Ofcom's perspective on the regulatory challenges posed by Next Generation Access networks

Speech given by Dougal Scott, Brussels, 27 March 2007

Thank you very much for that kind introduction.

The point of this morning's session is to allow a number of European regulators each to share their thinking on the right approach to next generation access networks.

In Ofcom's case, we published a discussion document on this late last year. We've now had the chance to talk to a whole variety of people about, it in the UK and elsewhere, and I wanted to share with you where we've got to.

First thing is to explain what we were trying to achieve back in November when we published the document:

- really wanted to get debate going in the UK
- wanted to indicate our early views on various options, and provide some structure to the discussion

- wanted to start a process that would allow us to provide as much regulatory clarity as possible, as early as possible – so that whatever factors there were holding off investment in NGA in the UK, regulatory uncertainty wouldn't be one of them

On the subject of the timing of investment, one of the things that you notice about the UK is that there hasn't been any big announcement of NGA investment, as you've seen here in Belgium, and also in France, Germany, further afield in the USA, and so on. There's a body of opinion in the UK that says that that in itself is a real problem. We're less sure that we need to worry just yet. We think there are good reasons why the efficient timing of investment in the UK might be later than in some places:

- our copper loops are relatively short which means that DSL is pretty good in many places
- most British people live in little houses, rather than blocks of flats, so it's much more expensive to roll out fibre than in some places
- …and we have the highest level of digital television penetration in the world, with three – soon four – competing digital TV platforms, so the economics of IPTV look a bit difficult.

We wanted to re-iterate in our document some of the principles of regulation that we'd arrived at a year earlier, in our Strategic Review of Telecoms.

[Slide 1] Here they are. The point about these principles is that we don't see any reason why they're not the right principles for regulating next generation access networks, just as they were for today's networks. The question is: exactly how do you apply them to next generation access?

I want to highlight two of these principles in particular:

- promote competition at the deepest level where it will be effective and sustainable. The question is: where is that level for next generation access? Is it end-to-end infrastructure? Or ducts? Or competing electronics in the sub-loop? Let me come back to this.

- promote a favourable climate for efficient investment. And this is a new challenge. We've had to cope with risky investments before as regulators, and we spend a lot of our time thinking about how to regulate bottlenecks. But regulating risky bottlenecks – that's a whole new set of challenges.

So let me talk about these two principles in turn.

First of all: what is the deepest level in the network (in other words, as close as possible to the customer) where infrastructure-based competition will be effective and sustainable?

Well, there are a number of answers possible. The answer could be that competition is effective and sustainable all the way to the customer. In other words, you have competing end-to-end infrastructures and you don't have a bottleneck at all. A good result if you can get there, because as a regulator it allows you to spend a lot of time on the beach. Trouble is: we just can't reach that conclusion in the UK. We have cable networks, but only to about 50% of households – and even then, it only gives you two competitors. There's wireless, but almost everyone has told us that even though wireless is very exciting, it's not going to offer services that compete head-on with fixed next generation access networks. And there are other possibilities like using sewage pipes or gas pipes or powerline – and some have worked in other countries – but in our country they just never seem to get beyond the ideas stage.

A second answer could be that competition could be effective and sustainable so long as everyone has access to ducts. This is hugely seductive for regulators. We all know the theory: it makes the market contestable because civil works are about three quarters of roll-out cost. And there are examples where duct access has made

real, end-to-end infrastructure competition possible. Like in Paris. But sadly, this looks a less promising solution in our market too: BT's ducts are often not in a good state, and we don't often have the high quality municipal duct networks that you have in Paris, for example.

So in our case, we think the answer is that the limit of where competition is likely to be effective and sustainable is somewhere in the network. For example, it might be access at the sub-loop, where you could have competing sets of electronics at the level of the cabinet. Or it might be at the bitstream level, with competitors connecting to a monopoly architecture at the exchange. We don't know the answer yet. And the options available rather depend on the technology that the bottleneck operator rolls out. So for example, if the bottleneck operator rolls out a fibre-to-the cabinet architecture, as they are in the Netherlands or Germany, then in principle you can interconnect at the sub-loop. But if they roll out a PON, as France Telecom is starting to, then the options are more limited: perhaps a bitstream product or some kind of wavelength unbundling.

But I think four things follow from this little tour of options:

- one is: you need to take a view as to how much competition is enough to call 'effective'. In particular, if for example you have two competing infrastructures – say cable and a telco – is that

enough? And you might find that the answer changes over time: for example, it might be effective in a roll-out phase, when everyone's competing for subscribers, but not later on, when it's a much more stable duopoly.

- the second is: different countries are likely to end up with quite different solutions, depending both on the competitive conditions they have to start with, and – as I've just said – on the type of new networks that get rolled out. So you might have quite different solutions even if you work from these exact same set of principles.

- thirdly, it might be appropriate to consider different solutions in different geographic areas. That's an approach that we're adopting now in our wholesale broadband access market review mkt 12; where it's obvious that competitive conditions are very different where you've got, say, four or five LLU operators plus cable, from where you've just got the incumbent. The same thing might well apply for next generation access.

- and the final point I want to make on this, is that the deepest level at which competition is likely to be effective and sustainable might change over time. It did first time around. If you think about current generation broadband, in many

countries – certainly the UK – competitors built up their scale by buying bitstream products. Only once they had enough scale was it economic for them to compete via LLU. Exactly the same thing might happen in next generation access: it might not be economic to have several sets of electronics in the cabinet today, but it might be in say three years time when there are tens of millions of subscribers.

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I want to go back to the other regulatory principle that I talked about: promoting a favourable climate for efficient investment.

And the first thing I want to say is: note the wording. A favourable climate for efficient investment is not the same as "as much investment as possible, as early as possible".

In fact, if that was the problem, it would be rather easier to solve! The real problem here, as I mentioned before, is that these are bottleneck assets. That means that by definition they're assets where there's no prospect of effective and sustainable competition, at least in the medium term. But they're also risky investments. They're risky because how many consumers and businesses are going to want the products that next generation access networks can deliver – and how much they're going to be prepared to pay for them – is an unknown.

We think the right solution to this is a combination of equivalence of input and risk-adjusted returns. Let's look at each of those:

- Equivalence of input because this is what gives you effective downstream competition. In other words, though you can't have effective competition in the bottleneck asset, you can in other parts of the value chain. And we think you get that by ensuring that the bottleneck owner offers exactly the same wholesale product, using exactly the same systems and at exactly the same price; to its wholesale customers as to its own downstream divisions.

- Risk-adjusted returns because this is the way you create the incentives for efficient investment. To take the extreme, if you regulate the price of access according to cost plus the basic cost of capital, why would anyone make the investment? If it's wildly successful, you can only earn your cost of capital. But if the investment is a dog, you lose your money. So returns have to be allowed to reflect the risk at the time of investment, and to continue to do so for a long time into the future.

- In fact, you might even go so far as not to set a price at all, at least for a while. You would just require equivalence of input, so that everyone has the same access to the asset as the

bottleneck owner's downstream divisions. You'd have to be concerned about the potential to margin squeeze – but the economists tell us that in those circumstances there isn't much incentive to margin squeeze – because the incumbent's making all its super-normal profits upstream.

That said, I just want to make four points about providing the right incentives for efficient and timely investment.

The first is, we've heard the argument that functional separation chills the incentives to invest in next generation access. We just don't agree with that. Let's step through it. In the UK, Openreach is functionally separated from the rest of BT. But for such a large investment, it's BT Group that's making the investment decision – and quite right too: because it's got to be answerable to its shareholders. So what's actually relevant here is equivalence of input, not functional separation. That means that Openreach would have to make the asset available to other wholesale customers on exactly the same terms as it did to other parts of BT. So the decision that BT makes on the investment has to do with how profitable it is for *Openreach* to make the investment. And if you can reflect the risk in how you regulate the investment – as I've discussed – there's no reason you can't end up with the right incentives.

In fact, if you think about it, if you're saying that functional separation removes the incentives to invest, what you're really saying is this. You're saying that the incentive to invest in next generation access comes from the ability to foreclose competition downstream. And as any economist will tell you: if that's the only reason you're making the investment, it's probably not a very efficient investment to have made.

It won't surprise you, therefore, for me to say that we don't buy the concept of regulatory holidays. This is a tired debate and one I'm not going to go into, but I just want to make one point. And that is that we don't think it's true that there's a trade-off to be made between competition and investment. Because that's the trade-off that regulatory holidays make. We think that you should allow competition to *drive* investment, just as LLU has done in many member states. It was true for copper and we don't see any reason why it shouldn't be true for fibre.

The third point I want to make about incentives to invest concerns public broadband schemes. It's a subject close to our hearts because we have one major scheme like this in South Yorkshire, which - slightly to our surprise - received its state aid clearance in November. The point is: the public sector has a lower cost of capital, so if it invests in infrastructure in a particular region, you can be pretty sure no-one else is going to. So if it invests in a region where there

would otherwise be the prospect, in two or three years, of competing next generation access networks – say both cable and the incumbent telco – then that competition just isn't going to happen. You'll end up with a public sector monopoly. Worse: you'll end up with a public sector monopoly that might cover a pretty small area – perhaps a couple of hundred thousand homes – that's too small for any service provider to serve profitably.

There is a very important role for the public sector in broadband. That's to address the digital divide where the market won't supply, now or in the future. But the thing about next generation access is: we don't yet know where the market will supply. So investment which aims to accelerate faster broadband in one particular region is likely to impose a huge cost in terms of future competition.

But enough about public broadband – we're talking about that more this afternoon.

The final point I want to make is about net neutrality. Another huge subject that I'm only going to touch on briefly. At the core of the net neutrality debate, at least in Europe, is this question. If I'm a network operator, and I go up to you, Myspace, and I say: "how about I offer you guaranteed quality, prioritised delivery of your video traffic in exchange for you paying me some money" – should that be allowed?

For the record, we think that as long as the network operator doesn't have SMP, that's OK. But the point I want to make is that there are two linkages with the issue of efficient investment incentives for next generation access investment:

- first, if there's net neutrality regulations which means no-one's allowed to prioritise traffic like that, you're going to need a next generation access network sooner. Because of course it's a much more efficient use of bandwidth to prioritise different applications according to their need for quality of service than to have to dimension your network with everything getting the same quality of service

- and secondly, broadband access is a two-sided market. Consumers benefit from it and so do application or content providers. And if network operators, even if they don't have SMP, aren't allowed to maximise their profits in that two-sided market, then you may be artificially restricting their incentives to invest.

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So, I've talked about where effective and sustainable competition is likely to be possible, and I've talked about providing efficient investment incentives.

Let me just conclude with a comment about the European Framework. I think it follows from what I've said that we think that next generation access is a challenge that the current framework is perfectly capable of dealing with. You might want to tweak it. For example, you might look for a way of making commitments to reflect risk in regulated returns beyond just a two or three year market review period. But broadly speaking, we think it's fit for purpose.

That's all I want to say – I think there's time for some questions now, and I'll also be on the regulator's panel in the next session to take any more.

Thank-you very much.

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