

**CORNING INCORPORATED
REPLY TO**

**Ofcom Consultation Document on
Next Generation New Build**

Introduction

Corning welcomes the opportunity to respond to the Ofcom Consultation on Next Generation New Build - Promoting higher speed broadband in new build housing developments.

Corning Incorporated (www.corning.com) is the world leader in specialty glass and ceramics. Drawing on more than 150 years of materials science and process engineering knowledge, Corning creates and makes keystone components that enable high-technology systems for consumer electronics, mobile emissions control, telecommunications and life sciences.

Corning is the inventor of low-loss optical fibre and continues as a global leader in telecommunication products offering a broad range of end-to-end solutions for customers' telecommunications networks including cables, connectors, related hardware, and network services that include network design, project management, installation and maintenance and training programs.

As a result, Corning has substantial experience in the provisioning, implementation and economics of fibre optic telecommunications networks and FTTx networks in particular. Corning believes that in this respect we are able to offer valuable insight into the present consultation.

We believe that there is now a critical window of opportunity for the United Kingdom to put in place a regulatory framework for next generation access networks which will offer the right balance on one hand between appropriate regulation to maintain competitiveness and on the other a regime which will encourage the required investment in access networks which the UK urgently requires to maintain its global competitiveness. It is particularly vital that both aspects receive critical attention.

Ofcom's consultation is particularly timely in view of the recent publication by the European Commission of its proposals for the reform of the Regulatory Framework for Electronic Communications Networks. In this respect the commitment of the Commission to enhance legal certainty for stakeholders by issuing, by end 2008, a Recommendation on the application of the regulatory framework to aspects of new fibre investment in the local access network and also to examine the possibility of issuing guidance in other areas, in particular on sub-national geographic differentiation is of particular importance and this consultation should provide a valuable input into this process through Ofcom's membership of the European Regulators Group.

Response to Ofcom's Questions

In the remainder of the document we set out our responses to Ofcom's questions.

Question 1 What can Ofcom do to encourage timely standards development for new build NGA wholesale access products and interfaces? Which industry body is best placed to undertake the standardisation of these products and interfaces? What action should Ofcom take if these standards fail to materialise?

We generally support Ofcom's aim to move to a standardised ALA product, however this should not be to the detriment of the consumer benefits arising from infrastructure competition. An appropriate approach may therefore be to initially standardise on an ALA product which is capable of supporting the legacy products in the Anchor Product approach which is being considered by Ofcom. Where new products at the retail level result in a different wholesale product then this should not be the subject of too early ex-ante regulation with the danger of stifling innovation. In this case, access to an ALA product to enable additional services should be subject to commercial agreement.

As this is a topic of at least European, if not global interest, then European or International Standards bodies would be appropriate and any approach based on existing standards wherever possible to eliminate unnecessary delays.

Question 2 Do you agree with Ofcom's approach to promoting competition and consumer choice in new build fibre access deployments?

We believe that the aim of regulation should be to maximise the amount of infrastructure competition where economically feasible. Given that in a new build situation, there is no significant difference in infrastructure investment costs for all operators given similar efficiencies, ie that any investment should be contestable, the aim should be to ensure that first mover advantage is restricted to the market and not to the creation of new barriers to investment. This should be the case provided steps are taken to ensure future access to ducts for an economically reasonable number of operators, say 3 to 4. A number of approaches to new build duct sharing could be envisaged including a shared investment model through to third party ownership (such as a municipality or developer) with equality of access (see also our response to Q4).

Ofcom notes in para 4.19 that: "The prospect of regulatory obligations following the contestable investment in new build NGA might be considered a disincentive to investment. This should not be the case. Investment in copper access networks in new build developments has continued under the current regulatory environment and there is known demand for existing telephony and broadband services." We would argue that this reference to ongoing copper investment does not provide strong evidence against the disincentive argument. There are two reasons for this. Firstly the existing

USO obligations oblige BT and KCOM to invest in replicating the existing copper infrastructure. Investment in providing other services such as Broadband is therefore against the same business case as elsewhere in the country. Secondly, the rapid growth in mobile telephony and the emergence of a significant trend towards mobile only households for telephony raises into question whether the USO in terms of fixed voice is nearing the end of its useful life. Therefore the business case for an NGA infrastructure investment is purely predicated around a future service mix which is not reflective of today's. Regulatory risk therefore plays a much higher role in the decision, given that it may offer others access to the *new* infrastructure and *new services* at prices which would significantly dilute the business case.

Therefore in considering investment in NGA where replication of the copper network may not be required, it is probably inappropriate to draw many inferences from existing evidence bases.

We support Ofcom's view that to encourage innovation in new services, operators should have significant pricing freedom around new services to enable them to explore the market. In particular, where it is necessary to protect competition by the imposition of WBA as a remedy, we consider that this should reflect an adequate return on investment for the investing operator and should not necessarily apply to new services in order to encourage infrastructure competition to the maximum extent possible.

Question 3 Do you

(a) believe that the existing obligations must be met by replicating the existing copper products, or that an alternative approach could be satisfactory? What are the implications of replicating existing products on fibre?

We believe that it is unnecessary to oblige any operator to install new copper in parallel with end to end fibre. This would be an inefficient and unnecessary use of capital and would not provide significant consumer benefit. We strongly believe that the efficient design of NGA networks must not be inhibited by any legacy obligations designed around a previous technology. This simply increases deployment costs without adding significant consumer benefit. The broad aims of existing consumer choice can be met by equivalent approaches based on the new paradigm, such as VOIP. We also believe that the existing USO obligations can be adequately met by an all-fibre network, where necessary with battery back-up

(b): Do you agree that SMP holders rolling out fibre do not need to roll out a copper network in parallel solely to meet their LLU obligation?

Yes. We believe that with the deployment of NGA in new build existing LLU obligations are inappropriate and competitiveness should be ensured by other approaches, particularly by ensuring duct access to enable infrastructure competition at the deepest level and only where this is not feasible by the adoption of WBA remedies such as provision of ALA (see our response to (c) below)..

(c): Do you agree with Ofcom’s approach in relation to WBA and new build areas?

In our response to Ofcom’s earlier consultation on Future Broadband we outlined an approach based on so-called ‘graded remedies’.

The Commission has already indicated that it considers it very important for each NRA to analyse both Markets 4 and 5 together, thus ensuring a holistic approach to the regulation of NGA. Before starting this analysis it will therefore be important for Ofcom to have a clear view of the positioning of each operator and potential investor on the ladder of investment and its readiness to invest in NGA.

In the “grey areas”, that is those areas where there is no clear business case leading to intrinsic infrastructure competition we believe that the regulatory intervention (remedies) should be graduated starting from the lowest physical element of the network. When lower elements of the networks are available, upper remedies should not be applied or should be lighter. This will promote a holistic approach to regulation and will require an analysis of the complete value chain in a consistent manner while incentivising infrastructure based competition.

When ducts are available, in compensation for the strong remedy of mandated duct sharing, the investment in fibre should be relieved from regulation and bitstream left to commercial negotiation or eventually mandated but on a non cost-oriented price.

Where the incumbent intends to deploy VDSL only, it should be treated as the current xDSL offers and by replacing loop unbundling with sub-loop unbundling plus an upgraded backhaul offer. However, the NRAs should ensure that the above remedies are also included during the market analysis in order to offer the competitors the possibility to jump to FTTH directly without having to be forced to follow the strategic choice of the incumbent.

(d) Do you believe that the WLR obligation must be met by replicating the existing copper product, or that an alternative approach based on an ALA-type product would be satisfactory?

An ALA type product would be appropriate. Alternately operators making use of WLR elsewhere may choose to invest in their own infrastructure.

(e): Do you believe that the CPS obligation must be met by replicating the existing copper product or that an alternative approach based on an ALA type product would be satisfactory?

An ALA product would be appropriate. Alternately CPS operators may choose to invest in their own infrastructure.

(f): Do you believe that the IA obligation must be met by replicating the existing copper product or that an alternative approach based on an ALA type product would be satisfactory?

An ALA product would be appropriate. Alternately CPS operators may choose to invest in their own infrastructure.

(g): Do you agree with our proposal to interpret GC 3.1 (c) as being met through the provision and use of a battery backup facility to maintain uninterrupted access to emergency services in new build developments

Yes

Question 4 Do you think access to the duct network, including non telecoms duct, is a potentially feasible means of promoting competition in new build? If so what types of commercial and operational models could successfully support such access arrangements in the UK?

We strongly support the view that access to duct infrastructure is a key enabler of infrastructure competition.

Sharing of new duct infrastructure through shared investment or other models such as third party owned and managed duct infrastructure could be usefully promoted.

As noted in the consultation document, symmetric remedies are being considered elsewhere, in particular for in-building wiring.

FTTH will require a clarification regarding indoor cabling rules. This will require different initiatives targeting operators, landlords and end users. Regarding the operators, there will be the need for a definition of multi-operator access / sharing rules for access to new in-building fibre (particularly for MDUs). It is possibly that imposition of these rules may require new legislation to be put in place. Products have been developed elsewhere to simply provide the required functionality of connecting multiple infrastructures to a single in-building wiring system.

We would encourage Ofcom to consider this further, particularly since a significant proportion of UK new build is anticipated to be apartment style housing.