

COTS Project: Access Infrastructure Provider Requirements

Introduction

The following note identifies the drivers and requirements of access infrastructure providers (operators of access networks) and some service providers (traditional ISPs and over-the-top service providers) on the aspects of wholesale products offered over these networks, including the associated processes and commercial terms.

For simplicity, this group will be referred to throughout as access infrastructure providers. However, where this term is used it should be considered that service providers involved in the drafting of this position agree with the position put forward. For example, where access infrastructure providers wish to provide a particular type of wholesale product, it should be considered that those service providers would be interested in utilising such products.

There are 3 underlying drivers for these requirements:

1. retailers should be able to provide services on an open access basis using available wholesale products to find the most economic way of delivering services to end customers;
2. multiple retail services should be able to be provided to a premises without interfering with each other (the ALA model discussed below), reflecting the capabilities of next generation infrastructure;
3. end users should be able to migrate economically between different service options and providers on the same underlying infrastructure seamlessly with the minimum loss of service

This note covers all the main aspects of the wholesale offerings and platform management including

- Product – features of the product
- Process – systems and processes for ordering, dealing with faults etc
- Commercial – pricing, service level guarantees and agreements, contractual matters

In each area we cover both what the proposition needs to include / be and some thoughts for further discussion.

Product

Access infrastructure providers are interested in providing a range of wholesale product options for retail SPs, which would cater for the needs of a range of SPs and the services they seek to offer. These products would reflect the different appetites for investment, innovation and control that service providers would seek.

The full product set would include the following:

Passive access

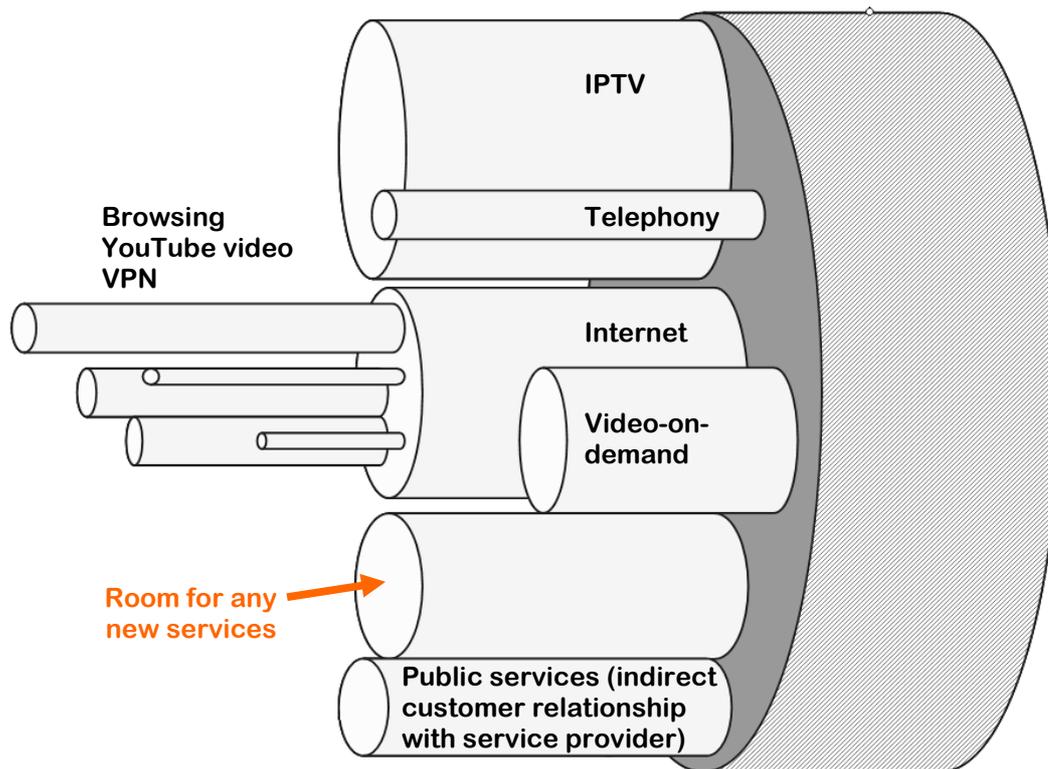
- True passive products for FTTC are unlikely to be viable; here SLU is considered as a wires-only solution below.
- For FTTH deployments with P2P fibre, passive fibres could be a product offered to ISPs, although the commercial arrangements of this would need to reflect the value of the line (as discussed later). Further technical issues would need to be considered to make such products a reality for FTTH, such as architecture requirements and constraints (eg chamber space).

Wires-only

- As standards mature, a wires-only product could be developed, both for VDSL over SLU and for FTTH solution variants.

Active products

- ALA-based products are the most likely options within the product set to be available in the near-term, given the ongoing industry work on standardisation and the relative maturity of this work compared to similar activities for other products.
- Active products over fibre provide a greater flexibility to both access infrastructure providers providing wholesale products and to retail service providers than existing bitstream products over copper.
- Reflecting this, active products could be developed around a number of characteristics of a service, such as guaranteed bandwidth, QoS, and others; fundamentally, products could be developed that reflect more accurately the demands and requirements of service providers, while enabling a more efficient utilisation of the line, for access infrastructure providers, service providers, and end users.
- Through this approach, access infrastructure providers envisage an environment where multiple service providers deliver services down a single line to end users, as demonstrated in the diagram below.



The ALA approach leads to 2 series of questions to be answered:

- how products are developed
- how the platform on which the products sit is developed, managed and funded.

Funding would need to be on a relevant, non-discriminatory basis in order to maintain a level playing field for the competitive provision of services.

Central coordination and transparent, inclusive governance would be needed to develop consensus on how to, for example, manage the capacity at each premises, create the back-office arrangements to allow smooth migration of customers between services, develop arrangements for introducing new products such that they do not interfere with existing products etc.

The ALA model, however, would not preclude ISPs taking control of a significant chunk of capacity and customising their offerings using their own technology and systems, but it would not allow the whole line to be handed over to one ISP who would preclude other service providers using it. Similarly, if the end user decided he did not want this service any more, that capacity would have to be relinquished to the access infrastructure provider to allow other services to use the vacated capacity.

Process

Access infrastructure providers recognise that for retail service providers establishing a scalable set of processes would be the most efficient outcome; this would ideally be based on the existing established processes.

However, the reality is that recreating Openreach's Equivalence Management Platform (EMP) will not be practical for a number of access infrastructure providers, and it is unlikely that such diverse businesses could easily be brought together to establish a common set of processes. The most feasible approach would be for a body (or bodies) to play a process aggregation role in the value chain, which would emulate EMP in order to provide simple integration for ISPs.

The most appropriate role, functions and governance of such a body need to be considered, particularly given any role in enabling commercial relationships. It may be useful to draw on the experience of commodity and utility markets in order to understand the requirements that an aggregator would need to meet.

This solution would require a recognition from all players in the value chain that additional value would need to be added in the value chain, and further debate would be required to understand whether the market would deliver this solution, or whether a policy or regulatory stimulus would be required.

The development of processes aligned to the delivery of the products set out above would need to include migrations between ISPs, technologies, and services.

A useful starting point for the development of the requirements to be met by an aggregator could be to identify industry best practice in this area.

Commercial

At the core of the access infrastructure provider view is the recognition that a fibre asset has a particular value that is greater than that of a current generation copper line. In order to unlock this value, new business models could emerge that reflect a new way for end users to consume services and a new way for SPs to provide innovative, bandwidth-efficient ways to provide them. This would be supported by a platform environment that has low barriers to the entry and exit of SPs, and allows for the efficient re-use of capacity as end-users move between different services on offer.

This conception of a higher value of a fibre line compared to an existing copper line has a fundamental implication for those products that give an ISP total control of a line, as the pricing of such a product would need to reflect the opportunity cost of lost potential revenue streams.

The commercial relationships with existing ISPs are an important relationship for access infrastructure providers to maintain: ISPs have the existing relationships with end users, and there is a level of end customer expectation regarding the delivery of broadband services. However, access infrastructure providers are keen to explore

service delivery with other non-traditional partners, a reality that needs to be reflected in the products and commercial arrangements between ISPs and access infrastructure providers.

Further constraints could also apply to access infrastructure providers depending on their contractual obligations. For example, access infrastructure providers operating networks funded through public organisations would be likely to have constraints upon the types of service it can offer retailers, particularly given possible public service delivery requirements over these networks, and the prices it can charge.

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