

Response to the Consultation: Review of Wholesale Local Access Market

Introduction

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. Our products include glass substrates for LCD televisions, computer monitors and laptops; ceramic substrates and filters for mobile emission control systems; optical fiber, cable, hardware & equipment for telecommunications networks; optical biosensors for drug discovery; and other advanced optics and specialty glass solutions for a number of industries including semiconductor, aerospace, defence, astronomy and metrology.

As the worldwide market leader in optical fibre, optical fibre cabling and passive hardware solutions with more fibre deployed worldwide than any other supplier in the industry, Corning has a deep knowledge of the benefits and practical challenges of deploying Fibre to the Home (FTTP). Therefore, Corning believes that they continue to be able to offer valuable insight into the present consultation in relation to the regulation of markets 4 and 5¹ in the UK market and welcomes the opportunity to participate in this public consultation.

Corning recognises that Ofcom must allow private firms to make the technological choices which are appropriate as the most efficient and most cost effective. The UK ICT market has always benefited from a healthy degree of competition which has driven relatively good results for users in the past. However, the current network upgrades under way (or at least planned) represent the first time that the incumbent, BT, has had the possibility to make a network overhaul since liberalisation of the sector started more than two decades ago. Naturally, we assume BT will opt for the network design that gives them the most capacity at the lowest cost but which also gives them the greatest control of the value chain. Corning believes that there must be a balance struck between BT's right to make independent technology choices and the Ofcom's duty to ensure competition in the future.

¹ As set out in the Recommendation on Relevant Markets: OJ L 344, 28.12.2007, p. 65

Corning believe that it would be very short sighted to close future access options (or allow them to be closed ahead of time since roll-out has not yet commenced in earnest) when possibilities still remain to plan for additional access options in the future. While BT has chosen to opt for a GPON deployment where it is deploying FTTP, there are a variety of ways in which a GPON can be deployed. If a GPON is deployed with an upgrade to WDM PON in mind, then that upgrade can take place at a fraction of the cost and much more quickly than if an upgrade is not anticipated.

While Corning would agree for the most part with Ofcom's assessment of the status of WDM PON technology and its likely evolution, Corning categorically disagrees with the conclusion that no action is required now (paragraph 7.47). Corning believe that Ofcom must recognise that a PON deployment is inherently less favourable to third party access since physical unbundling is very difficult and it is difficult to see how unbundling can be made to be cost effective. Therefore some other form of unbundling is required. Ofcom proposes its VULA product and Corning is concerned that the product proposed which is really an enhanced bitstream product is being presented as a substitute for ULL. Corning believes VULA is not a substitute for ULL. However, Corning believe that wave length unbundling can be an effective substitute (both on the demand and on the supply side of the market).

Corning therefore believes that Ofcom should make a requirement on BT to anticipate an upgrade to support wave length unbundling in the future and that its network roll out should be built with this requirement in mind. For example, the use of pre-connectorised solutions for splitters in the field would lower the skill requirements of deployment (increasing speed) and facilitate a smooth transition to later technological evolutions.

Corning further believes that Ofcom is mistaken to put a bitstream (VULA) product in the physical access market not only because the economic conditions of demand and supply are not met but more importantly, because of the message it sends about the likely network evolution.

BT is only starting its NGA deployment and already Ofcom is conceding that physical access remedies are likely to have very limited success. There is a very real danger that Ofcom will create a self-fulfilling prophesy. By making an potentially enhanced bitstream service available as a remedy on market 4, Ofcom are facilitating a migration of alternative operators back down the ladder of investment and facilitating investments in infrastructures which are unlikely to be adequate in the medium term.

Corning's opinion is that strict obligations to facilitate infrastructure competition should be the only focus of remedies placed in market 4. Such infrastructure competition can be based on parallel infrastructures or based on shared infrastructures (in the case of LLU). Corning believes the facilitation of a monopoly infrastructure sends a very strong signal that Ofcom's vision for the future is one primarily based on a single infrastructure which may be FTTC or FTTP hosting with alternative operators taking wholesale products

quite far down the value chain. Such a vision does not encourage investment in infrastructures by alternative operators or by BT itself.

Ofcom dismisses the possibility of investments in parallel infrastructures at paragraphs 7.48-7.50 seeing some cause for operators to lay one or two extra fibres for expansion or breakages 'spares' are not likely to happen. This is as developed as the case for infrastructure investment gets and ignores the dynamics that happen in other jurisdictions where co-operative roll-outs can lower costs and reduce risks in deployment.

The danger is that by facilitating an insufficient remedy in market 4, Ofcom could achieve the opposite of their intention and undermine efficient investment in infrastructure based competition. Corning further believes that access to passive infrastructures should not be limited to SMP operators and that Ofcom should address the issue of infrastructure sharing more comprehensively and indeed more coherently through the use of symmetrical remedies. Corning believes that by combining Article 12 of the Framework Directive together with Article 5 of the Access directive, a comprehensive remedy for ensuring access to the passive infrastructures (including ducts, poles, trenches etc.) that are best able to host alternative operators can be assured.

Corning asks that Ofcom reconsider the inclusion of the VULA remedy in market 4 on the grounds that it is inappropriate because it facilitates a second best network evolution by the SMP operators and is likely to undermine investment incentives for alternative access operators.

Consultation Questions

Question 1 Do you agree with our proposed product market definition?

**If not,
please explain why.**

No.

Corning believes that Ofcom has not made the case that virtual and physical access markets are either demand or supply side substitutes. In reviewing argumentation contained in the Explanatory Memorandum to the Recommendation on Relevant Markets² Corning does not believe that the conditions described have changed or altered in any way. Corning believes that the demand and supply characteristics applying to access products have not altered in any way even if availing of some access products would be more difficult in the future. From a functional perspective and from a financial perspective, Corning believes that physical and virtual access must remain distinct.

Question 2 Do you agree with our proposed geographic market definition? If

not, please explain why.

No.

For the UK (excluding Hull), Corning believes that the imposition of different remedies in different geographic areas is inherently necessary to set the correct incentives for competition and welcomes Ofcom's consideration of these factors but regrets the conclusions reached in relation to market 4. Corning recognises that there are likely to be large differences in the possibility for network competition in the UK between densely populated urban centres, sparsely populated rural areas and the areas in-between. Corning also believes that there can be competing networks (either duplicated or based on LLU) in urban centres, that there may be no FTTP network in rural areas without public support and that there may be very limited competition on fibre networks in-between.

Corning believes that Ofcom needs to geographically isolate areas where the prospects for physical competition are greater from those areas where such prospects are not so great the analysis presented is too static and is based on what has happened in the past. Corning believes that the assessment that needs to take place should be forward looking and should happen regardless of the current state of competition in these areas but be based on an identified

² Ibid

potential to support competition in order to ensure the broadest geographic areas for infrastructure competition.

Corning believes that there can be a stronger correlation between the treatment of geographic segmentation in this market analysis and the treatment of geographic markets in the State Aid Guidelines. The SMP process which includes both product and geographic market definition in stage 1 must be conducted on a forward looking basis. This is also true of a State Aid assessment which takes a (proposed) five year forward looking perspective to determine which areas are to be classified as white (no prospective infrastructure) grey (only one prospective infrastructure) or black (more than one prospective infrastructure). In the UK many State Aid decisions have been conducted with different perspectives in this regards but seems to be overlooked in the current analysis.

A determination of where, geographically more than one prospective infrastructure could be deployed, or where a single infrastructure could effectively support multiple networks through unbundling, would warrant a different treatment of those areas. In particular, other remedies which would undermine the incentives to make the appropriate investments should not be available on that market and more importantly, it should be clearly signalled ahead of time that they will not be available. Where parallel networks are not viable or effective infrastructure sharing is not feasible, NRAs should concentrate their efforts to making sure that other forms of access are put in place as effectively as possible in the appropriate market analysis (market 5).

Please see also the response to question 10 below.

Question 3 Do you agree with our proposals that BT and KCOM have SMP in their respective geographic markets? If not, please explain why.

Question 4 Do you agree with our proposals for the general access requirements that should apply to BT and KCOM respectively? If not, please explain why.

Question 5 Do you agree that Ofcom should impose a new network access obligation on KCOM, that would require it to follow a statement of requirements process to handle requests for new network access in this market? If not, please explain why.

Question 6 In relation to LLU, do you agree with the assessment and options set out?

Question 7 In relation to fibre access, do you agree with the potential unbundling arrangements for the different fibre architectures and the positions/options set out given the current and expected future availability of fibre within BT's access network?

No.

While Corning would agree for the most part with Ofcom's assessment of WDM PON technology and evolution, Corning categorically disagrees with the conclusion that no action is required now (paragraph 7.47). Corning believe that Ofcom must recognise that a PON deployment is inherently less favourable to third party access since physical unbundling is very difficult and it is difficult to see how it can be made to be cost effective. Therefore some other form of unbundling is required. Ofcom proposes its VULA product and Corning is concerned that the product proposed which is really an enhanced bitstream product is being presented as a substitute for ULL. Corning believes VULA is not a substitute for ULL. However, we believe that wave length unbundling can be an effective substitute (both on the demand and on the supply side of the market).

Corning believe that Ofcom should make a requirement on BT to anticipate an upgrade to support wave length unbundling in the future and that its network roll out should be built with this requirement in mind. Specifically, the used of pre-connectorised solutions for splitters in the field would lower the skill requirements of deployment (increasing speed) and facilitate a smooth transition to later evolutions.

In relation to the assessment of ducts and their capacity to support competitive deployments, Corning believes that competing operators should have the opportunity to conduct their own assessment of the ducts and make their own deployment plans. Corning believes that Ofcom should facilitate third party surveys of BT's infrastructure where operators wish to deploy their own infrastructure.

Furthermore, in relation to infrastructure competition and the deployment of multiple fibres, Corning believes it is more possible than is suggested by Ofcom in its analysis. The assessment of the case for deployment of multiple fibres is perfunctory (see paragraphs 7.48-7.50) and does not consider the competitive dynamics that may exist (and which may in turn be impacted by the current analysis).

In particular, Corning believes that there are a number of scenarios where joint or common investments could be encouraged and where operators would opt to invest in 'spare' fibres. The investments in FTTP/FTTP can be shared between a number of operators and risk can be shared in some pre-agreed proportion as a means to improve investment profiles. Such arrangements can be facilitated by appropriate regulatory interventions which require notification and facilitate co-ordination of investments.

Where it becomes clear that multiple networks may be deployed investors may opt to invest in network designs which are easier to share and other investment considerations and dynamics may take hold.

Corning believes that sequential network deployments would be much slower and more expensive and consequently less likely to happen. A co-investment model is much more likely to emerge where feasible.

Corning believes that where alternative operators wish to deploy their own fibre networks they should be in a position to join BT in their deployment in a framework to be set out by Ofcom but where the alternative operator would have to pay an appropriate proportion of the deployment costs. Ofcom should impose an obligation on BT to notify its fibre roll-out notifications and facilitate a forum in which investment-sharing/coordination can take place.

Therefore Corning believes that option 3 (set out in paragraphs 7.61 -7.66) may be appropriate but not as set out by Ofcom. Unless a framework is put in place to facilitate alternative operator's investments then Corning believes it will not happen. Please see further below in answer to question 10 for Corning's concerns about the impact that such a lack of competition is likely to have on UK network deployment.

Question 8 In relation to SLU, do you agree with the assessment and options set out?

Yes

Question 9 In relation to PIA, do you agree with the proposed PIA obligation structure and the proposed implementation arrangements?

Yes

Question 10 In relation to VULA, do you agree that VULA may be a necessary access remedy in the WLA market and if so, do you agree with the key characteristics identified and how these currently relate to BT's GEA products?

No.

Corning is concerned that Ofcom has opted to put a virtual remedy amongst the suite of physical access remedies available in market 4. As outlined previously, Corning believe that the appropriate demand and supply analysis has not been conducted which would justify an extension of the defined market to include access product further down the value chain.

The Explanatory Memorandum to the Recommendation on Relevant Markets makes it clear (at page 4) that the objective of NRAs should be to encourage access without undermining the incentives to make investments.

Competing network infrastructures are essential for achieving sustainable competition in networks and services in the long term. When there is effective competition, the framework requires ex-ante regulatory obligations to be lifted. Where competition is not yet effective granting others access to facilities in a way that levels the playing field but does not remove incentives for new infrastructure investment ensures that users enjoy choice and competition during the transition to a fully competitive market. Investment in new and competing infrastructure will bring forward the day when such transitional access obligations can be further relaxed.

It is also clear that the reason the Commission has identified two wholesale access markets is precisely because physical access will not be universally effective (page 32 of the Explanatory Memorandum) and that because of their interaction, that they need to be examined together:

The initial Recommendation identified two wholesale markets that were linked to the broadband retail market: wholesale unbundled access (including shared access) to metallic loops and sub-loops, and wholesale broadband access. The reason for identifying a second separate wholesale market was based on the view that even regulated local loop access would be insufficient in most Member States to constrain potential market power at the retail level and a significant entry barrier would still exist. The fact that the two wholesale markets are linked in this way to the same broadband retail market implies that it is logical for national authorities to undertake a single overall analysis of the broadband market which examines in sequence the impact that (a) regulated infrastructure-based access and (b) regulated (non-physical) network-based access could be expected to have on any significant market power that is identified.

Corning believes that by setting out separate markets, based on a demand and supply analysis, the Commission has been able to encourage investment in infrastructure whilst ensuring sufficient access for alternative operators where investment would not be efficient. In such a model, operators can see that where efficient investments are possible, failure to invest may undermine their ability to have access products across the entire territory of the UK. This is so because areas with significant investments in alternative networks may be declared competitive for market 5 and access products further down the value chain may cease to be available. Only by investing where feasible can alternative operators secure their future.

The proposal by Ofcom to now put an enhanced bitstream product in the market and effectively undermine the previous market distinction could be detrimental to the incentives for alternative operators to invest even where it would be efficient to do so.

The proposal from Ofcom is detrimental to the vision of the form of competition that can emerge in the future and sends a strong signal to alternative operators that Ofcom does not foresee investments in alternative telecoms networks in the future. There is a danger that when signalled ahead of time (since BT's investments are still in planning) that this will become a self fulfilling prophecy.

Corning would also note that the proposed addition of VULA also undoes all the geographic segmentation in market 5 by stealth. In practice Ofcom proposes to make enhance bitstream available throughout the territory of the UK with geographic limitations only applying to more restricted forms of bitstream.

Again, regarding market definition in the context of the VULA remedy, there is no assessment of whether it is appropriate to include remedies which support specific products, such as TV transmission, in the absence of the an assessment of the relevant market. The retail market which informs the wholesale market assessment makes no attempt to assess whether a bundled retail market exists which includes TV service etc. Therefore, Corning believes that from technical perspective Ofcom is mistaken to include VULA as a remedy in market 4 but remains much more concerned about the broader perspective impacts of this decision.

Question 11 Do you agree with the framework for considering specific access remedies on BT?

No.

Corning believes that the absence of immediate requests for access or a lack of identified demand is not a sufficient or justified reason for not putting appropriate obligations on BT. The history of LLU shows that it took a long time for copper based LLU processes to be made effective and for processes to become efficient. Taking the current approach and applying in a copper context would have delayed the making effective of copper LLU remedies even longer.

Corning believes fibre unbundling solutions should be signalled as a requirement of BT so that when planning and deploying their network they can put these requirements in their build processes and so that alternative operators can plan with confidence in future access.

Question 12 Do you agree that there is a need to have a complementary set of access remedies and if so, do you agree with the proposed set of remedies on BT?

Question 13 Do you agree that no specific access remedies should be imposed on KCOM in the WLA market at this time? Could any remedies on KCOM at the WLA market level address the competition issues that we have identified?

Question 14 Do you agree with our assessment against the legal tests for each specific remedy, as set out in Section 9?

ENDS