Peter Phillips, Ofcom speech to BSG Conference, 09 June 2008

Thanks. You can always rely on your former colleagues to help manage expectations.

We've already heard a lot of thoughts on next generation broadband through the morning. And today's debate – and the responses to our three published documents on the subject - show there are many, many different opinions about all the key issues.

But there is an increasing consensus in one area: that next generation broadband is a landmark in the development of telecoms. Why? Because it seems very likely that - in the next decade or two - most developed markets will have very-high bandwidth networks available to many, many households, if not universally. And those networks will open up a world of new or transformed applications and services.

First and foremost this is an issue for the market – in deciding when and how to invest.

But it's a hugely important issue for us at Ofcom too. The Communications Act charges us with: 'having regard' in performing our main duties, 'to the desirability of encouraging the availability and use of high speed data transfer services throughout the United Kingdom.'

In less grand language you might take that to mean: "do what you can to help make high speed broadband available and taken up". So both by duty and by temperament, we want to help take the question of high speed broadband forward with real urgency – though without undue haste the UK might regret in decades to come.

In doing so, we will need to balance the needs of innovation, investment, competition and the consumer, to all of whom we owe a statutory duty.

Regulation is going to be a critical part of this story, just as it was with today's broadband.

A vibrant and competitive UK broadband industry has emerged in just three years.

- Basic broadband is now available to more than 99% of the UK population.
- About 60% of households subscribe to a broadband package.
- More than 70% of UK homes have a choice of 4 or more telecoms operators.
- Speeds have more than doubled in the last 18 months and are now ten times what they were only four years ago.
- The divide between broadband take-up in rural areas and in urban areas has closed, though rural speeds are still slower.
- We've even got to the point where, in some areas, we can step back and remove regulation for broadband services

This success depended crucially on implementing three regulatory principles:

- Equivalence - ensuring that BT's competitors have access to exactly the same wholesale products and processes as BT retail operations
- Contestability - ensuring possibilities for investment by a whole range of operators
- Innovation – maximising the potential communications providers have to innovate and differentiate themselves

As we set out in last Autumn's consultation, these principles are just as relevant when thinking about next generation access.

As we have heard this morning, next generation access is gaining pace in a number of countries: it's a reality in Japan and Korea and in some big American cities. It's also being rolled out in a number of European urban areas.

Listening to this morning's session, you could be forgiven for thinking that nothing was happening in the UK at all. Things are moving in the UK, too.

Virgin Media has announced it will make 50Mbps connections available across its cable footprint – almost 50% of UK households – starting later on this year. BT has plans to use fibre to new build homes and businesses. And H20 will be laying fibre through sewers, starting in Bournemouth. Other cities, including Northampton and Dundee, may follow this model.

That's all encouraging. But given the potential importance of this issue to the UK as a whole, everyone - including Ofcom - must continue to look for positive ways to advance the debate.

The research that the BSG has published today is a very welcome contribution in achieving just that. We'll want to review it in detail and take our own view – as no doubt the Government will. Personally I agree with the BSG that there are likely to be substantial private benefits which will drive the market to invest. But we need to keep a watchful eye to make sure there are no barriers to this happening.

High speed broadband looks likely to be an important element of the UK's future infrastructure. But there's still significant uncertainty. The BSG report highlights the uncertainty about what public value it might deliver. But there are other uncertainties too. What technology should be used? What level of demand might we see over time? What will the regulatory environment be?

We will act to reduce any areas of uncertainty we can influence. Our goal is to provide an effective, solid and predictable regulatory framework for consumers, business customers and suppliers.

I want to share with you this afternoon five elements which will shape that regulatory framework:

- First, a technology neutral approach
- Second, encouraging efficient investment
- Third, promoting competition
- Fourth, a broad view of telecoms networks which is not just about access
- And fifth, clarity about managing the transition.

Let me take the first of these.

There are a lot of technologies for next generation access: different flavours of fibre to the home, fibre to the cabinet, cable. Wireless too has a strong role to play. The growth of mobile broadband shows that different technologies are already serving different market segments.

Each technology has its pros and cons. Fibre to the home is well suited to new developments or blocks of flats, but can be expensive in other circumstances. Fibre to the cabinet is cheaper but offers lower speeds. Wireless gives mobility but suffers from inherent contention.

No single technology looks likely to win out everywhere - or for every need. That's why we don't think the regulator should select one technology against another. Not being technology neutral risks distorting efficient investment decisions which the market would otherwise take.

To assess the second of my points – encouraging efficient investment – we need to consider the specifics of the UK market. We've previously set out a number of differences in the investment case in the UK versus other markets.

The presence of a well-established pay TV market in the UK, for example, may affect the perceived opportunities for operators to charge premiums for IPTV services. In other countries that's often been the main source of revenue to pay for faster broadband.

More generally, demand and willingness to pay remains uncertain. To make a clear case for investment, the industry may need to find new commercial models. Commentators have talked about many different options – charging for capacity or quality of service, new products and services, targeted advertising. As the debate before lunch suggested, much of this is still contentious.

But while the market searches for attractive business models, we want to understand whether we need to help improve the investment case. So we're asking questions like:

- Are there regulatory barriers to industry enhancing revenues? We aren't aware of any, but we want to hear your views
- Is existing regulation getting in the way of a transition away from current broadband, and the possible cost savings which might follow?
- Does our approach to regulated pricing reflect the real risks? We proposed an approach to this issue last year and received positive feedback, but it's important to keep checking whether things have moved on.

Until the market has started to invest, it's difficult to talk with precision about the digital divide in Next Generation Access. There is likely to be a need for public investment to get universal coverage if indeed that is what we as a society decide that is what we want. But think about current broadband. Everyone thought that the market reach would be 60 in households but it in fact has reached more than 90% so early intervention could have been damaging.

The third element of our framework is promoting competition as well as investment. Of course, there may be some element of short term trade off between promoting competition and promoting investment. We need to understand the needs of investors while continuing to protect consumers and promote competition. But we should all remember that before the current generation of broadband was competitive, it wasn't very successful – either in investment levels or for consumers. When it became competitive, the picture for both changed out of all recognition.

Some people have suggested that separating Openreach within BT has promoted competition but slowed down investment in new networks. I don't see any evidence of functional separation holding-up investment. The experience of other sectors shows that co-ordination problems can be dealt with. And we're ensuring the right balance of returns between access network operators and service providers.

We think there are ways to achieve both investment and competition. As we've seen in France, Holland and Denmark, competition drives timely investment, as well as consumer benefits like choice, innovation, and lower prices. And our work on BT's fibre to the home trials in Ebbsfleet - and our recent consultation on deploying fibre more generally to new housing - both aim to do just that.

In today's broadband, we've seen the benefits of competing based on infrastructure. Local loop unbundling has allowed different players to decide when they invest, and allowed them to innovate and differentiate themselves.

Infrastructure competition has a lot of attractions in a next generation broadband world too. How it might work differs according to the technology which is being rolled out.

So with fibre to the cabinet, infrastructure competition might depend on unbundling at the cabinet rather than the exchange.

With fibre to the home, civil works account for some 70% of the total cost of deployment. Reducing these costs could reduce barriers to entry. So infrastructure based competition

might mean giving access to ducts to allow more than one competitor's fibre into the home. Duct access has raised a lot of interest in France. The French regulator ARCEP recently audited a sample of France Telecom's ducts. We're conducting a similar audit over the summer working closely with BT.

Alternative way-leaves could be important too, as we're seeing with sewers in Bournemouth and Paris. Some of these are beyond the communications sector and hence outside our control. We're delighted to be working closely with Franceso Caio and his team on faster broadband issues. The Caio review will allow us to ask broader questions which may well open up avenues which to date have impeded progress in this area.

Infrastructure based competition, based on "passive" inputs like ducts, alternative wayleaves or sub-loop unbundling, remains an attractive option to us wherever possible. But it is unlikely to me it will make commercial sense in every part of the UK.

So ensuring effective wholesale access to the home is also important for ensuring competition and choice in faster broadband.

Thanks to technologies like Ethernet, a single, shared network has the potential to support differentiated products. This – what we called in last Autumn's consultation Active Line Access - could allow much more effective competition than today's equivalent bitstream products.

We have been talking to communications providers about Active Line Access over the past few months. We're delighted that debate has already begun on how new active products could best work, and look forward to more feedback on the alternative approaches to competition we've set out. Standardisation and interoperability remain important, especially as different broadband networks may be built in different parts of the UK.

The fourth element shaping the regulatory framework was the need to consider issues beyond the access network. That means backhaul in particular.

The notion that today's bandwidth constraints are caused by the lack of next generation access is a common over-simplification. For many of today's applications, backhaul is the weak link, not access. As one example, take the BBC's iPlayer. Its phenomenal growth has already shown how mass market take-up of services can affect customers through pressure on backhaul networks.

Next generation broadband will increase that pressure further. To illustrate what I mean, consider this. Today, the engineers in Ofcom tell me total backhaul capacity is around 2Tbps - 2million Mbps.

Broadband evangelists have no difficulty in imagining a world where fibre to the home delivering speeds of 100Mbps – and carrying new applications and services which need much lower contention ratios than today. Even with the same number of broadband homes, simple maths would imply some 450 Tbps of backhaul capacity was needed. That's 200 times today's capacity. Even with more conservative assumptions it doesn't

take much to get to an increase that one can't ignore. And if one signs up to Richard Allen's view of the world, the numbers would look even more challenging.

This is not just a hypothetical issue. The size of the shortfall may not be as easy to deduce as my back of the envelope maths suggests, but problems of this kind are already emerging. In Japan, quality of service and speed is becoming a problem for some fibre-to-the-home customers. That's because huge amounts of peer to peer file sharing are causing the same backhaul issues as iPlayer has here.

We can't disregard this issue if we want to see successful deployment of next generation access in the UK. Thanks to new technologies like Ethernet, upgrade costs may be a lot lower than in the past. But they won't be insubstantial. And issues remain around whether current commercial models for broadband can support ongoing investment in either access or backhaul networks.

I don't think there is one single solution to this problem. Technology offers some answers, and upgrades by Openreach will help too. But I think we'll also need to see new commercial models which link usage more explicitly to supply. And we need to look at how to promote further investment in backhaul in the future – more competition in this area of the network could be one solution.

My fifth and final point is about transition. How and when to move from existing to new networks isn't the most immediate question – clearly a business case to invest comes first! But we have to think about this now, because it may affect the economics of deployment, particularly the potential for cost savings.

We'll need at some point to support a switch-over to new networks, but we also have to continue protecting consumers and promoting competition. That means striking a balance between sometimes conflicting interests. BT would want to understandably avoid running two networks, because this means duplicating costs. Competitors would want flexibility in accessing current or new regulated products, in ways which fit their investment strategies. Similarly, end users would not want to be forced to buy something they really don't want.

Few people have a firm view on when transition might become a reality: who knows whether it might be in 2 years, 5 years, 10 years? But at some point, the most efficient outcome will be to close the old network and move all customers to the new ones.

So in conclusion, next generation access is a really important policy area for us, just as it is crucial for the future of the country. In conjunction with industry, regulation has a key role to play in delivering these investments.

When will these investments happen? In reality, they've already started with Virgin and new build fibre. When will we see millions of fibre customers in the UK? I honestly believe that no-one knows for sure.

It is not within Ofcom's power to make this happen on our own. Equally, industry cannot deliver it without clarity and support from the regulator. What we will continue to do is to remove barriers, taking forward the clear principles and policy choices we've set out over the last year.

I want to close with a final thought. The notion of a choice between competition and investment is wrong. Efficient investment is compatible with a regulatory approach which ensures competition and which allows appropriate rewards for investors successfully take big risks. We will work tirelessly with industry, government and other stakeholders to prove this to be true. And we'll be setting out further significant policy development for next generation access in our next consultation to be published in September.

Thank you.