

Response from WarwickNet

Additional comments:

WarwickNet are currently establishing PIA with BT and expect to be deploying our first passive infrastructure into BT ducts early in 2015, this will be utilised mostly to extend our extensive SLU deployment.

We see the restriction on providing Leased Lines via PIA is a problem for us, and will cause unnecessary duplication. We already have examples where we use EAD to provide a circuit 100m from our POP to a customer (which BT route 8km via the serving exchange).

We also operate a lot of our own dark fibre and understand some of the challenges that face CPs both in operating and sub-leasing capacity.

Question 1: Do you agree with our preliminary framework for considering the case for passive remedies?:

Yes

Question 2: Do you agree with our preliminary views on the potential benefits of passive remedies? Please provide evidence to support your view.:

Yes

We already provide services via DF and we find there are tremendous benefits over the equivalent managed Ethernet services (EAD, etc.), these include:

- 1) Ability to deploy passive WDM solutions on top of DF to deliver parallel, and resilient services at no extra cost.
- 2) Quick and easy to scale capacity.
- 2) Removal of dependence on provider equipment that sometimes has technical limitations (such as frame size - though this isn't generally an issue with EAD).
- 4) Removes points of failure, for the CP this enables us to quickly identify a problem as being with the DF provider - for the DF provider though it can mean a more challenging troubleshooting process as they lack active equipment on the line.

Question 3: Do you agree with our preliminary views on the impacts and risks of passive remedies? Please provide evidence to support your view.:

Yes.

We believe it's important that passive remedies are priced appropriately to not dissuade investment in new duct where required.

Our own cost models with PIA seem to suggest we will be many decades before it's better to dig new duct than lease duct capacity from BT for NGA access. (We hasten to add the pricing feels about right!). However our models are based on relatively short distances (under 500m) around the complicated last mile into customer premises. Once you start to consider longer

backhaul circuits over multiple kms PIA as it currently stands is no good value compared with EAD (upto 1Gbit/s).

Question 4: What are your views about the potential impact of passive remedies on the pattern of common cost recovery and the associated distributional impacts? :

We believe that in the first instance passive access shouldn't be all about CPs saving money, the passive access benefits may justify a spend that is no great reduction.

Also it will potentially generate additional revenue for BT by allowing them to be more competitive with other operators. On backhaul for example we use Virgin Media extensively simply because they sell us an EAD equivalent circuit much cheaper than BT, however if we had access to a DF product from BT for mid-mile backhaul (<25km) we would probably prefer paying for that rather than a discounted managed service from VM.

Question 5: Do you agree with our initial view that mobile backhaul and fixed broadband backhaul are likely to be the primary applications with significant demand for passive remedies?:

Yes and No.

Certainly for us one of the biggest problems at the minute is lack of viable midmile backhaul at 10Gbit/s from BT, especially because we don't follow the traditional model of taking space in BT exchanges (thus have no access to the EBD). Our POPs are very distributed (typically located at each business park we serve), and if we can't get VM backhaul is very costly with BT, especially once we want to go over 1Gbit/s).

We are also getting an increasing number of requests for 10G on the customer access side, with BT at the moment (via OSA) this is mostly untenable, and BT seem to be dragging their feet on an EAD 10Gig product.

Question 6: What benefits might duct access offer over dark fibre and vice versa? Is there a case for having both remedies?:

Yes both remedies have a place.

PIA with duct access is perfect for 'local' solutions, within a 1km circumference of a provider POP. Within business parks we expect to be able to connect new customers to fibre with PIA in under 2 weeks.

On longer mid-mile backhaul PIA scales quite badly and in that scenario leasing of DF is preferable. EAD without the NTE is very much ideal.

Question 7: If passive remedies were restricted to particular product types or geographic areas how might this affect the usefulness and benefits of the passive remedy?:

We suspect that BT would want to be allowed to provide DF services in areas that DF is readily available (London and anywhere City Fibre and similar are based), as at the moment they are losing out as they can't provide a competitive service.

CPs would want BT passive access to be made available in areas where there is no other option, particularly where there is no other provider at all (for example VM).

In terms of product type passive implies DF or duct. Duct (if costed per PIA) is already self restricting as becomes decreasingly viable over distance. Even with the leased line restriction taken off PIA this wouldn't change greatly.

One possible restriction is to limit DF to provider backhaul (POP to POP), forcing providers to either use PIA or EAD for customer access from their POP.

Question 8: What arrangements would be appropriate for the supply of new infrastructure for passive remedies?:

We feel that both the current ECCs method (as per EAD) is fine for extensions. With PIA we can already either opt to pay BT to add capacity or choose to dig our own capacity to bridge the shortage on BT's network.

We already regularly with SLU pay to add duct capacity to BT's network due to full ducts, which they can subsequently put additional services down and we take it on the basis of 'you win some you lose some'.

Question 9: Do you agree with our initial views about the non-discrimination arrangements for passive remedies? :

Yes very much so.

Question 10: In light of the trade-offs identified, which broad options on pricing do you consider would be most appropriate for passive remedies and why? Please also provide details if there is another pricing approach you consider would be appropriate in light of the considerations identified in this section.:

For duct access, PIA pricing seems to be well worked out and we would welcome a reduction of the restriction on using PIA for leased lines and point to point services.

For DF the obvious comparison is EAD, a cost minus approach based on EAD could work well. Our suggestion would be to align this with EAD1000 pricing, thus leaving BT with a healthy slice of the managed ethernet pie (which in a lot of cases CPs may prefer to DF due to the built in management and monitoring). Thus CPs can get DF backhaul upto the same ranges/pricing as EAD1000.

Question 11: If a value-based (active minus) approach to pricing dark fibre were adopted, what do you think would be an appropriate active wholesale product (or products) to reference?:

See Q10.

We think that pricing should be for dark fibre irrespective of use, as soon as you try and relate that to an equivalent downstream service you have some major trust issues, and questions over what actual capacity to charge for potential (we could easily put 100Gbit/s down a single strand of fibre), and in use (customer pays for 1Gbit/s but uses 1Mbit/s).

It would be tempting to reference DF products against OSA, however it should be noted that one of the reasons OSA is so expensive is due to the cost of the termination equipment BT have chosen to terminate the fibre with. CPs would be able to dramatically reduce this cost with their own choice of WDM and optics.

Question 12: Do you have any other comments on the issues raised in the document or comments that might aid our consideration of the passive remedies as a whole?:

We feel passive access is a necessity for further innovation and product diversity in the market.

We consider PIA is basically the right answer for duct access and merely needs some of the shackles removing.

A DF product for backhaul and in the future potentially for customer access would be very welcome and allow BT to compete in a market they are currently unable to be competitive.