BT's response to Ofcom's Call for Inputs on the Business Connectivity Market Review

June 2011

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1. Summary

The competitive landscape in business connectivity

Business connectivity markets are undergoing fundamental change. Customer switching from traditional interface services to Ethernet or broadband is a particularly strong trend. This is evidenced by the steep decline in our traditional business: for example, our retail leased line revenues have fallen by 70-80% in the last decade and partial private circuit volumes are declining at 11% each year.

In contrast, the Ethernet market in the UK is expanding rapidly at 14% per annum. Growth is especially strong at the higher bandwidths, where other CPs are growing faster than BT, reflecting the intensity of competition and incentives for entry. A significant proportion of Ethernet connectivity is provided over the extensive city fibre networks built over the years by other CPs.

We believe the current trends will accelerate over the period of the review, and that the market will continue to be highly and increasingly competitive where it is expanding most rapidly.

How regulation should reflect the realities of the market

We believe Ofcom's approach in this review needs to reflect the changes since the last review and take into account expected developments on a forward looking basis. To achieve these outcomes, we believe that in this review, Ofcom should in particular:

- Ensure its analysis is properly forward-looking, and fully assess the competitive conditions for investment, new entry and new technologies as the basis for proportionate regulation;
- Assess whether differences in competitive conditions indicate that further geographic markets should be defined, taking full account of the incentives for CPs to extend their networks over the period of the review;
- Refrain from imposing additional regulation in the 'AISBO' market, which continues to grow rapidly and is increasingly competitive and dynamic, and properly consider the scope for deregulation, for example of services at 1 Gbit/s;
- Consider how to remove or significantly reduce regulation of traditional services, recognising the strong linkages to copper and fibre broadband services and to Ethernet at higher bandwidths. Regulation risks artificially and inefficiently prolonging the life of these legacy products, and continued intervention will become increasingly disproportionate as volumes fall. lace;
- Re-align its approach with the EU mainstream. The scope of regulation should not be wider in the UK - one of the most competitive Member States - than in the rest of the EU. Few Member States still regulate retail leased lines or wholesale trunk segments, which the Commission removed from its Recommendation on markets susceptible to ex ante regulation before the last review;
- Simplify the current complex web of over-prescriptive remedies, which results in multiple baskets and sub-baskets in charge controls, potential conflict between cost orientation and charge control obligations, and mandated SLA/SLGs instead of service standards agreed by the industry;
- Ensure its analysis and proposals are based on accurate and up-to-date information obtained from all relevant providers, where possible supplemented and validated by public domain sources such as companies' published results and other announcements.

One of the questions in the Call for Inputs document asks for views on the role that passive remedies could play in business connectivity for the promotion of downstream competition. We do not believe there is a legal basis for passive remedies in this market. Further, we agree with Ofcom's conclusions in last year's Wholesale Local Access market review that passive remedies would do little to make

business connectivity more competitive and would seriously undermine the effectiveness of the existing active remedies. It would also undermine incentives for investment in alternative infrastructure. In addition, we would note that any assessment of this issue would need to include analysis of all relevant infrastructure, including that owned by other CPs and utilities.

In this response, we highlight the key trends in business connectivity in the UK and outline the approach we believe Ofcom should take in its forthcoming market review.

2. Key trends in business connectivity

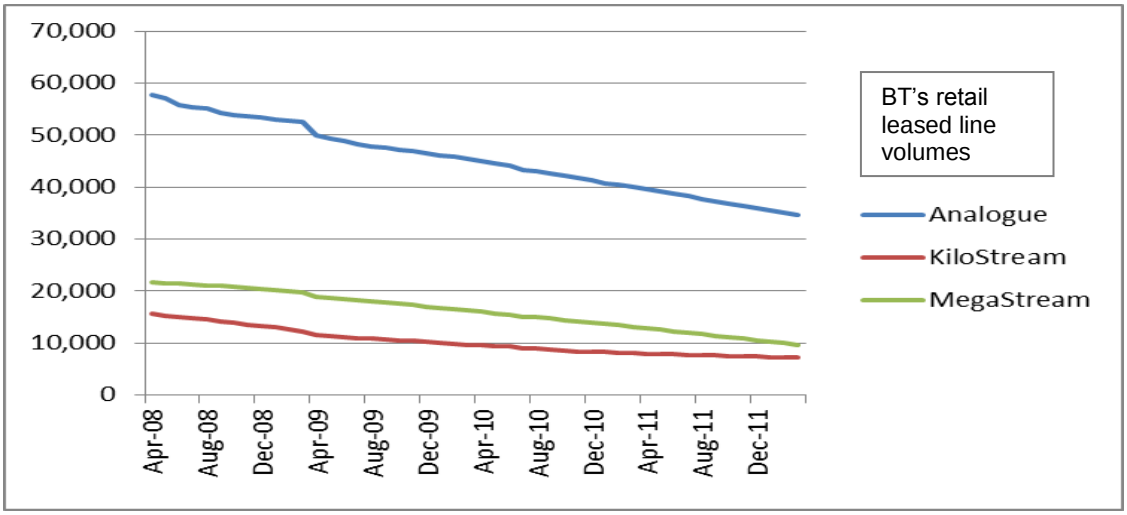
Business connectivity markets have changed significantly since the last review concluded just over two years ago. Many of the market trends highlighted in our responses to Ofcom's consultations in the last review have continued and strengthened.

Retail leased lines

At the retail level, the big trend is the continued migration away from traditional leased lines as customers look for better technology options and increasing value for money. Reductions in BT's revenues from retail traditional interface leased lines show how deep-seated this trend is, having declined by 70-80% in the last decade.

Ethernet is now the default choice for large users, including the data centres which consume a significant proportion of business connectivity. Elsewhere, customers are migrating to simple business broadband. This is not confined to small businesses: many large businesses with distributed sites, such as national retail chains, have made this switch. This trend will continue over the next few years, and we expect super-fast broadband will also increasingly substitute for low bandwidth leased lines.

As a result, we find that our regulated leased lines volumes are increasingly provided to a small number of customers with relatively large leased lines estates. It is reasonable to assume that the movement to alternative connectivity services will continue or even gather pace. Accordingly, we would expect to experience a series of significant reductions in circuit volumes as large customers migrate to alternatives. The following graph illustrates the downward trend in this part of our business:



Wholesale traditional interface services

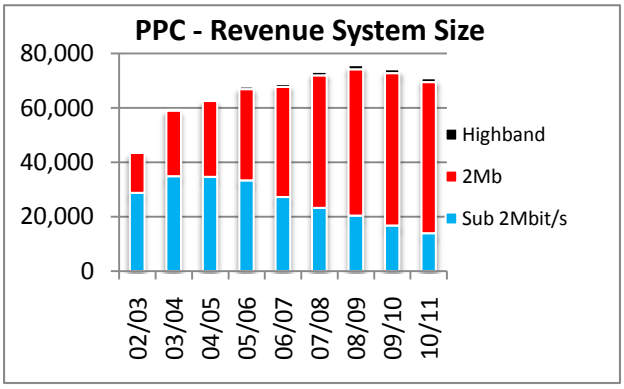
These changes are also reflected in the wholesale business connectivity markets. Over the last three years, BT's volumes of traditional interface partial private circuits sold to other CPs have declined at

an average rate of 11% per annum. This is despite price reductions over the period, for example a 54% cut in 2 Mbit/s trunk charges in September 2009 and a 40% cut in sub-2 Mbit/s trunk charges in March 2010.

As at the retail level, step reductions in volumes can be expected over the coming years as existing contracts expire and as Ethernet services are enhanced to provide functionality that can currently only be provided through traditional interface services. An example is radio station backhaul, which is expected to switch over to Ethernet-based delivery in the near term.

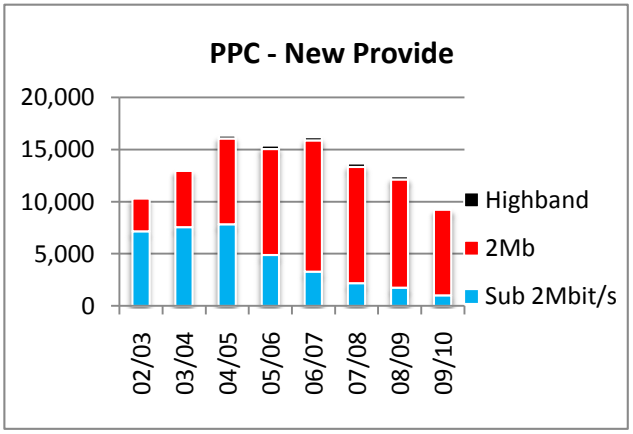
BT's wholesale partial private circuit business is also highly susceptible to further big and sudden contraction since sales are concentrated in a small number of customers. For example, at the lower bandwidths which account for over 80% of external partial private circuit revenues, one large customer accounts for over half the volumes.

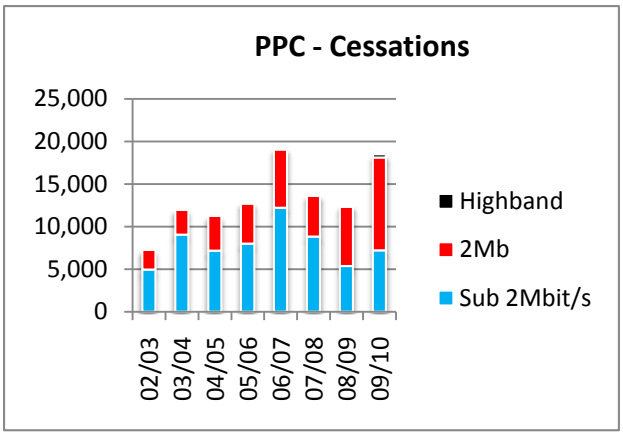
The following graphs show key statistics that evidence these trends:



External PPC volumes have declined by 6% since 08/09. The biggest decrease is in the sub-2 Mbit/s circuits where volumes have decreased by 32% in this period. Volumes of higher speed circuits have also decreased significantly over this period and are now 11% lower than they were 3 years ago.

The number of PPC new provides has been decreasing steadily since 2005/067. The rate of decline has been running at an average of 11% per annum. The rate of decline for sub-2 Mbit/s provide orders has averaged 32% per annum, and 2 Mbit/s provide orders have been declining at 4% per annum.





PPC cessation rates have been increasing since 2005/06 at an average rate of 15% per annum. The rate of increase for sub-2 Mbit/s cessation orders has been, on average, 5% per annum over the 4 year period. 2 Mbit/s cessation orders have been increasing at a rate of 29% per annum over the same period. Higher speed products have seen an average cessation rate of 32% over the 4 years.

Wholesale Ethernet services

In contrast to traditional interface services, Ethernet is a growth area, with the UK market as a whole expanding at about 14% per annum. Growth is especially strong at the higher bandwidths.

Growth is driven by a range of factors including: increasing demand for applications such as high bandwidth applications such as video conferencing; expanding use and transfer of data between sites and end customers; growth in demand for data centre connectivity; greater mobile data usage leading to explosive demand for Ethernet circuits to replace existing traditional interface private circuits; and consumer broadband market growth resulting in greater use of higher bandwidth backhaul circuits at more locations throughout the UK.

Competition has increased significantly. Since the last review, entry barriers have reduced as technology has become significantly simpler and cheaper to build, manage and consume. A number of other large CPs are providing Ethernet access services using their own extensive network infrastructure. Virgin Media has the ability to reach over 85% of UK businesses via its own network[1]. Cable and Wireless Worldwide states that it owns "the UK's biggest fibre network dedicated to business users of telecommunications[2]". Opal has invested over £500m in rolling out its next generation IP network which covers 80% of the population[3]. COLT, Geo Networks and Global Crossing also have significant networks. Business customers requiring Ethernet services also have a wide choice of resellers. Network operators will extend their networks and supply services where it is economic to do so, for example, to win a bid or on a circuit by circuit basis at the higher bandwidths.

This competition has given customers the benefits of keen pricing and a wide range of service propositions. Since the last review, Openreach has responded to the changing needs of its CP customers by introducing a number of new services to replace legacy products. For example, legacy access and backhaul products have been consolidated into simpler next generation Ethernet Access Direct (EAD) and Ethernet Backhaul Direct products. Openreach will continue to invest in development of its Ethernet portfolio over the coming years.

[1] Source: Virgin Media 2010 Annual Report, page 13. Virgin Media also serve the remaining 15% by using wholesale partnerships.

[2] Source: Cable and Wireless 2011 Annual Report, page 7

[3] Source: TalkTalk Business website at http://www.talktalkbusiness.co.uk/about-us/our-network/ (accessed on 30th March 2011)

3. Approach to identifying geographic markets

Identification of relevant sub-national geographic markets is a clear requirement of the regulatory framework set out in the Framework Directive and the Commission guidelines on market analysis and the assessment of significant market power. Geographic analysis is particularly important in business connectivity since there are wide variations across the UK in the presence and extent of competing infrastructure. Reflecting this, Ofcom's approach to identifying geographic markets in the last review was based on a network reach analysis by postcode sector. The key steps in this analysis were to:

- Use the Experian Business Database to identify all sites belonging to companies with 250 or more employees nationwide;
- Map CPs' flex points as reported in their section 135 responses onto postal sectors;
- For each postal sector, calculate the average number of CPs with a flex point within 200m of each identified site;
- Identify the postal sectors where the average numbers of CPs is three or more, including BT, within major UK cities;
- Assess whether these postal sectors could be defined as separate geographic markets.

In London, Ofcom found a number of contiguous postal sectors meeting the criteria: these were defined as the separate CELA geographic market. In other cities, Ofcom considered the number of postal sectors meeting the criteria to be too low for the definition of separate markets to be proportionate or practical.

We believe Ofcom's approach has a number of weaknesses that should be addressed in this review:

- The first step in the analysis is too simple. It excludes sites belonging to companies with fewer than 250 employees nationwide but which are large consumers of connectivity because of the nature of their business. IT companies and data centres could fall within this category. At the same time, it includes sites belonging to businesses above the employee number criteria but which are low users of connectivity and therefore likely to use broadband to meet their needs. An example could be small local branches of high street retailers. This suggests that a more sophisticated approach taking account of business type is needed;
- The 200m build-out distance does not accurately reflect the incentives for CPs to build out to customers from their flex points. Where an individual customer wants a premium high bandwidth service, or a new business site is planned which is likely to have high demand for connectivity, CPs will build out much further than 200m or even insert new flex points into their networks. Because of this, we think a more calibrated approach to the build out distance criterion is needed in this review;
- The requirement for there to be a certain, unspecified, number of contiguous postal sectors which meet the criteria in order for a separate market to be defined is not logical. It implies a geographic footprint threshold which is irrelevant in the context of the concentrated, connectivity-hungry business centres in city centres outside London. A revised approach could lead to the definition of separate geographic areas in other highly competitive metro areas such as Birmingham and Manchester.

These improvements to the process would help to avoid situations where BT is regulated at a large business site with competitive supply – for example a shopping centre, business park or data centre – because the postal sector as a whole does not meet the criteria. However, these anomalies could still arise with an improved process. To address this and avoid results that fly in the face of market

realities, we think the methodology should have the flexibility to treat any such site differently to the rest of the postal sector in which it is located.

4. Retail services

We firmly believe that any finding of SMP and application of remedies in the market for analogue and low bandwidth digital retail leased lines in the forthcoming review would be fundamentally unsound and unjustified. The market concerned is no longer on the Commission's list of relevant markets, and wholesale inputs exist for many of the retail services involved. The services are in a state of steady decline in volume with customers having the choice of other more advanced alternatives such as Ethernet and broadband. The market situation is to a large extent analogous with retail ISDN30 services which Ofcom deregulated in 2010.

Accordingly this retail market should function effectively without regulatory intervention, with any remedies where necessary remaining at the wholesale level only. Ofcom themselves acknowledged the effectiveness of reliance on wholesale remedies in their document 'Draft Consent - Replicability and the regulation of BT's retail low bandwidth digital leased lines' published on 23rd June 2009. Para 4.6 stated "*we can now be more confident that the price regulation imposed on BT's wholesale pricing of PPCs will provide an effective constraint on BT's pricing behaviour downstream*".

We also believe that regulatory intervention in the retail market tends to act against the interests of competition. As Ofcom observed in para 4.37 of the Draft Consent document "*there is a risk that competitors may follow BT's prices (typically pricing a few per cent below BT) rather than competing strongly amongst themselves*".

We believe this risk has been realised, since retail regulation has reduced BT's ability to compete by restricting our ability to meet customers' needs. This is not only affecting the market for leased lines but also the wider market for bundles, as unlike its competitors, BT cannot offer bespoke terms and conditions for bundles which include leased lines.

As Ofcom pointed out in para 4.25 of the Draft Consent document, in a market with a very strong demand for bundles from business customers "*there is a possibility that customers may be worse off as a result of BT not being allowed to offer bundles. This is because BT's competitiveness would be reduced compared to competitors that can offer such bundles as customers may find the BT competitors' offers more attractive, even if these other operators are not as efficient as BT. This would negatively impact competition and customers who are denied the lower prices that would likely prevail if BT was able to match the bundles offered by i s competitors*."

Ofcom considers broadband markets in another market review, Wholesale Broadband Access, and we believe broadband and leased lines continue to be in separate markets. Nevertheless, we think it is essential that when Ofcom assesses SMP in business connectivity markets in this review, it takes into account the competitive constraints from broadband products.

5. Wholesale services

Traditional interface

As we have argued earlier in this response, the decline in TI services is likely to accelerate as technical issues relating to Ethernet are resolved, long-term contracts expire, and businesses find that their needs can be met by services which do not fall within the business connectivity market, such as faster and superfast broadband.

We believe this section of the market is now reaching the stage where Ofcom's traditional approach is disproportionate. For example, in the155 Mbit/s TISBO market we only provide around one hundred circuits, and external turnover in 2009/10 was below £20m. Continued regulation of these services may also have unintended effects: applying charge controls to products at this stage in their life cycle acts as an inefficient 'life support' system, deterring some customers from switching to more effective alternatives and forcing the regulated supplier to make inefficient investments needed to meet obligations to supply.

BT has committed to keep existing TI leased lines until 2018, subject to commercial viability. With this in mind, to avoid the problems discussed above, we think Ofcom should consider significant deregulation or explore other, flexible and innovative approaches, including:

- Committing to carry out a focused market review of TI services in advance of the next full review if and when volumes and revenues fall below certain levels;
- Signalling an intention to remove all TI services from the scope of future business connectivity market reviews;
- Including TI services in the scope of future reviews, but adopting an approach to the assessment of SMP that takes full account of the obsolescence of these services;
- Making use of informal commitments as an alternative to formal remedies.

In the meantime, we believe that when defining TISBO markets in this review, Ofcom should take into account the significant differences in the characteristics of traditional interface services at 2 Mbit/s and those below 2 Mbit/s. Over the last three years, volumes of sub-2 Mbit/s circuits have declined by 42% as users have switched to broadband and Ethernet, a greater decline than that experienced in 2 Mbit/s circuits.

In our view, the strong evidence for competing national networks suggests that Ofcom should use this review to withdraw ex ante regulation from trunk segments. This would be in line with the European Commission's intention when it removed trunk segments of leased lines from its Recommendation on relevant markets in 2007, before the last review.

Alternative interface

Bandwidth-delineated markets

One of the main issues Ofcom will need to consider in this area is that of bandwidth breaks between markets. In the last review, Ofcom found a break above 1 Gbit/s. We believe it is still right to define a separate market for services at speeds above 1 Gbit/s for a number of reasons, principally:

- The cost of the equipment required to provide service over 1 Gbit/s is significantly higher than that used to deliver lower bandwidth services;
- There is a stark difference in volumes, with the numbers of circuits above 1 Gbit/s still comparatively low;
- Competitive conditions at the wholesale level vary dramatically, with Openreach having far lower market shares above 1 Gbit/s. Competition is likely to become even stronger at high bandwidths, reflecting the incentives for CPs to enter this growth market.

As well as retaining the bandwidth break above 1 Gbit/s, we believe Ofcom should investigate whether there is evidence for any other bandwidth breaks. Our own market analysis suggests that the conditions of competition for services at 1Gbit/s differ materially from those at lower speeds, and that it may therefore be valid to define a separate market for 1 Gbit/s circuits.

Linkage between finding of no SMP and removal of Undertakings EoI obligations

BT has particular concerns over the continued application to AISBO services over 1Gbit/s of EoI obligations arising from our Enterprise Act Undertakings. The market for services above 1 Gbit/s has seen strong growth since the last review and it has become even more competitive. Entry barriers have reduced as technology has allowed networks to become significantly simpler and cheaper to build, manage and consume. However, the market is not functioning as effectively as it should be. Although our SMP status was removed in the last review, Ofcom has required that we continue to supply these products on an Equivalence of Inputs (EoI) basis. As a result, Openreach has not yet been able to respond fully to customers' needs, while other CPs have the ability to offer flexible terms and conditions.

Ofcom is now proposing to grant a temporary exemption to the Undertakings that will remove EoI from certain key AISBO services at speeds over 1 Gbit/s. We believe that relevant Undertakings obligations should be reviewed in parallel with the BCMR, and we would expect that the exemption would be made permanent in the review. We also believe that if Ofcom removes SMP from further products currently subject to an EoI obligation, the obligation should be removed promptly.

Remedies

In our view the current set of remedies is too complicated, and we think the time has come for a simpler and more flexible approach. In the wholesale markets where we were found to have SMP in the last review, we have the following obligations:

- Requirement to provide Network Access on reasonable request
- Requirement not to unduly discriminate
- Basis of charges
- Charge control
- Requirement to publish a reference offer
- Requirement to notify charges and terms and conditions
- Quality of service
- Requirement to notify technical information
- Requests for new Network Access
- Requirement to have cost accounting systems and accounting separation
- Direction relating to Service Level Agreements and Service Level Guarantees (SLA/SLG Directions).

We think the key priorities for Ofcom in simplifying these remedies should be to:

- Remove or radically reform the SLA/SLG Directions:
  - SLA/SLG levels are best set by agreement with industry rather than by Ofcom Direction, and they should be subject to periodic review: this would give us greater flexibility to respond to our customers' changing needs;
  - SLA/SLGs need to be appropriately reflected in regulatory cost stacks for charge control purposes, recognising that CPs' actions can affect both the level of performance that can be achieved by BT and the cost of meeting any given level;
  - We also believe SLGs should be linked to CPs' forecasting accuracy.
- Shorten the notification periods for price changes. The period should be cut from 90 to 28 days to align with notification periods in other markets such as Wholesale Broadband Access.

- Remove the duplication between cost orientation ('basis of charges') obligations and charge controls. This can lead to the untenable result where the prices that BT must charge under the charge control might be found not to comply with our cost orientation obligation.

The charge controls in business connectivity are also complex, as the summary table below from Ofcom's 2009 Leased Lines Charge Control Statement shows.

Basket	Services in scope	Value of X	Value of sub-cap
TI	Wholesale low bandwidth TISBO (= 8 Mbit/s) connection and rental; Wholesale high bandwidth TISBO (> 8 Mbit/s and = 34/35Mbit/s)-outside CELA connection and rental; Wholesale very high bandwidth TISBO (> 34/45 Mbit/s and = 140/155Mbit/s)-outside CELA connection and rental; and Trunk (all bandwidths) rental	RPI-3.25% (now RPI-1.75% following CAT Direction)	RPI-0% (Sub-cap on sub-basket of TISBO terminating segments) RPI + 5% sub-cap on each charge (excluding PoH charges) RPI 0% sub-cap on each charge (PoH charges only)
Equipment and Infrastructure (TI)	All relevant equipment and infrastructure charges	RPI - 0%	No charge can increase more than 5% in nominal terms
Ancillary Services (TI)	All relevant ancillary services used in the provision of TI services in scope of the TI Basket	RPI - 0%	None
AI	Wholesale low bandwidth AISBO (= 1 G bit/s) connection and rental Including new services: Ethernet Backhaul Direct Bulk Transport Link Ethernet Access Direct	RPI-7.00%	RPI-0% (Sub-cap on sub-basket of BES RPI + 5% sub-cap on each charge
Accommodation (AI)	Access Locate AI Accommodation Administration Fee	3.5% nominal terms (2009/10) RPI + 4.5% (2010/11)	Controlling percentage on each charge RPI-0%
Ancillary Services (AI)	All relevant ancillary services used in the provision of AI services within scope of the AI Basket	RPI-0%	None

We believe the priorities for Ofcom in setting any new charge controls in this review should be to:

- make them simpler. The current web of baskets, sub-baskets, floors and ceilings is difficult to manage and monitor effectively;
- allow term discounts, geographic pricing and special offers to count towards basket compliance, providing customers with greater choice of pricing and contract flexibility and better reflecting the market norm;

- support migration to new technologies by avoiding artificial pricing incentives for customers to stay with legacy products.

We would urge Ofcom not to consult on any new charge controls until after the market review conclusions have been finalised. We recognise that Ofcom feels under a time constraint. However, in our view it is not possible for stakeholders to comment meaningfully on the appropriateness of charge control structures and levels before such basic issues as national or sub-national markets, product level market definitions and bandwidth breaks have been determined.

6. WDM services

BT sells its Wavestream services to a small number of customers with a particular need for high-speeds and low latency. We believe this indicates that WDM represents a separate specialised market. The market is an emerging one and small in terms of volume relative to more established forms of business connectivity. For these reasons we agree with Ofcom's previous conclusion that WDM-based services are not part of the business connectivity market. The small volume of circuits - coupled with the specialised and emerging nature of WDM services - strongly suggests that WDM services should not be a priority area for Ofcom in this review.

In any event it is BT's firm belief that the WDM market is intensely competitive as evidenced by our experiences with competitors such as Geo Networks, COLT, H20, Verizon, C&W, Vitesse, Global Crossing, and Virgin Media. Many of these CPs provide information on their WDM offerings on their websites, further demonstrating the high level of effective competition and customer choice. We believe this provides further evidence that no regulatory intervention is needed.

In the December 2010 Statement on the Undertakings exemption for BT's Wavestream National service, Ofcom justified the granting of the exemption partly on the basis of:

- Absence of need to address competitive failure: The new input product that Openreach is currently obliged to develop would be in a similar market area to one in which BT does not have SMP (>1 Gbit/s AISBO). This indicates that there is already a competitive market in the provision of high bandwidth access services. (Wavestream National offers dedicated 2.5 Gbit/s and 10 Gbit/s services.); and
- BT Global Services' low sales volumes, low market share and the considerable competition that we face: our Wavestream National product offers high bandwidth point-to-point/ring/chain topology data services in markets in which BT has a low market share and corresponding revenues. There is considerable competition in this market, with the public websites of other CPs confirming their offerings in high bandwidth DWDM optical solutions. BT's analysis of its bid information confirms that several significant-sized competitors have successfully won business from BT in this product area in the last 18 months.

Whilst the subject of the exemption concerned was the long-distance Wavestream National variant, the market conditions are in BT's view and experience materially similar in the shorter distance WDM market.

7. Passive remedies

The Call for Inputs document asks for views on the role that passive remedies could play in promoting downstream competition in business connectivity. The question appears to assume that there is a legal basis for passive remedies in business connectivity. However, we do not understand what this legal basis would be. The Commission's recommendations on markets susceptible to ex ante regulation and Next Generation Access Networks both refer to passive remedies in the context of the Commission's Market 4, defined as "Wholesale (physical) network infrastructure access (including shared or fully unbundled access) at a fixed location". This market is described as being upstream of and providing inputs to Market 5, "Wholesale broadband access". There are no references to physical network infrastructure being upstream of the Commission's Market 6 "Wholesale terminating segments of leased lines".

Even if it were within Ofcom's powers to mandate passive remedies in the business connectivity market review, we do not think they would do anything to make the market more competitive, either in the short or longer term. Indeed, the opposite may incur since passive remedies are likely to undermine investment in alternative networks and technologies that have to date brought significant benefits to end users. As Ofcom pointed out in its Statement in the Wholesale Local Access (WLA) market review, CPs already have their own infrastructure and fibre networks in place in the city centres where most business connectivity end-users customers are concentrated: this would clearly indicate low demand for passive remedies in business connectivity.

We also agree with Ofcom's conclusions in the WLA review that passive remedies in business connectivity would seriously undermine cost recovery for and the effectiveness of existing active remedies. This is because regulated prices for wholesale business connectivity services reflect the fact that high value business services such as high-bandwidth leased lines are able to make a relatively large contribution to the recovery of BT's common costs. If CPs were able to use passive remedies for business connectivity, we may be unable to recover these common costs.

Any proposal for passive remedies in this review would also need to be assessed against their impact on the business connectivity market and not any effects they may have on and not any potential effects on WLA and Next Generation Access.

Finally, we would also note that any assessment of this issue would need to include analysis of all relevant infrastructure owned by other CPs and utilities.