



WHOLESALE LOCAL ACCESS MARKET REVIEW: INITIAL PROPOSALS TO DEVELOP AN EFFECTIVE PIA REMEDY

EXECUTIVE SUMMARY

1. In principle, infrastructure competition to Openreach and cable in local access could be beneficial to consumers and businesses by exposing more of the value chain to investment, innovation and differentiation. However, in practice, Sky does not consider that such investment is likely to materialise, either at all, or at a scale capable of making a significant difference to the competitive environment. The massive fixed costs of deploying a new access network, the finite demand for local access lines, and the lack of contestability of BT's and cable's retail businesses make the investment case for a substantial 'third network' particularly weak.
2. It is appropriate therefore for Ofcom to consider options such as DPA which act to reduce the deployment costs of new fibre networks by removing the duplication of some of the most expensive network components – i.e. ducts and poles. However, in Sky's view even with a fit for purpose DPA product, deploying a wide-scale fibre-to-the-premises network remains exposed to substantial risk around capturing enough end users to the new network, and therefore DPA does not alter materially the investment decision. These challenges are particularly acute in light of Openreach's excessively-priced wholesale Generic Ethernet Access product¹, which creates a significant risk that other communications providers' market share will diminish over time.
3. This enduring economic reality means that any DPA solution is also unlikely to deliver a material benefit to competition and consumers. Given this, it is important that the steps Ofcom takes in improving DPA do not unduly harm the other important products and services which also use BT's ducts and poles. This principle should be applied when considering whether proposals to improve DPA are proportionate and justified. Where there is a risk that certain DPA proposals could have unjustified, knock-on, negative consequences for the other important products offered by Openreach, then business rules should be introduced to ensure that these effects are minimised.
4. Further, whatever the eventual scale of DPA-based entry, Ofcom should remain mindful that the purpose of improving the viability of DPA is to introduce more competition in local access networks to BT and cable. Therefore a DPA network should aim to compete with the full scope of services offered by these existing network operators – including if necessary in business connectivity. As such, this requires that the scope for which DPA can be used is extended to include these services but, crucially, business connectivity should not be the sole use of the DPA network. Allowing 'cherry-picking' in this way would not introduce the full scope of infrastructure competition to BT and cable which is the underlying objective of the DPA remedy. To the extent that Ofcom intends to proceed with introducing a DPA solution, Sky considers that Ofcom should introduce business rules and incentives that require DPA networks to offer consumer FTTP as well as any business connectivity.

¹ See Sky's submission on "GEA Charge Control", sent to Brian Potterill on 31 January 2017.

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SECTION 1: IMPROVEMENTS TO DPA SHOULD NOT UNDULY IMPACT OTHER PRODUCTS THAT USE BT'S DUCTS AND POLES

1. Sky considers that any steps to improve duct and pole access ("**DPA**") - as set out in Ofcom's consultation on "*Wholesale Local Access Market Review: Initial proposals to develop an effective PIA remedy*", dated 6 December 2016 (the "**Consultation**") - should not come at the expense of other important Openreach products and services that also use this infrastructure.

As the scope for DPA based entry is limited it should not come at the expense of other services

2. Infrastructure competition - i.e. competing networks - can be beneficial to competition and consumers as more of the value chain is exposed to investment and innovation. However the high fixed costs of deploying new infrastructure are often so high that it is not viable to duplicate all network components - particularly, those 'passive' elements such as ducts, poles and cables.
3. In relation to standard, DSL-based broadband, this principle of establishing where in the value chain infrastructure competition was viable was recognised in BT's original undertakings in lieu of a market reference in 2005, which allowed BT to rent access to 'passive' network components in the local access network while prohibiting it from installing and controlling 'active' electronic equipment. This approach ensured that there was not uneconomic duplication of BT's passive infrastructure (ducts, poles and copper cables) while exposing the active layer of the value chain (DSLAMs, MSANs, etc.) to competition.
4. However, as the market moves to fibre-based broadband, Ofcom is considering promoting the roll out of fibre-to-the-premises ("**FTTP**") via DPA which would expose more of the value chain to competition by introducing some additional duplication of passive network elements - primarily, cables. While it is appropriate to consider options such as DPA, which act to reduce costs and improve roll out speed for investors in new fibre networks by removing the duplication of the most hard to replicate network components - i.e. ducts and poles - it is unlikely to result in significant roll out of alternative fibre networks.
5. In recent years, Sky has conducted extensive research into the business case for fibre network investment. In short, the economies of scale required to make deployment profitable present a significant challenge in terms of risk and the length of time it takes for such investments to pay back. The key sensitivity is that the new network needs to obtain enough end users, but as BT's and Virgin Media's retail businesses are tied to their vertically integrated networks, over half of the market is non-contestable. This means that the prospect of a wide-scale third local access network is low². Therefore, until such time as BT Consumer's business is contestable - for example as a result of structural separation - there is unlikely to be meaningful roll out of viable DPA based networks by communications providers (each a "**CP**") serving the residential market irrespective of steps Ofcom takes to improve DPA.
6. Given this economic reality, it is important that the steps Ofcom takes in improving DPA do not unduly harm the other important products services which also use BT's ducts and

² See Sky's submission on "GEA Charge Control", sent to Brian Potterill on 31 January 2017, paragraphs 58 to 64.

poles. This principle should be applied when considering whether proposals to improve DPA are proportionate and justified. Where there is a risk that certain proposals could have unjustified, knock-on, negative consequences for the other important products offered by Openreach, then business rules should be introduced to ensure that these effects are minimised.

As the purpose of DPA is to introduce competition in access networks, its usage scope should be wide

7. In seeking to lower the barriers to DPA based entry it is important for entrants to be able to also unlock the broad economies of scope typically associated with the access networks of BT and cable. Capturing all revenue sources in the network footprint is necessary to improve the investment case for new networks. As such, exclusions of specific uses (e.g. radio backhaul, symmetric services) narrow the economies of scope for DPA users and are inappropriate.
8. Further, the purpose of the DPA remedy is to introduce a degree of infrastructure competition to BT and cable in local access. In Sky's view this means competition across the full range of services currently offered by these network operators – which includes both business connectivity and, more importantly, wholesale local access primarily used for fixed broadband.
9. Ofcom has identified a specific key need to promote DPA based entry in order to drive the roll out of FTTP networks – of which there has been little to date. The gains available from using DPA for business connectivity however do not appear to be as significant and there are already a variety of regulated Openreach products suitable for serving these markets. Accordingly, in Sky's view it is unjustified to allow DPA to be used solely for business connectivity.
10. This is particularly relevant given the scope for DPA based business connectivity to impact negatively the scope for DPA based fibre to the home (“**FTTH**”) and the other important services that use BT's ducts and poles. Physical infrastructure capacity is finite and permitting completely unrestricted usage risks resource exhaustion in areas of high demand. Business CPs can be expected to sign off discrete builds more quickly than CPs assessing the case for much larger areas of build for residential deployment. However, 'cherry picking' by business CPs could result in the accumulation of bottlenecks in the duct network, impeding later deployments targeted at FTTH.
11. Ofcom also outlines in Annex 4 of the Consultation how the loss of Openreach revenues from reducing volumes in wholesale leased lines as a result of increased DPA based business connectivity could affect its recovery of common costs. In short, the price of other Openreach products and services may have to rise as a result. This could have a material impact on the costs of serving residential customers without providing them any benefit. Therefore, Sky requests that Ofcom remains mindful of this danger when considering the case for an 'any usage' policy.
12. In the Consultation, Ofcom proposes 'mixed usage' as an alternative to 'any usage' as a means to promote investment in FTTH which may help to achieve that.

SECTION 2: SKY'S COMMENTS ON OFCOM'S DETAILED PROPOSALS FOR IMPROVING DPA

13. As noted in section 1 above, Sky considers the investment case for a wide-scale DPA based FTTP network to be weak due, in part, to a limited base of contestable customers and the high cost of deploying a DPA network. Nevertheless, below Sky provides specific comments on Ofcom's proposed DPA solution.

Need for Equivalence of Inputs

14. Equivalence of inputs (“**Eol**”) is a fundamental tenet of BT’s undertakings and ensuring that other communications providers are able to compete effectively with BT. The European Commission specifically states that:

“Where duct capacity is available, NRAs should mandate access to civil engineering infrastructure. Access should be provided in accordance with the principle of equivalence as set out in Annex II”³.

15. This means that BT must provide access to civil engineering infrastructure for ultrafast technologies (including all types of g.fast deployment) on the same basis to internal and third party access-seekers. Notwithstanding this clear recommendation from the European Commission and the fact that Ofcom recognises that BT has the incentive to discriminate against competing CPs⁴, Ofcom proposes departing from Eol in the Consultation.

16. In the Digital Strategic Review, Ofcom stated:

“We will work to apply equivalence of inputs to Openreach’s provision of DPA, so as to require Openreach to provide DPA to all communications providers (including other parts of BT) on the same timescales, terms and conditions, and by means of the same systems and processes. We expect only to consider exceptions to this where it would result in a disproportionate level of costs being incurred, such as in relation to certain existing network infrastructure as opposed to where new network assets are deployed.”⁵

17. Ofcom now proposes departing from this principle, without any analysis or meaningful explanation of why it considers the costs that would be incurred by BT are disproportionate. Ofcom only states in the Consultation that attaining equivalence “*may be costly and disruptive, and is likely to take considerable time*”⁶.

18. If Ofcom is going to depart from its position in the Digital Communications Review and the European Commission’s recommendation, then Sky would expect evidence of proper scrutiny of whether an equivalence obligation is truly disproportionate particularly given that equivalence will be fundamental to material take up of the DPA remedy. Further, in order to allow stakeholders a fair opportunity to comment on Ofcom’s proposals, we would expect a clearer statement of how Ofcom’s proposals depart from Eol and, accordingly, what advantages Openreach will continue to have over other CPs.

Processes

19. Sky attended the Passive Infrastructure Working Group (“**PIWG**”) hosted by the OTA throughout 2016, and has observed the progress made on improving the terms under which CPs are permitted to access Openreach’s ducts and poles, many of which have already been accepted into a new version of BT’s agreement for the provision of physical infrastructure access (“**PIA**”).

³ Commission recommendation on regulated access to Next Generation Access Networks, 20 September 2010, paragraph 13.

⁴ Consultation, paragraph 3.4.

⁵ Ofcom statement on “*Making communications work for everyone: Initial conclusions from the Strategic Review of Digital Communications*”, 25 February 2016, paragraph 4.30.

⁶ Consultation, paragraph 3.8.

20. It is imperative, however, that these process improvements continue to develop, and are regularly reviewed as DPA becomes more widespread. Inevitably, issues relating to DPA will only come to light once an effective DPA remedy is in place and CPs have an opportunity to utilise it.

Planning

21. Openreach has taken a significant step forward by committing to extend the functionality of its Infrastructure Discovery Tool (an on-line mapping service available via its website). Following implementation of Openreach's proposed changes, the updated tool will overlay all Openreach pole locations, duct routes, manhole and joint boxes. Additionally, Openreach has committed to providing an indicative 'R-A-G availability' status that would show the expected capacity of each asset.
22. Subject to the reliability of the R-A-G status information, CPs utilising PIA should be able to plan networks with a reasonable degree of confidence.
23. However, Openreach's proposal does not go far enough to bring CPs seeking PIA in line with Openreach. While access to R-A-G status information may assist the development of small network builds, it is insufficient for larger deployments. CPs investing in larger deployments will require 'read/write' access to BT's geographic information system (GIS) database files, which is currently not provided nor proposed by Openreach. By providing network records in a GIS-compatible format ('shape-files'), PIA users will be able to view Openreach's infrastructure alongside their own duct networks, allowing them to plan flexibly using both sets of resources. 'Write-access' to the records will be necessary in order to reserve capacity and for such reservations to be visible to other users of Openreach's passive assets.

Deployment

24. Ofcom considers that self-provision of enablement works by access seekers is likely to be the most efficient model, and note that this aspect of the Proof of Concept run by Openreach through the PIWG was considered successful.
25. Subject to our overarching concerns regarding DPA, Sky also considers this is likely to be an effective model, provided that appropriate SLAs/SLGs relating to the authorisation process are also required.
26. In the situation where build works are required to increase the available duct and pole capacity, either the access seeker or Openreach may be well placed to complete the work. Where the new build is provided by the access seeker, it will be necessary to have SLAs/SLGs on any approval process required by Openreach. If Openreach is completing works on behalf of the access seeker, guarantees remain important, but may be more difficult to agree due to external factors (such as availability of build resources, or Local Authority permissions).

Connecting the customer

Overhead

27. For a CP to offer service in an area of FTTP build, it needs to have certainty that a customer order can be fulfilled. Therefore, it is necessary to address capacity constraints relating to Openreach's poles. Introducing a system of supply whereby Openreach substitutes legacy copper drop wires for new fibre/hybrid drop wires alleviates capacity issues since total load is not increased.

28. To be effective, the obligation to substitute legacy copper drops for new fibre/hybrid drop wires must be accompanied by SLAs requiring Openreach to provide reliable appointing for drop wire substitutions. This will enable CPs using PIA-based networks to offer service delivery advice to customers.

Underground

29. In the Consultation, Ofcom takes the view that the constraints relating to the provision of underground drop wires (through 'lead-in' duct) are different to those relating to overhead drop wires, and therefore different regulatory approaches are required for each⁷. In particular, Ofcom assumes that unavailable lead-in ducts can be easily overbuilt as the duct lead-in lengths will be relatively short compared to other parts of the local access area⁸.
30. Sky does not agree with this view. Where a lead-in duct is not available, it may be necessary to overbuild the section not only across the section of 'soft dig' (e.g. front garden) but also back to an underground distribution point (DP) where connectivity is made to the distribution network. Such work might require several meters of 'hard dig' along public pavement, making the cost of install completely uneconomic for a residential customer. CPs could often expect to dig 10 to 20m of pavement to build out to a customer's premises at a cost of around £60/m, rendering the costs of provisioning prohibitive.
31. A further issue with lead-in ducts, which is similar to pole access, is that there are likely to be cases where a lead-in duct is available for a new fibre drop wire, but could only be fitted by removing the in-situ copper drop wire.
32. For these reasons, Sky believes Ofcom should apply the same reasoning to the provision of both underground lead-ins and overhead drops. That is, Openreach should be responsible for the provision of the final drop wire in either architecture, and should recover its reasonably incurred costs through rental charges over the economic lifetime of the drops.

Obligation to provide final drops

33. There are a number of issues that arise if a CP operating a PIA network is required to provide the final drop.
34. First, it is costly to provide final drops. This can be prohibitive for a CP given that there is no certainty that a CP will retain a customer for the period necessary to recoup its investment.
35. Second, if a customer churns away, the CP that installed the final drop will be left with a redundant asset. That CP will continue to pay the rental cost of using the pole attachment or meters of lead-in duct are payable for the whole time the drop is physically present, whether or not there is a paying customer attached. The only way to avoid such rental charges is to remove drops when a customer terminates service, introducing significant extra cost to the PIA-user's business model.
36. Ofcom has previously considered that the expected average superfast broadband customer lifetime is around five years⁹. This is a fairly short time to depreciate the drop's

⁷ Consultation, paragraphs 5.58 and 5.80.

⁸ Consultation, paragraph 5.85.

⁹ Ofcom's Statement on Fixed Access Market Reviews: Approach to the VULA margin, 19 March 2015, paragraph 5.83.

total cost (providing the drop, paying pole/duct rental, and removing the drop), rendering a DPA solution economically unattractive.

37. A way to address the risks inherent in customer churn and switching is to require Openreach to provide final drops (as Ofcom has suggested for overhead drop-wires, at least). Openreach would not face such economic challenges, since as monopoly supplier of final drops, Openreach would likely be able to reuse the drop either for its own fibre service, or when the customer selects a new CP.

Cost Recovery

38. Sky considers that, in principle if Openreach were partly responsible for financing essential upgrades to its infrastructure to support duct and pole access, then this would lower barriers to the roll out of DPA based networks. .
39. However, Sky advocates extreme caution when considering how costs should be recovered by Openreach. As Ofcom recognises in the Consultation, residential customers may be disproportionately affected by higher costs if PIA is primarily used to serve the business connectivity market. This risk can be mitigated by ensuring that additional common costs are not excessive, and that CPs that do not use DPA do not face disproportionate price increases. Costs can also be driven up by CPs requesting work from Openreach but then not utilising those networks. Sky proposes a use it or pay for it approach to limit CPs from asking for extensive duct work that they cannot subsequently use.
40. Similarly, Sky advocates that to the extent that a DPA remedy is introduced, the cost of installing fibre drops, together with the associated depreciation, is recovered from fibre-based products, ensuring that consumers acquiring copper-based services are not affected by investments facilitating the provision of fibre-based products.

Sky

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