see a market led deployment in the next 12 to 18 months the key questions are about how to ensure a competitive market going forward and whether there is a need to intervene to ensure that networks are deployed in more rural areas. In the negative scenario, the question will be how long can the UK wait before the lack of next generation broadband becomes a problem for the wider economy and whether there might be a case for a more fundamental intervention if the market cannot deliver.

3. So what should policy makers and regulators be doing today?

As I said, I think we are at a particularly uncertain moment. In the absence of other information it seems right to plan for a positive market led deployment but to consider contingency options should the market fail to deliver.

A pre-requisite is for regulators and policy makers to be clear about the importance and significance of next generation broadband to the wider economy. Something that I'm glad to say has started to happen in the UK over the last 18 months.

Regulators need to set out a clear and predictable regulatory framework that enables effective competition and sustainable long-term investment. They will need to be pragmatic in their approach allowing operators including existing players and new entrants the flexibility to experiment with technologies and business models. The timely release of radio spectrum for broadband services must be a key priority for any regulator.

Key among those new entrants will be innovative new community, local and regional initiatives that combine private, public and third sector expertise and resources. There are many successful examples of such projects across Europe. Some are still sceptical about what role they should play in a market driven strategy, but I believe there is a growing consensus that they can be part of a coherent market driven approach. Something I'm sure my colleagues on the panel will expand upon.

Policy makers need to do all they can to reduce potential supply side barriers to civil infrastructure deployment which means taking a coherent approach to issues like planning, street works, rights of way that could lead to unnecessary additional costs and delays.

We also need to see innovation being led by commercial players across the value chain - a process that policy makers and regulators can actively support. An example being our response to the issue of illict peer to peer file-sharing where a positive solution needs to be found that re-aligns commercial incentives so that all parties can benefit from value creation from digital content rather than suffer the effects of value destruction.

I could continue with other issues that need to be addressed, but at this point I should return and conclude on the core issue of this conference – digital inclusion.

The costs involved in deploying next generation broadband are an order of magnitude greater than the costs of deploying the services that are

available today. This means that although possible, it is highly unlikely that the market will deliver the near universal levels of coverage that we have reached in the UK and other markets today. In my view this is a significant problem that needs to be considered now rather than left to be revisited at some point in the future.

As I have said, the BSG believes that next generation broadband will deliver significant economic and social benefits. This means that the individuals and communities that don't have access to next generation broadband will become progressively disadvantaged over time compared with communities and individuals that do. And we can map, I believe relatively accurately the areas that are likely to remain un-served by the market for some time.

Given what we know about the transformational benefits of broadband and that we know where the un-served areas are likely to be I believe it is appropriate from the outset to start thinking about how these areas will be served so that we ensure that next generation broadband will be available for the many and not just the few.

In a recent speech, the BSG Chairman Kip Meek floated the idea that a joint commitment by the public and private sector could and should be made from the outset to making next generation broadband universally available. What form such a universal service commitment might take and over what timescales it could be delivered is unclear. But as we start on the next generation journey, it seems entirely appropriate, that even if we are unsure of the exact route, we should have an idea of the final destination.

So to wrap up I believe that broadband in the next decade will be every bit as important and transformational as it has been in this one. But deployment of next generation broadband will be difficult and uneven and its patchwork availability could lead to new social and economic divides. We should therefore be thinking from the outset about how collectively, the public and private sectors can meet this challenge.

How?

Well there are rarely easy answers to the most interesting questions.