

Three Response to the Ofcom Business Connectivity Market Review Call for Inputs

Hutchison 3G UK Limited ("Three") welcomes the opportunity to respond to Ofcom's consultation *Business Connectivity Market Review Call for Inputs*, released on 21 April 2011. As Ofcom is aware, Three has a joint venture (Mobile Broadband Networks Ltd ("MBNL")) with Everything Everywhere ("EE"), which is responsible for the operation of the joint EE and Three 3G radio access network (RAN). Both through this joint venture, and in its own right, Three is a major purchaser of business connectivity and therefore has a significant interest in the outcome of the Business Connectivity Market Review (BCMR).

In light of the above, much of the substance of this response will mirror that submitted by EE and MBNL¹. Three does not believe it is helpful to Ofcom to simply repeat that response, and therefore attempts to provide input below to echo and emphasise those items of greatest importance.

Executive Summary

- There has been a significant move from traditional interface symmetric broadband origination (TISBO) to alternative interface symmetric broadband origination (AISBO) services since the last market review. This reflects an ever growing need for business connectivity bandwidth. In particular, the delivery of high download and upload rates over mobile backhaul requires high capacity Ethernet backhaul circuits from our base station cell sites. This growth is set to continue, notably with the deployment of Long Term Evolution (LTE or 4G) mobile services in the UK. Indeed, the deployment of LTE will be one of the most important developments to take place in the lifetime of the new BCMR.
- Nevertheless, there remain many instances where it is not cost effective or suitable for us to replace legacy TISBO services with AISBO services. Low levels of competition, combined with reduced geographical availability and pricing structures that are both high and supplier biased, are constraining the migration to faster services that ought be more cost effective. The need for competitive supply of 1 Gbps AISBO services and above is limited to particular pockets in densely populated urban areas, yet the need for such services more widely is growing. Mobile Network Operators (MNOs) increasingly require AISBO services throughout the UK, including in many rural areas where only BT has infrastructure deployed. Where this demand does not yet exist it will likely arise overtime, notably with the deployment of LTE.
- We do not feel that the competitive landscape for the supply of wholesale business connectivity services has improved in any material respect since the last BCMR.
 - In AISBO services, there is an emerging replication of BT's current significant market power (SMP) status for low bandwidth AISBOs, in the high bandwidth AISBO market.
 - Providers of point to point Ethernet services severely struggle to replicate the efficiencies that BT can generate by providing its Ethernet business connectivity services over an existing national 21CN core network, the costs of which are shared by many other BT services.
 - In those areas and at those bandwidths where BT and KCOM have SMP, we still believe that their charges: a) for the regulated wholesale business connectivity services that we purchase; and b) which form part of the non-regulated wholesale business connectivity services that we purchase, are set well above cost.

¹ Those parts of this response marked with [X] and highlighted in grey are confidential to MBNL.

- It follows that the current environment permits BT and KCOM to premium price high value leased lines and impaired competition prevents price erosion and greater geographic availability. This means that MNOs are restricted in deploying their own high speed broadband services. This is contrary to Government policy and consumer expectations.
- In Three's view, it is imperative that the outcomes of this BCMR involve imposition of remedies for SMP which:
 - impose tighter, stricter, more transparent and more actively enforced charge controls and non-discrimination obligations on the supply of AISBO and TISBO services in the relevant non-competitive markets; and
 - in conjunction with these remedies, in order to genuinely improve the prospects of these markets becoming more competitive during the lifetime of this next BCMR, mandate regulated access to the upstream input products required to stimulate such competition. In particular, this should involve extension of Physical Infrastructure Access (PIA) for use for competitive wholesale leased line supply, and we would also suggest that it should include re-examination of access to dark fibre, as well as regulated access to upstream Wave Division Multiplex (WDM) products.

Response to Consultation Questions

Question 1: Do you agree with our “no material change” considerations as set out above? In particular, do you agree with Ofcom that:

1.1 The characteristics of Traditional and Alternative Interface products are such that separate markets continue to exist for TI and AI products?

As noted above, the substitution of alternative interface (AI) Ethernet products for traditional interface (TI) time-division multiplex (TDM) based products has continued strongly since completion of Ofcom’s last BCMR in 2008:

- [redacted]
- [redacted]

Nevertheless:

- while there remains a degree of substitution of AI for TI products, there remain significant barriers to switching TI products for AI products; and
- these barriers are likely to endure throughout the course of the next BCMR period. In particular, barriers are posed by resilience requirements (e.g. in the metro layer), where a site is out of reach of the EAD distance criteria, or where the costs to put fibre into a site would be prohibitive.

We therefore agree with Ofcom’s conclusion that AI and TI products continue to be in separate markets.

1.2 We should retain the main bandwidth breaks for traditional interface products but combine 34/45 Mbit/s and 155 Mbit/s services?

The shift to AI solutions has reduced demand for higher bandwidth TI products and services, although we believe that increased geographic and pricing competition at higher bandwidths for AI products and services is lagging.

It follows that the bandwidth breaks for TI products are becoming less relevant. With the shift to AI and 34/45 Mbps services are being replaced with better value 155 Mbps services, we agree with Ofcom’s view that there would appear to be scope to combine the up to 34/45 Mbps and up to 155 Mbps TISBO markets.

1.3 VPNs continue to be outside the business connectivity markets? Please explain why.

We do not believe that current VPN services are able to provide the same reliability, security and resilience afforded by a dedicated leased line. Furthermore, leased line connections provide improved functionality and additional security and resilience.

We therefore do not think that there has been any material change to the market circumstances that led Ofcom to conclude in the last market review that VPNs are outside the business connectivity market (§§3.18-3.22).

Question 2: What are your views on the extent to which broadband products can be used effectively for the delivery of business connectivity? How do you think this might change over the next 3 to 4 years?

High quality next generation network (NGN) asymmetric broadband services offer bandwidths that are comparable to those offered by leased lines. However:

- there are still many areas in the UK that are not covered by a fibre-to-the-cabinet (FTTC) or fibre-to-the-premises (FTTP); and
- even in those areas where high-speed NGN based asymmetric broadband services are supported, those broadband services currently do not support the service level agreements (SLAs), resilience, quality of access, robustness, down-time connectivity and self-healing functions that business customers require and receive from leased lines².

In each case, we do not believe that developments over the next 3 to 4 years are likely to materially alter the level or availability of substitution. The factors that led Ofcom to find ADSL services in a separate market to leased lines in the last BCMR are therefore likely to endure.

Question 3: What are your views on the existence of a break in the market for Ethernet services provided at speeds above 1 Gbit/s; and the extent to which WDM-based products are part of the business connectivity market? If you consider they are, do you think they are part of the Traditional Interface market, the Alternative Interface market, or constitute a separate market within the business connectivity market? How do you think this might change over the next 3 to 4 years, given the rate of growth in bandwidth demand?

Break in the market for Ethernet services above 1 Gbps

We believe that there continue to be separate wholesale markets for AISBO services of:

- speeds up to and including 1 Gbps (low bandwidth AISBOs); and
- speeds above 1 Gbps (high bandwidth AISBOs).

We further believe that this position is likely to endure over the next 3 to 4 years. [X].

By contrast to the last BCMR, in our view, it may be the case that BT will have SMP in the high bandwidth AISBO market as well as in the low bandwidth AISBO market.

We do not believe that Ofcom's conclusion in the last BCMR that these respective AISBO markets are competitive was correct. This has been proven over the lifetime of that review and should be addressed in this review. While there is increasing competition in urban areas, BT often remains the only supplier with network coverage for high bandwidth AISBOs services. While demand was previously concentrated, significant demand for circuits above 1 Gbps is developing outside major urban areas (and will do so significantly with the deployment of LTE, including in rural areas).

This is of particular importance given the potential of LTE for customers in rural areas who currently get low speeds or are unable to get broadband altogether.

WDM based products

Competitive providers of point to point Ethernet severely struggle to compete with BT because:

- they are unable to replicate the efficiencies that BT can generate by providing its Ethernet business connectivity services over a national 21CN core network, the costs of which are shared by many other BT services; and

² At the wholesale level, we do not use broadband services for cell site network infrastructure, as they do not meet the required capacity and performance criteria.

- where they can offer competitive services in a particular geographic areas, they require us to give them a critical mass of sites with them in each area, which we cannot necessarily offer outside urban areas.

Consequently, the only alternative to purchasing such services from BT is to incentivise competitive service provision in these areas, but this would likely require us to offer to pay for the build out of their infrastructure into those regions, which can be cost prohibitive.

As a significant purchaser of MEAS from BT that involves conveyance of these Ethernet services over BT's core network, MBNL is subject to pricing that is unregulated yet not subject to any strong competitive pressure from alternative Ethernet services providers.

We therefore believe Ofcom must investigate whether to require BT to provide wholesale WDM based products to competitive providers of AISBO and TISBO services (not just to providers of retail WDM products competitive with BT's Wavestream products) in order to stimulate competitive supply of wholesale AISBO and TISBO services in those markets in which BT is found to continue to have SMP. We believe this remedy should be considered alongside investigation by Ofcom of the extension of PIA for use for competitive wholesale leased line supply, and re-examination of the need for BT to provide access to its dark fibre.

Question 4: Do you consider that:

4.1 There is still a separate market for trunk segments provided with a Traditional Interface which warrants SMP assessment for the purpose of considering ex-ante regulation;

4.2 The trunk routes identified in the last market review are still relevant to inform the definition of the trunk market; and

4.3 The analysis and identification of Trunk Aggregation Nodes carried out in the last BCMR are still relevant for competition and market entry. Please explain why.

[X].

Question 5: Do you think that separate markets could now exist for access and backhaul products? If you do, please explain why.

Ofcom previously distinguished between the backhaul component of TISBO and AISBO services from the BT Local Serving Exchange (LSE) to another communications provider's network node, via a Point of Connection (POC), and the access component from the LSE to a 3rd party customer premises.

We do not believe that such a distinction can be drawn between the access and backhaul components of the AISBO and TISBO products that MNOs purchase. The wholesale services employed for RBS backhaul are essentially the same as those captured by Ofcom's TISBO definition.

Question 6: Do you think that separate markets could now exist for broadband backhaul products and, separately, for mobile backhaul products? If so, please explain your reasons.

Mobile backhaul requirements are distinct from broadband backhaul requirements. Mobile backhaul:

- involves different performance parameters (e.g. specific requirements re delay and latency) for guarantee of throughput; and
- does not offer leased line providers the same opportunities for scale efficiencies because of the large geographic spread of MNO requirements for backhaul (i.e.

compares to infrastructure to serve broadband backhaul / enterprise customers in densely populated urban areas).

[X].

Question 7: Do you think there are other sources of demand for symmetric broadband origination outside the services mentioned above which are relevant to our assessment? If so, please explain your reasons.

We have not identified any such alternative sources.

Question 8: Do you agree that the three parts of our analytical approach discussed in paragraph 1.31 are still relevant and continue to provide an effective tool for assessing competitive conditions and for considering regulatory obligations? In particular, do you agree with Ofcom that:

8.1 the approach to identifying geographic markets used in the last BCMR is still appropriate, or is there any additional perspective that we should appraise to inform our competition assessment?

Yes. However:

- we believe Ofcom should undertake a more robust analysis of the precise boundaries of the identified geographic markets, so as not to erroneously regulate/deregulate the supply of business connectivity services in those geographic markets; and
- while Ofcom has rightly considered whether deregulation can be achieved through a more granular analysis, it should not overlook that MNOs purchase leased lines on a UK-wide basis. Regardless of local variations in competition it remains the case that no alternative supplier can match the ubiquity of BT's national network.

8.2 the definition of the CELA from the last BCMR is still relevant? and

Yes. However, whilst we believe that the definition of the CELA is appropriate we believe that the CELA area defined by Ofcom covers too great a geographic region and includes areas which may not actually have effective competition.

8.3 there continues to be a trunk market which is national in scope? Please explain why.

Subject to the comments set out in response to Question 4 above, yes: the lack of any transparent competitive trunk pricing being offered to MNOs would to us tend to suggest that there is still no real competition to BT in this market in any part of the UK.

Question 9: Do you think that Ofcom should consider the extent to which other local geographic markets exist in the UK outside the CELA, and excluding Kingston upon Hull? Please explain the reasons for your answer.

We think that Ofcom should consider this as part of the BCMR. However, we have not observed the emergence of materially more competitive pricing in any new geographic areas outside of CELA since the last BCMR.

Question 10: In the last BCMR, we found no SMP provider in the market for high bandwidth 622 Mbit/s TISBO and high bandwidth AISBO provided at speeds above 1 Gbit/s in the UK and, separately, in Kingston upon Hull. Do you consider that deregulation has worked well in these markets? Do you think that the competitive conditions in these markets have improved, or do you consider they have deteriorated? Please explain, providing examples where appropriate, based on your company's first-hand experience.

Please refer to our response to Question 3 above.

Question 11: In the last BCMR, we also found that BT had no SMP in the CELA for the provision of wholesale leased lines (PPCs) at speeds above 2 and 8 Mbit/s and up to, and including, 155 Mbit/s. Do you consider that deregulation has worked well in these markets? Do you think that the competitive conditions in these markets have improved, or do you consider they have deteriorated? Please explain, providing examples where appropriate, based on your company's first-hand experience.

[X].

Question 12: In the last BCMR, we found that BT had SMP in the market for analogue and low bandwidth digital retail leased lines and imposed SMP obligations on BT as a result. The remedies were designed to ensure the continued availability of these legacy products at reasonable prices as well as to provide transparency and regulatory certainty to BT's competitors in this market. Do you have a view as to how these remedies have worked? Do you consider that we should continue to impose regulatory obligations on BT in this market if we were to find SMP or we should rely on wholesale remedies alone? Please explain your answer.

Three does not have any views on this question.

Question 13: What are your views on how the current remedies have worked in promoting downstream competition?

We do not believe that the current remedies have been effective in promoting downstream competition in the supply of business connectivity services: BT's SMP status should therefore remained unchanged in the relevant market. This has arisen because Ofcom's remedies were not sufficiently focused on stimulating competitive infrastructure deployment by competitors to BT and KCOM, particularly outside major metropolitan areas - such competition being critical for MNOs.

It is therefore imperative that Ofcom puts in place remedies which provide regulated access to upstream inputs to wholesale business connectivity services, including:

- PIA;
- dark fibre; and
- WDM input products.

Whilst interventionist, these remedies are necessary to change a market which has so far failed to deliver effective wholesale competition. While the ability of MNOs to procure cost effective backhaul across their networks is alone significant, Ofcom must also consider this in light of stated aims for broadband coverage generally.

Question 14: How effective have the current remedies been in addressing the market failures identified in the last BCMR and in supporting competition and market entry? Please elaborate with some examples

In the previous 2008 market review, Ofcom:

- imposed charge control required BT to reduce its prices first by certain one off reductions, and then across a basket of low bandwidth AI connection and rental services (including for EAD, Ethernet Backhaul Direct (EBD) and Transport Link) by RPI-7%, with a sub-cap on its Backhaul Extension Service (BES) of RPI-0% and a sub-cap on each charge of RPI+5%.³
- accepted a voluntary commitment from KCOM to decrease the prices of Wholesale Extension Service (WES)/ Wholesale End-to-End Extension Service (WEES) circuits each year by around RPI-16% over the period to 2012.

Nevertheless;

- in Hull, prices for leased lines remain prohibitive for MNOs, which use microwave wherever possible. This is not a satisfactory long term position, particular as bandwidth demands increase. Ofcom must introduce regulation to ensure: (i) cost based pricing; and (ii) the stimulation of competitive infrastructure deployment in the Hull area.
- outside of Hull, BT's Regulatory Accounts suggest that BT's regulated 1 Gbps Ethernet products are still priced very significantly above cost. For example, the prices for WES and BES 1 Gbps Ethernet rentals are considerably higher than both the unaudited LRIC ceiling (i.e. the DSAC) and the audited fully allocated cost.

Service	Year	Average price	DSAC (unaudited)	FAC (audited)	% above DSAC ceiling
WES 1Gbps rental	2009/10	£5,555	£3,028	£2,098	83%
	2008/09	£7,569	£1,822	£1,383	316%
BES 1Gbps rental	2009/10	£4,199	£2,239	£1,935	87%
	2008/09	£4,473	£1,256	£1,660	256%

As demonstrated in the recent PPC charging dispute, cost orientation requirements apply to each service within the basket individually. However, the current list prices for WES and BES 1Gbps rentals (£5,000 and £3,764 respectively) are still much higher than the relevant DSACs⁴. Accordingly, on the basis of this evidence, it would appear that BT has been overcharging for these services, and is continuing to overcharge.

The consequences of this failure in the remedies are:

- the perpetuation of infrastructure deployment costs so high as to make little or no difference to barriers to entry/expansion;
- the restriction of MNOs deployment of their own high speed broadband services; and
- the frustration of Government policy and consumer expectations.

We strongly believe that Ofcom must adjust the basis on which these products price regulated, and allow operators access to BT ducts or fibre in order to provide and expand services.

³ Leased Lines Charge Control Statement, 2 July 2009, Table 1.1

⁴ [redacted].

Question 15: How effective have the regulated access products been from an operational perspective? Please provide examples where appropriate to illustrate your answer.

Three does not have any views on this question.

Question 16: Do you consider that the current set of remedies should be simplified? If so, how?

Please see our response to Question 21, regarding making remedies clearer and more effective.

Question 17: Do you consider that the scope of the charge control was correct in terms of the products and services subject to the control? Has the charge control been effective? Looking ahead, what changes, if any, do you consider would be appropriate for any future charge control(s)?

Please see our response to Question 14.

[X].

Question 18: What are your views on the role that passive remedies could play in this market for the promotion of downstream competition? In your view, what implications might adoption of passive remedies have on the provision of active remedies?

Remedies to enable access to the upstream inputs are crucial if there is to be any change in the competitive landscape regarding the supply of these services: access to BT dark fibre, and ducts for provision of business connectivity services by competitive suppliers like Virgin and Cable and Wireless has the potential to dramatically lower the costs of supply by competitors and truly stimulate a competitive market. Nevertheless, the long lead times to the efficacy of such remedies preclude the early withdrawal of current safeguards.

Question 19: Have business connectivity markets changed since the last review? If so, how? How might business connectivity markets develop during the next four years?

While there has been a change in the take up and balance of particular services, these have served only to clarify the extent to which there remain problems in business connectivity markets. We do not believe competition has improved since the last BCMR. [X].

Over the next four years the deployment of LTE services will require further migration to higher bandwidth services. This risks BT acquiring SMP in the high bandwidth AISBO market as well as in the low bandwidth AISBO market.

Question 20: Do you have any comments about arrangements for withdrawing regulations as TI services reach the end of their lives?

BT should be required to continue delivery of legacy T1 services or to provide alternatives at no additional cost to acquirers of these services while they continue to have SMP in the markets in which these services are supplied.

Question 21: Are there any other issues or views you would like to put forward that are not mentioned in this paper?

The evolution of regulation in this area has resulted in a highly complex regime. As a consequence, it can be difficult to identify the parameters of its application. This significantly undermines understanding, monitoring and enforcement of BT's SMP and EOI obligations in relation to business connectivity services. Therefore, the impact of regulation is blunted.

In order to better address the market failures in the current business connectivity markets, we urge Ofcom to make the obligations and restrictions on regulated entities clearer and to ensure that their purpose and effectiveness is not undermined by: a) technological change; b) piecemeal regulatory changes which do not consider the entire regulatory context of these obligations; and/or c) non-enforcement of those obligations imposed.