



Writer's Direct Dial: 703.755.6730
Facsimile Number: 703.755.6740
Sheba.Chacko@bt.com

June 3, 2015

Via Electronic Filing
Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

EX PARTE LETTER

RE: *WC Docket No. 05-25, RM-10593, GN Dkt No. 13-5*

Dear Secretary Dortch:

On June 1, 2015, BT met with Jack Erb, William Layton, Eric Ralph, Deena Shetler, Aleks Yankelevich and David Zesiger, WCB, WTB and OSP, FCC. Representing BT in person were Sheba Chacko, Senior Counsel and Head, Americas Regulation and Global Telecoms Policy, and Jennifer Taylor Hodges, VP, US Government Affairs. Paul Richards, Tony Reeder and Frederic Dupas, Senior Economist, Senior Regulatory Specialist and Senior Competition Counsel, BT plc, participated via telephone from the UK.

During this meeting and using the presentation attached to this letter, BT explained that the UK regulator, Ofcom, gathers access competition data similar to that gathered by the FCC in the special access data request every three years. It has analyzed this data, applied a new set of remedies including price controls every three years and observed the emergence of access competition in the UK for nearly twelve years now. The factors Ofcom has observed over time include the amount and density of rival infrastructure, the distribution of service shares, the pricing and profitability of services and other structural indicators (such as the density of businesses in a geographic area). In Ofcom's experience, the most important factor that determines the emergence of leased lines access competition is the amount and density of rival infrastructure. On this point, Ofcom's view is that not only is it important to have upwards of two rivals to BT with network flex points¹ within 100-200 meters of business sites, but it is important to have a **high** density of business sites in a geographic area that are within such network reach of rivals' infrastructure.² 50-70% of business sites within network reach of rivals' infrastructure does not constitute high network reach. For this reason, in this latest round of analysis, Ofcom is not proposing to remove wholesale access regulation from BT's Ethernet and

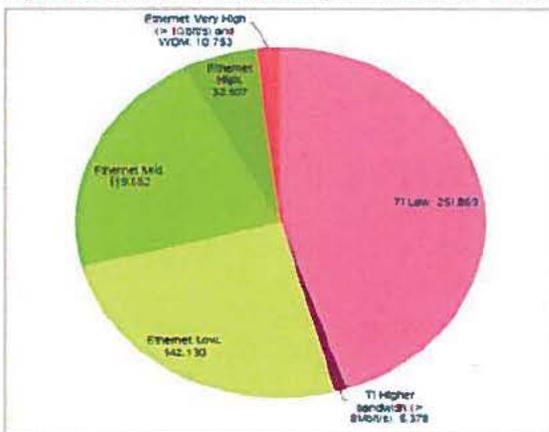
¹ A flexibility point in the rival's network is where new fiber can be added to the network to connect to a customer's site.

² UK experience is that competitors may decide to build even if flex points are more than 200 meters away from a customer site if the service requested is an extremely high bandwidth service such as a 10 Gigabit Ethernet access service.

WDM services in the periphery of London where 68% of business sites are within 100 meters of flex points of the networks of two or more competitors to BT, and where BT only has on average a 50% service share of all Ethernet and WDM products.³ Ofcom's view is that, despite all the existing regulatory safeguards in the UK⁴ having two or more competitors' with infrastructure within 100 meters of 68% of business sites in the periphery of London (which has a business site density of 232 businesses per square kilometer as opposed to central London's business site density of 1,767 per square kilometer) is still insufficient to predict the emergence of leased lines access competition in this area.

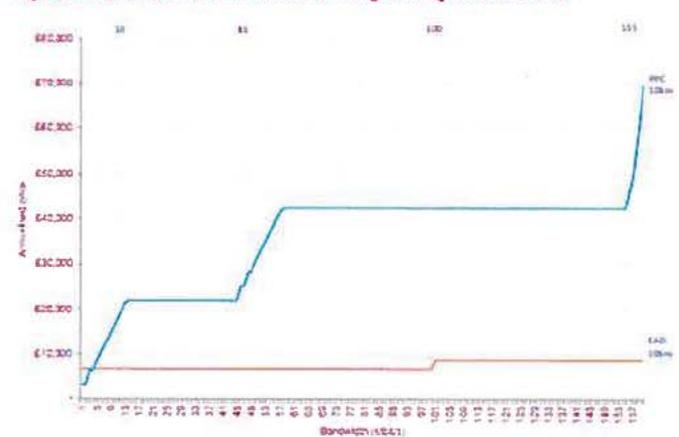
The other key finding by Ofcom in this latest consultation is that bandwidth breaks in the Ethernet and WDM product market may not make sense any longer. As long as there is fiber to a site, the cost to communications providers to put electronics at the ends of the fiber connection do not vary much. This can be seen in the pricing of BT's Ethernet Access Direct ("EAD") product in the UK shown by the relatively flat red line in Figure A10.2 of the 2015 BCMR Annex reproduced below. Figure 3.8 of the 2015 BCMR Condoc reproduced below shows that because of the low pricing of Ethernet services in the UK (especially at bandwidths above 8 Mbps), a high proportion of access lines in the UK are now Ethernet-based. This shows that setting cost-oriented Ethernet rates for dominant providers' services will encourage an expeditious transition to all-IP services.

Figure 3.8 : Volumes of leased lines by different interface and bandwidth segments⁴⁴



Source: Ofcom based on aggregation of operator data.

Figure A10.2: Ethernet and TI wholesale charges at higher bandwidths



³ See Table 4.4 of Ofcom's latest consultation document in the Business Connectivity Market Review released May 15, 2015 ("2015 BCMR Condoc and Annexes") (attached hereto).

⁴ I.e., functional separation of BT in the UK for a decade; equivalence of input obligations on the functionally separated entity, BT openreach, that supplies Ethernet services to BT affiliates and competitors on an absolutely equivalent basis; wholesale price caps and sub-caps on BT's Ethernet services below 1 Gigabit speeds since 2007; publication of BT's cost accounts, accounting separation, and publication of service metrics by openreach to allow detection of discrimination.

If you have any questions regarding any matters discussed herein please contact the undersigned.

Sincerely,

A handwritten signature in black ink that reads "SChacko". The "S" is large and loops around the "C", and the "h" is lowercase and loops under the "a".

Sheba Chacko
Head, Americas Regulation and Global Telecoms Policy, BT
Americas Inc.

cc: Jack Erb
William Layton
Eric Ralph
Deena Shetler
Aleks Yankelevich
David Zesiger

June 1, 2015

UK -- Regulation of Leased Lines and Benefits for Consumers



UK REGULATION OF LEASED LINES



- **UK regulator Ofcom and other EU regulators run market reviews of leased line services (including special access) every three years**
- **Ofcom's Methodology for Reviewing the Leased Lines Market**
 - Ofcom defines the retail product market by considering whether a product is substitutable by the consumer considering the product's pricing, characteristics and intended use. Using this retail product information, Ofcom derives the wholesale product markets.
 - Ofcom collects extensive supply and demand data much like the FCC has just done and uses it to analyze competitive conditions in 10k UK postal sectors (which are like US zipcodes but much smaller; 42k zip codes in the US v. 1.8 mil postcodes in the UK).

UK REGULATION OF LEASED LINES



- Ofcom maps on a postal sector basis the network reach of infrastructure-owning competitors (i.e. business sites that are 100-200m from a network ingress ‘flex point’) and plots the number of businesses that are within the network reach of rival infrastructure. Ofcom also considers incumbent’s pricing policies and service shares, and other structural indicators.
- Ofcom then determines whether the incumbent has significant market power in the relevant market. Using this analysis, Ofcom determines dominance.
- It then applies remedies which include obligations to supply wholesale services to other operators, not to unduly discriminate against them, to publish prices and reference offers, price controls, accounting separation and cost-accounting.
- May 2015: because of significant market power (SMP), Ofcom proposes that BT be subject to wholesale regulation of TDM services below and at 8Mbit/s throughout the UK (except Hull) and Ethernet and WDM services outside the Central London area (except Hull). Ofcom’s findings are based on the competitive criteria set forth on the next page.

Overview of relevant metrics in the four key geographic areas

Competitive indicators	Metrics	CLA	LP	CBDs in other cities	Rest of UK (exc. Hull)	
Rival infrastructure	Average network reach* (100 metres)	8.2	2.4	2.8	0.8	
	Average network reach (200 metres)	8.0	4.1	4.4	1.2	
	Average network reach (500 metres)	9.5	6.8	7.2	2.0	
	Depth of network reach – 100 metres (200 metres)**	1+	100% (100%)	96% (99%)	97% (99%)	81% (71%)
		2+	99% (100%)	88% (91%)	78% (95%)	15% (30%)
		3+	98% (100%)	40% (78%)	55% (84%)	5% (12%)
4+		93% (100%)	22% (59%)	30% (65%)	2% (5%)	
5+		83% (98%)	11% (37%)	15% (46%)	0% (2%)	
Distribution of service shares	BT share	Low bandwidth TISBO	63%	70%	88%	94%
		CISBO up to and including 1Gbit/s***	46%	50%	47%	57%
		- Low CISBO	41%	44%	40%	46%
		- Medium CISBO	55%	57%	54%	69%
		- High CISBO	34%	44%	47%	64%
		Very high CISBO****	8-11%	14-15%	21%	30-32%
		CISBO Total*** (by revenue)	37%	41%	44%	53%
	Virgin Media share	CISBO up to and including 1Gbit/s	9%	26%	33%	30%
		Very high CISBO	16-17%	39-42%	57-58%	48-53%
		CISBO Total	10%	26%	33%	31%
	Combined BT and Virgin Media share	CISBO up to and including 1Gbit/s	55%	75%	80%	87%
		Very high CISBO	28%	53%	80-81%	84-85%
		CISBO Total	54%	73%	80%	87%
Concentration (HHI)	CISBO Total	2,773	3,100	3,395	4,154	
Pricing and profitability*****	BT pricing	AISBO	Free connections on EAD 1Gbit/s products between March 2013 and May 2014; uniform list prices otherwise		Uniform list prices	
		MISBO	[<]		Uniform list prices	
	BT profitability	AISBO	48%		21%	
		MISBO	-		32%	
Other structural indicators	Number of circuits	CISBO up to and including 1Gbit/s	30,624	11,640	13,634	251,518
		Very high CISBO (incl MNO backhaul)	2,142	796	224	7,814
	Number of businesses	4,238	3,378	4,428	154,244	
	Square kilometres	33	233	132	246,756	
	Business density (number of businesses per square kilometre)	1,787	232	62	14	
	Linkages to the centre of London	-	Strong	Weak	Weak	

* Average network reach concerns the average number of OCPs with a flexibility point within the buffer distance (100m, 200m, 500m) of businesses. Determined at postcode sector level
 ** Depth of rival infrastructure reflects the proportion of businesses in area that are located within the buffer distance (100m, 200m) of X+ OCPs, with X varying from 1 to 5
 *** We refer to Table 4.1 for the terminology used in categorising leased lines services. Low CISBO includes all Ethernet circuits up to and including 10Mbit/s. Medium CISBO corresponds to Ethernet services at bandwidths of more than 10Mbit/s and up to and including 100Mbit/s. High CISBO corresponds to Ethernet services of more than 100Mbit/s up to and including 1Gbit/s. CISBO up to 1Gbit/s includes Ethernet services up to and including 1Gbit/s (and thus covers low, medium and high CISBO). Very High CISBO concerns services capable of supplying bandwidth exceeding 1Gbit/s. CISBO Total covers CISBO of all bandwidths.
 **** Shares in the very high CISBO segment are presented as an range defined by very high CISBO shares excl. MNO and LLU backhaul and very high CISBO shares incl. MNO and LLU backhaul.



Key UK Acronyms

- CLA – Central London Area
- LP – London Periphery
- CBD – Central Business District
- TISBO (traditional interface symmetric broadband origination) – TDM
- CISBO (contemporary interface symmetric broadband origination) – Ethernet and WDM
- AISBO (alternate interface symmetric broadband origination) – Ethernet

UK REGULATION OF LEASED LINES 2003- present



Date of Ofcom Market Review	Regulation of TDM Leased Line Access		Regulation of Ethernet Leased Line Access	Regulation of Multiple Interface / Optical
	Retail	Wholesale		
2003	Yes	Yes, up to 622Mb	No	No
2007	Yes, < 2Mb/s	Yes, up to 155Mb	Yes, ≤ 1Gb/s	No
2013	Yes, < 2Mb/s	Yes, up to 155Mb	Yes, ≤ 1Gb/s	Yes, no bandwidth limit
2016	Proposed withdrawal	Yes up to 8 Mbps	Yes single market with no bandwidth limit	

UK Regulation of Leased Line Access 2003- present



Date of Ofcom Market Review	TDM Leased Line Access Price Controls		Ethernet Leased Line Access Price Controls	Multiple Interface / Optical Price Controls
	Retail	Wholesale		
2003	Cost orientation	RPI – 4% low bandwidth RPI – 6.5	No	No
2007	Voluntary price cap increase limited to inflation	RPI – 3.25%	RPI – 7%	No
2013	RPI + 2.5% (analogue)	RPI + 2.5%	RPI – 11.5% RPI - RPI (WECLA)	No but cost accounting is required

Price control shown as inflation (RPI) and X reduction per annum. Note there are sub-baskets as well which limit price changes for particular services. WECLA is a deregulated zone consisting of West, East and Central London.

Ofcom's proposed remedies for 2016

Table 1.5: Overview of remedies proposals in wholesale markets CI markets in which BT would have SMP

Remedies	UK, except London and Hull	London Periphery
Network access on reasonable request	Yes	Yes
<u>Specific access remedies</u>		
Dark fibre	Yes	Yes
Ethernet	Yes	Yes
Minimum Quality Standards for Ethernet	Yes	Yes
WDM	Yes	No
<u>Price controls</u>		
Dark fibre	Yes	Yes
Ethernet <1Gbit/s	Yes	Yes
Ethernet >1Gbit/s and WDM	Safeguard cap	No
<u>Equivalence of Inputs</u>		
Dark fibre	Yes	Yes
Ethernet	Yes	Yes
WDM	Yes	n/a
Other general access remedies, including:		
- No undue discrimination		
- Publication of reference offers		
- Notification of changes to charges, terms and conditions	Yes	Yes
- Publication of technical information		
- Accounting separation		
Develop new products	Yes	Yes
Ethernet Quality of Service	Yes	Yes

Effective Regulation → Low UK Broadband Prices



Ofcom's regular review of the wholesale access market and imposition of remedies where dominance led to competition and innovation to the benefit of UK consumers. UK has lowest superfast broadband prices (24 Mbps & up).



Source: International Communications Market, December 2014, Ofcom

Notes: Comparative single service 'lowest available' fixed-line broadband pricing monthly prices (excluding telephone line rental); PPP adjusted.

Effective Regulation → Low UK Ethernet Prices



Effective Regulation → Low UK Wholesale Ethernet Prices on Open and Transparent Terms and Conditions

- A UK competitive provider (CP) can purchase a 100 Mbps Ethernet link from BT openreach to connect its POP to openreach’s facilities in the same exchange for as little as £254/month or \$382/month (\$363 PPP adjusted). The terms and conditions are open and transparent – for example, unlike the case in the US, CPs do not have to meet a percentage of previous spend to obtain reasonable discounts on supranormal prices, nor are purchases of dominant services tied to the purchase of competitive services. openreach’s prices are standard, open, transparent and available to all CPs.

Annual charges for nine 100 Mbps Ethernet Access Direct (EAD) links with 1Gbps handover (Year 1)	£ 39150	Year 1 includes nonrecurring connection charges plus year 1 total rentals
Annual charges for nine 100 Mbps links with 1Gbps handover (Years 2&3)	£ 43200	
Charges for 36 months	£ 82350	
Monthly charges	£ 2287.50	
Monthly charge per 100 Mbps EAD link	£ 254.17	

Above price based on CP purchasing nine 100 Mbps links aggregated over a 1 Gbps handover amortized over 3 years

Effective Regulation → Vibrant UK E-Commerce



UK has a highly developed e-commerce market with the value of business-to-consumer e-commerce at almost £2000 per person in 2013 which is significantly higher than in Australia or the US.

