

## THE ROAD TO NEXT GENERATION NETWORKS (NGNs)

Next generation networks offer the possibility of delivering real benefits to citizens and consumers including innovative new services and reduced prices. However they also raise many important and complex issues which regulators need to consider, not least the appropriate regulatory regime, including the absence of regulation. This paper summarises Ofcom's views where appropriate:

- Regulatory convergence of the telecommunications and Internet world

The convergence of different services and industry value chains onto a single network raises many issues for regulators not least around consumer protection. Ofcom seeks actively to avoid exporting regulation from one domain (for example telecoms) into another (for example the internet), where it may not be appropriate. An understanding of the market structure, the market players, the potential for abuse and the level of information available to consumers, generally as part of the European Framework market review process, is required to determine the appropriate regulatory approach.

- Investment

It is not the role of Ofcom to provide operators with incentives to make particular investments, for example in Next Generation Access. Rather, we should endeavour to ensure that the incentives for efficient investment are not distorted. In determining the most appropriate approach to regulation for investment in any risky bottleneck asset, and its implications on incentives, it is important to reflect adequately the level of risk incurred at the time of investment, whilst not over-compensating which would encourage inefficient investment and lead to consumers facing overly high prices.

- Access/ Universal access/service

Given the economics of wireline next generation access deployments, it is likely that the deployment of next generation access infrastructure will be undertaken on a regional basis, starting with the most densely populated areas. Whilst such regional developments may pose some challenges for ex ante regulatory policy, for example in the definition and application of geographic markets, it is not Ofcom's role to determine the most appropriate deployment strategy or coverage for next generation access deployments. These are decisions that the market must make. However, such regional deployments may lead to much greater challenges for wider public policy. This is because, given the cost economics of next generation access, it is likely that the reach of these networks will fall short of the current generation broadband deployments, and therefore short of near-ubiquitous availability.

Should broadband become an essential part of citizen life in the UK the case for the inclusion of broadband in our universal service requirements would need to be reviewed.

- Competition

Ofcom's principle duties are to further the interests of citizens and consumers in relevant markets, where appropriate by promoting competition. As discussed in our Strategic Review of Telecoms, we consider that promotion of competition through equality of access is the most appropriate approach to assets that are enduring economic bottlenecks. Ofcom continues to favour this approach with respect to next generation access investments, but with returns that are reflective of the level of risk at the time of investment.

The level in the network where regulatory remedies may be applied to next generation access networks may differ substantially from the current copper local access network. Therefore, one key consideration for any next generation access regulatory policy is the correct level in the network to mandate access to promote downstream competition. This will, in part, depend on technology choices made by industry.

Deployment of next generation access infrastructure is likely to have an impact on current regulation, including the wholesale products currently defined by regulation. Ofcom must consider the appropriate level of, and period for, support for legacy wholesale products as operators move to using next generation access networks. As a result, the challenge for ex ante regulation is to balance the dual aims of both promoting competition and ensuring efficient investment incentives are not distorted. This is a question which has not arisen in the past, given the sunk cost nature of current copper local access networks – the incentives for efficient investment are much clearer, with known demand, and the level of investment risk much lower.

With regard to Next Generation Core networks, in “Next Generation Networks: Developing the regulatory framework”, March 2006, Ofcom gave one of our priorities as “to ensure that the deployment of BT’s Next Generation Network (NGN)<sup>1</sup> did not foreclose competition, either through disrupting existing competitive businesses or through preventing equality of access being provided in the future... The key challenge in taking forward NGN competition issues is establishing an appropriate balance between Ofcom’s role in providing certainty as to the regulatory framework and the role of the market in determining the commercial outcome of NGN-based competition. Regulatory intervention which is too early or too prescriptive could pre-empt the role of the market in determining the nature of NGN-based competition, whilst regulatory intervention which is too late or which is ineffective could result in there being no competition at all.”

- Consumer awareness/Consumer protection and Quality of Service

In the migration to 21CN – and other next generation core networks – we need to ensure that consumers do not suffer loss or degradation of service as they are switched from one platform to another. As part of industry engagement, BT Consult 21 have an Implementation and Migration Working Group whose aims include to minimise any potential negative impact of migration on end users. Ofcom monitors this working group.

There are some existing services which do not transition easily to 21CN due to its all packet nature. Examples include some home alarm systems, which require known delays. NGNs also offer tremendous potential for new and innovative services. However, as such they may also expose consumers to harm from malicious or criminal services. Location services are a good example: this capability of NGNs offers the possibility of identifying desired restaurants or other services near to a consumer; they also offer the possibility of malicious tracking or exploitation of the vulnerable. It should be noted that whilst voice is an existing service, its move on to IP could expose new vulnerabilities to hackers.

- Interconnection

IP interconnect commercial models will determine the revenue flows across the communications industries and are therefore of fundamental importance. In accordance with our preference for co/self regulatory approaches, we have encouraged the formation of NGNuk, an industry body made up of operators, content providers etc whose main function is to develop the commercial framework for NGN including IP interconnect. Ofcom monitors the work of this group, recognizing that as the regulator it may be called to intervene should disputes arise between players.

With regard to **pricing**, as set out in our discussion document, ‘Regulatory challenges posed by next generation access networks’ it is Ofcom’s view that further study is required to determine if pricing is appropriate and for which markets, the link to incentivising investment being understood. **Licensing** of NGNs or operators is unlikely to be a requirement in the UK.

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<sup>1</sup> Also known as 21CN