

## Regulatory Challenges of Next Generation Access Networks

### 1. Opportunity and Risk

As ever with the introduction of new technologies there is a risk which goes with the opportunity. The opportunity here is sometimes under-estimated, given that we already have a reasonably advanced telecommunications infrastructure: therein perhaps lies the seed of prevarication and complacency. Re-equipping UK plc with the infrastructure required for the 21<sup>st</sup> Century is an opportunity whose time has come. If we adopt an "if it isn't bust don't mend it" attitude we will find ourselves falling behind our peers in the never-ending race to deploy infrastructure to support greater and greater bandwidth-consuming content, and in turn our economic competitiveness.

The risk for investors is starkly clear, though rather a question not of 'whether' but of 'when'. Since regulation really began in 1984, local loop infrastructure has in various ways been the most heavily regulated part of the telecom service supply chain. So any enterprise or financier looking at the opportunity to build NGA facilities will need to factor in the regulatory framework. For the incumbent, BT, looking to replace an ageing, decaying, network infrastructure, the regulatory risk alongside the obvious financial exposure is of a regulator imposing access obligations which so distort the economics as to depress the investment incentives.

Ofcom acknowledge this risk and have publicly stated the importance to them of balancing the investment risk against the need to prevent the introduction of a new, next generation, bottleneck. So to date they have adopted a 'wait and see' attitude, citing the risk of premature regulation stifling investment.

This approach is conceptually sound but in reality much depends upon how long the 'wait and see' lasts. By the time the next consultation comes round and Ofcom have digested the responses it will surely be the end of 2007, more than a year since their last report on this subject (November 06).

As the BSG recently declared in their 'Pipe Dreams!' report, we do not have the luxury of time and, given the time that has already passed, a year or more to begin to draw conclusions could ultimately turn out to be damaging to the UK's interests. The continuation of regulatory uncertainty risks not only depressing investment by the incumbent but also deferring market entry or innovation by competitors, who lack any assurances regarding the types of wholesale product that may become available, and the costs associated with such products. The latter will be particularly crucial given the significant costs involved in installing fibre to the cabinet/ home.

Even when Ofcom decides it has bottomed out the policies and principles of a suitable regulatory system for NGA, procedurally it will have to go through the SMP market review analysis process in order to be able to apply regulation to wholesale products and prices, a further chapter in the timetable. Here again there will yet be the possibility of premature regulation and, if that is the alleged outcome, of potential legal challenge to the remedy.

So, whilst recognising the risk of such challenge, my first plea is, to dispel the uncertainty let us accelerate the pace of resolution of the issue of whether and how to regulate access to next generation infrastructure.

## 2. Promotion of Competition at Deepest Level

One of the most fundamental and oft-repeated regulatory principles or mantras of Ofcom is the need to promote competition at the *deepest level* in the network. This was a relatively tried and trusted approach in the context of copper-based local loops, but is less malleable in the fibre-to-the-home or to-the-cabinet context.

At the physical network level it may be difficult, we are told, to unbundled fibre deployments based on passive optical networks. It may also not be practically feasible or economic for rival fibre-to-the-cabinet networks to access sufficient capacity in unbundled sub-loops at the cabinet.

These are technical matters no doubt being explored and debated elsewhere, not just here. It may however transpire that the 'deepest' level of network connection is not the optimum, which will in turn impact the feasibility and economics of network-based competition.

So the regulator awaits a lead from the industry as to the options which are technically viable. The outcome will have a significant impact on whether a bottleneck could be re-created in the new infrastructure.

In this respect a potential danger for alternative networks appears to lurk in the distance. If sub-loop unbundling and co-location of equipment at the cabinet is infeasible, network interconnection will be forced back to the next available level in the network hierarchy, the exchange.

This is already the case with current-generation networks and LLU, but as I understand the next generation network architectures, these exchanges will be much fewer and farther between. This means, I suggest, that alternative networks will face an even greater dependency on the fibre 'tails' and increased costs as a consequence. This rather reverses the trend we have experienced to-date and on its own would represent a retraction of network interconnection back towards core networks.

Obviously alternative networks may find another route to end-users via alternative technologies, such as wireless or power lines, but if these prove to lack the essential capacity or bandwidth, the reconfiguration of network interconnection could prove costly to competition and consumer choice.

By the way the answer to the question of how to incentivise investment does not lie in 'regulatory holidays' – such forbearance would be discriminatory and disproportionate and court legal challenge under EU rules (as the German authorities have discovered).

## 3. Digging Deeper: Sharing Trenches and Ducts

If the practicability and economics of access to electronic communications infrastructure are impaired, this may cause alternative operators and investors to look even more closely at securing ways into premises using incumbent-owned physical conduits, such as trenches, ducts and poles.

These are areas that, notwithstanding a number of regulators' reviews over the years to-date, have not been touched by regulation. The power to regulate access to such facilities nevertheless

exists at both an EU and UK statutory level. Ofcom will need to give due consideration to whether at long last these powers should be dusted down and utilised.

That said, the challenges posed by the sharing of physical plant are perhaps even more economically and practically complex than those in the communications infrastructure. Certainly Ofcom's past analyses of the practicability are not encouraging. Nevertheless it is to be hoped that in the current debate all the relevant holders of wayleaves, ducts and other physical means of access to premises will make their views known and have them taken into account.

In this regard it would be possibly a missed opportunity not to embrace the possibilities of bringing non-communications infrastructure into play. All utilities and their infrastructure should be given due consideration if the potentiality of the nation's assets is to be fully realised. Here therefore I would put in another plea, for industry, Ofcom and Government thinking generally to be joined-up so that this potential can be properly explored. This 'joined-upness' is also echoed in the BSG's call for the DBERR, other Government departments, the public sector and industry to develop streamlined and coordinated approaches to NGA-related street works and planning issues.

Of course Ofcom's regulatory remit runs only to communications-related apparatus and facilities, and would not extend to other utilities. Therefore in the absence of legislation surely a solution would need to be found which was commercially attractive to asset holders: the question is how will these stakeholders be brought together and how can the case be made for them, if it exists at all, that will justify the sharing of these assets for communications apparatus?

At this stage, therefore, whilst many of the regulatory mechanisms exist and are at the disposal of the regulator to apply to next generation access, there is a mist hanging over how they should be applied, one which must quickly be dispelled if we are not to look back at this era as one of hesitation and, with it, a missed economic and social opportunity.

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