

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
Inquiry Concerning the Deployment of)	
Advanced Telecommunications)	
Capability to All Americans in a Reasonable)	GN Docket No. 07-45
and Timely Fashion, and Possible Steps)	
to Accelerate Such Deployment)	
Pursuant to Section 706 of the)	
Telecommunications Act of 1996)	

Reply Comments of BT Americas Inc. on Behalf of Itself and other BT Entities

BT Americas Inc., a wholly owned indirect subsidiary of BT Group plc (“BT plc”), submits these Reply Comments on behalf of itself and other BT operating entities in the US (collectively referred to herein as “BT”) pursuant to the Notice of Inquiry released on April 16 (“NOI”) to assist the Commission in its fifth annual inquiry into “whether advanced telecommunications capability is being deployed to all Americans in a reasonable and timely fashion.”¹

BT holds section 214 licenses and employs approximately 4000 people in the United States. BT’s relationship with BT plc, the incumbent carrier in the UK, and through the Global Services group which serves the global information and communications technology needs of large business (“enterprise”) customers worldwide, provides BT with unique insight into the comparative effects of different models of regulation on broadband investment and innovation.

¹ Notice of Inquiry, FCC 07-21 (“NOI”). See § 706(b) of the Telecommunications Act of 1996, Pub. L. 104-104, 110 Stat. 56 (1996) (1996 Act).

INTRODUCTION AND SUMMARY

The Commission seeks comment in this NOI on the impact of regulation/deregulation on broadband deployment² and how that compares with other countries.³ Claims of “sufficient progress” have been made by: (i) using over-inclusive definitions of broadband and inappropriate criteria for finding availability and (ii) then deprecating international data showing that the U.S. is lagging in broadband deployment. But the U.S is lagging in broadband deployment and investment because of its premature deregulation in the face of market failures.

The United States lag in broadband deployment is evident from a comparison of the U.S and the United Kingdom, which is an appropriate benchmark. U.S. residential broadband deployment lags behind the U.K. U.S. broadband speeds are on average lower than those of in the UK while prices are materially higher in the U.S. This is because the incumbent U.S. providers are not making available the access inputs necessary to offer innovative advanced services that are widely available in the U.K. The UK is ahead because it has adopted a proportional regulatory regime designed to open markets – the true driver of investment and innovation.

Thus the way to “encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans . . . by utilizing . . . regulating methods that remove barriers to infrastructure investment”⁴ is to adopt a proportional

² NOI, ¶ 17 (“what effects have recent market changes, including . . . regulatory changes, in the industry had on broadband deployment?”).

³ *Id.*, ¶ 31 (the Commission seeks comment on “how the availability of advanced telecommunications services in the United States as compared to other nations affects the ability of our citizens to compete in a global economy. What effect do any trends in this area have on international trade and the U.S. economic position in the global economy?”).

⁴ *See* § 706(a) of the 1996 Act.

regulatory regime designed to open the currently monopolized U.S. broadband access markets. Such a regime would improve investment and innovation in advanced services in the U.S.

ARGUMENT

I. THE U.S. IS LAGGING IN BROADBAND INVESTMENT AND INNOVATION NECESSARY TO PROVISION ENTERPRISE CUSTOMERS

In order to meaningfully evaluate where the U.S. stands on broadband investment and innovation there is a need to define “advanced telecommunications capability” in a meaningful manner and to distinguish between the residential/small business markets, and the larger enterprise business market.

A. The Current Definition of “Broadband” in the U.S. is Overbroad thus Inflating U.S. Claims of Broadband Market Penetration

There has to date, been no satisfactory definition of what falls within “advanced telecommunications” services. The 200 kilobits per second (kbps) measure,⁵ which the BOCs argue should be retained by the Commission,⁶ is certainly over-inclusive.⁷ It would be more realistic to define broadband at speeds over 1 Mbps as increasing numbers of applications require higher and higher bandwidths. This should raise the bar for eligibility for government grants and loans for broadband deployment and incentivize higher bandwidth deployment. In the residential space today, this would include some DSL services, cable modem services, fiber to the node (“FTTN”) or fiber to the home

⁵ See, e.g., *Availability of Advanced Telecommunications Capability in the United States*, GN Docket No. 04-54, Fourth Report to Congress, 19 FCC Rcd 20540 (2004) (*Fourth Report*) at 20551-52.

⁶ Verizon’s Comments at 31-33; AT&T’s Comments at 13-16.

⁷ As is the requirement that wireline broadband service providers filing Form 477 list those Zip Codes where they have at least one broadband subscriber. *Local Telephone Competition and Broadband Reporting*, Report and Order, WC Docket No. 04-141, 19 FCC Rcd 22340 at 22349-50, 22393, ¶ 18 & App. D (2004) (*2004 Data Gathering Order*) for the reasons set forth in Time Warner Telecom Inc.’s Comments (“TWTC’s Comments”) at 7-8.

(“FTTH services”) and Ethernet over copper services. Satellite while widely deployed offers upstream speeds of only 200 kbps. It is also expensive, has delays in transmission and hence is little used. 3G wireless is unlikely to offer real-time speeds of more than 400-500 kbps in the near future and is likely to be a complement rather than substitute to wireline broadband. Wi-Fi and WiMax broadband access technologies are in their infancy. Wi-Fi shares the unlicensed spectrum with an ever-increasing range of devices and hence has increasing technical challenges. While WiMax would offer practical bandwidth access speeds upwards of 2 Mbps, it has not been widely deployed.

B. There is A Need to Evaluate Competition in the Business Market Separately from the Residential Market

As noted in Time Warner Telecom’s (“TWTC’s”) Comments, in evaluating the state of advanced telecommunications, the Commission needs to distinguish between mass market (residential/small business) customers on the one hand and large (enterprise) business customers on the other.⁸ While there may be somewhat more competition, and hence perhaps more choices available, for some segments of the mass market, that does not mean that there is effective competition or adequate implementation in the enterprise business market.

The Commission has recognized the enterprise market as a discrete market segment.⁹ Application of traditional market definition principles¹⁰ demonstrates that there is a discrete market for broadband access to be supplied to enterprise customers, separate and apart from the mass market. Furthermore as the Commission considers the

⁸ TWTC’s Comments, *passim*. Cf. AT&T’s Comments at 1, n. 1 (FCC has traditionally focused only on the residential/small business market in conducting its inquiry).

⁹ See, e.g., *In re Application of SBC Commc’ns Inc. & AT&T Corp.*, Memorandum Opinion and Order, WC Dkt. No. WC Dkt. No. 05-65, FCC 05-183 (Nov. 17, 2005) (“*SBC/AT&T Merger Order*”) ¶ 58.

¹⁰ As proposed in TWTC’s Comments at 4.

business broadband market (medium versus large enterprise) it should not allow parties to bootstrap Commission decisions to deregulate Internet access in the mass market into the business broadband market.¹¹ The Commission should also ensure that the international data set used for the purpose of broadband comparisons is expanded to cover small, medium and large business broadband services.

The nature of the two markets is fundamentally different. Business broadband should definitely be defined at speeds higher than 1-2 Mbps given that today the bulk of business access purchased is for T1 or higher speed lines.¹² Mass market customers need broadband connectivity to a single location. Medium-sized enterprise customers may have a few campuses within a state or region. Large multi-site enterprise business customers need “universal connectivity” to all their sites, including not only sites in Central Business Districts, but more often, due to lower labor and land costs as well as for tax reasons, in suburban, exurban and even rural areas. And this “multi-site requirement” includes access for remote workers. A supplier must be able to provide connectivity at the right speeds and at the right level of security and reliability to *all* of the large enterprise customer’s sites if the supplier is to successfully compete for its business.

The conditions of competition for supply of businesses in the U.S. are different from the supply of mass market services. By the end of the decade, 40% of mass market customers in the U.S. may have access to more than one broadband access provider.¹³

¹¹ Cf. Petition of the Verizon Telephone Companies for Forbearance from Title II and Computer Inquiry Rules with Respect to Their Broadband Services, WC Dkt 04-440 (filed Dec. 20 2004).

¹² This is based on BT’s own inventory of access purchased by large enterprise customers.

¹³ Telco fibre access roll out in the US is expected to pass 38% of households; the majority of households will have a single cable supplier. *Dumb Pipe Paradox (Part II): Patchwork Pipes*, Bernstein Research, Feb. 28, 2006.

Last mile access to large business customers, however, outside of central business districts, is usually only possible from one incumbent supplier, *i.e.* to the vast bulk of sites. The three remaining Bell Operating Companies (“BOCs”) dominate the business broadband access market.¹⁴ Thus, the United States Government Accountability Office recently found that in the sixteen Metropolitan Statistical Areas (“MSAs”) it examined competitors provide facilities-based access service to only 6% of business customer sites for services at 1.5 Mbps and 15 to 25% of sites for services at 45 Mbps and above.¹⁵

C. The U.S. Is Lagging Behind the United Kingdom in Broadband Penetration, Speed and Price

Despite the BOCs’ efforts to downplay the Organization for Economic Cooperation and Development (“OECD”)¹⁶ statistics, the facts show that the U.S. lags behind at least one of the countries identified in that report – the U.K., clearly a relevant benchmark – on broadband speed, availability, adoption, and price.

1. Retail Broadband

Even on the residential side, the U.K. has surpassed the U.S. in broadband penetration. Half of U.K. households have broadband. That is, there are approximately 25 million U.K. households of which 3 million have cable and approximately 9.5 million

¹⁴ Nor do enterprise customers have effective “countervailing buyer power” for at least three reasons. First, even strong buyers may be relatively small purchasers in particular (geographic and/or product) markets. Second, the cost of the product or service may be a relatively insignificant part of the overall cost of the end product, and the strong buyer, for strategic may not have the incentive to exercise any countervailing market power that it may have. Finally, dominant undertakings have strategies to minimize buyer power, including the conditional rebate strategy. Such rebates could be used to lock in sufficient demand so that remaining providers could not realize minimum economies of scale and scope. Thus strong buyers could not exercise any countervailing power by threatening to take their business elsewhere or to self-provision.

¹⁵ GAO 07-80 Telecommunications. FCC needs to improve its ability to monitor and determine the extent of competition in dedicated access services, p.20 (November, 2006).

¹⁶ Verizon’s Comments at 22-31; AT&T’s Comments at 16-19. *See*, Free Press, Consumers Union, Consumer Federation of America, *Broadband Reality Check II, The Truth Behind America’s Digital Decline*, (Aug. 2006) (“*Broadband Reality Check II*”).

have DSL. Small and medium enterprises purchase another 1 million DSL lines. Over 99% of U.K. households are in ADSL enabled exchanges. Cable provided broadband is available to approximately 55% of the households in the U.K.

BT, the incumbent has only 24% of the residential broadband customers in the U.K. Virgin Media, which provides mostly cable-based broadband, has 26% of the customers. Other competitors have 50% of the broadband end customers. They provide broadband using unbundled loops purchased from BT or by reselling various versions of BT's DSL product.¹⁷

In terms of broadband speed, 99.6% of U.K. exchanges have been enabled with 8 Mbps ADSL service. 24 Mbps (ADSL2+) is being rolled out in 2008. The average speed of broadband service is 3.8 Mbps.¹⁸ Almost 90% of U.K. DSL subscribers receive service at speeds of 3 Mbps or more.

BT sells consumer broadband service of up to 8 Mbps for as little as \$21/month for the first 3 months and \$29/month thereafter.¹⁹ A comparison of these prices to AT&T and Verizon pricing:

Consumer	Speed	Price in USD
AT&T DSL	Up to 3 Mbps	\$29.95/mt for 12 mts
Verizon DSL	Up to 3 Mbps	\$19.99/mt for first 6 mts.

¹⁷ Thus in the U.K, which ranks ahead of the U.S. according to the OECD, broadband is primarily provided by the incumbent's *competitors* using cable, available to approximately 55% of the households in the U.K, and DSL. Cf. Verizon's Comments at 22-23.

¹⁸ See Ofcom's 2007 Broadband Report at http://www.ofcom.org.uk/research/cm/broadband_rpt/broadband_rpt.pdf

¹⁹ This includes 250 free Wi-Fi minutes. UK prices converted using OECD's 2006 UK/US purchasing power parities rate of 1.62.

		\$29.99/mt for mts 7-12
Verizon FIOS	Up to 5 Mbps	\$29.99/mt for first 6 mts. \$39.99/mt for mts 7-12

The BOCs argue that the Commission should not be concerned about U.S.’s comparatively lower residential broadband penetration because most U.S. consumers are perfectly happy with dial-up Internet access.²⁰ But this ignores the “cellophane fallacy.”²¹ That is, dial-up internet access is likely chosen by so many U.S. residential customers because broadband access is priced at supra-competitive levels; if residential broadband access were to be priced at competitive levels, it would not be an acceptable alternative for most consumers.

2. Wholesale Broadband

As shown in the next section, the U.K., unlike the U.S., has stringent wholesale enterprise access regulation. As a result wholesale enterprise access in the U.K. is cheaper, more varied and more widely available. U.K. businesses use Business DSL widely (with different Service Level Agreements or SLAs than consumer DSL). 65% of U.K. small and medium enterprises (“SMEs”) with less than 50 employees use DSL access of up to 8Mbps. Broadband penetration is higher among larger SMEs with 50-250 employees, at 70%.

²⁰ Verizon’s Comments at 29; AT&T’s Comments at 3.

²¹ *United States v. DuPont de Nemours*, 351 U.S. 377 (1956).

II. THE REASON FOR THE U.S. LAG IS THE ABSENCE OF EFFECTIVE REGULATION

A. The Critical Issue for Broadband Investment and Innovation is Open Markets and in the U.S. that Requires Proportional Regulation

The issue is not regulation or de-regulation, but rather open markets. Where there is competitive network supply, the market will achieve more investment, lower prices, higher speeds and more market driven innovation. But such competition does not exist in the U.S. in access and termination markets. Reasonable prices and innovation in the U.S. will only be offered where there is proportional regulation.

1. The U.S. Broadband Access Market is Not Open – to the Contrary it is Dominated by the Incumbents

Despite the incumbent carriers' promises to engage in intra-modal competition, and despite their repeated assurances since that inter-modal competition is imminent, the broadband access market is not open but to the contrary, is dominated by them. In most local areas across the U.S., the local cable company and/or incumbent local telephone company claim most, if not all, the market share for residential broadband access. According to one analyst, "[d]espite a consensus view to the contrary, the evidence suggests that last mile distribution remains tightly constrained, and is, in actuality, only becoming more so. . . ."²² This analysis is confirmed by the General Accountability Office ("GAO") which stated in its analysis of the U.S. broadband market that the median number of broadband operators serving a U.S. household is two.²³ Likewise in business

²² See Bernstein Research, *Dumb Pipe Paradox (Part II): Patchwork Pipes*, Feb 28, 2006 ("Dumb Pipe Paradox (Part II)").

²³ Government Accountability Office, GAO Report [to Congressional Committees], *Broadband Deployment is Extensive throughout the United States, but it is Difficult to Assess the Extent of Deployment Gaps in Rural Areas* GAO-06-426 (May 5, 2006). See also *Broadband Reality Check II* ("Consumers across

broadband access services, the last mile facilities-based broadband access market is monopolized by the incumbent local exchange companies. Analyses conducted both by an association of large business customers and the General Accountability Office reach this same conclusion.²⁴ The BOCs' promises that their numerous mergers would spur intra-modal competition²⁵ never materialized, and their predictions of inter-modal competition have been, to say the least, premature.²⁶

Nor has wireless broadband emerged as a meaningful competitive alternative; and in any event the incumbent wireline broadband access providers control the U.S wireless market.²⁷ Wi-Fi and WiMax don't have the bandwidth, service quality or reliability

the nation have relatively little choice in broadband services. The top two cable companies and the top two DSL companies together controlled over half of the entire U.S. broadband market The top 10 broadband providers, each a regional monopoly in cable or DSL, made up over 83 percent of the broadband market. The U.S. broadband market is essentially a series of regional duopolies”).

²⁴ See Economics and Technology, Inc., prepared for Ad Hoc Telecommunications Users Committee, *Competition in Access Markets: Reality or Illusion, A Proposal for Regulating Uncertain Markets* (Aug. 2004). See also, U.S. Government Accountability Office, Report to Chairman, House Committee on Government Reform, *FCC Needs to Improve its Ability to Monitor and Determine the Extent of Competition in Dedicated Access Services*, GAO 07-80 (November 2006).

²⁵ See e.g., SBC Public Interest Statement, *Application of SBC Communs. & Ameritech Corp. for Transfer of Control to SBC Communications*, CC No. 98-141 (July 24, 1998) at 12-25 and accompanying Declarations. Thus the BOCs promises of future investment in order to once again obtain Commission approval (e.g. Verizon's Comments at 8) should be understood in the context of their prior unfulfilled promises.

²⁶ *Id.*, Report of Richard Schmalensee and William Taylor, ¶¶ 61-62 (predicting that cable competition was imminent in 1998; it only recently emerged as a competitive alternative).

²⁷ The total U.S. market was 230.8 million subscribers, and the four largest carriers were: Cingular Wireless with almost 61 million subscribers (26.5%); Verizon Wireless with over 59 million (25.6%); Sprint Nextel with 48 million (21%); and T-Mobile with 25 million (11%). Market Share: Mobile Connections, North America, 4Q06, Gartner Dataquest. See more generally BT's Reply Comments in *In the Matter of Skype Communications, S.A.R.L. Petition to Confirm a Consumer's Right to Use Internet Communications Software and Attach Devices to Wireless Networks*, RM No. 11361 (filed May 15, 2007) and BT's Reply Comments in *Implementation of Section 6002(b) Of the Omnibus Budget Reconciliation Act of 1993 Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services*, WT Docket No. 07-71 (filed May 22, 2007) which are incorporated herein by reference.

required for enterprise network services.²⁸ Broadband over Power Line is more myth than reality at this point.²⁹

2. Open Markets Spurs Investment and Innovation

The incumbent carriers claim that *all* regulation reduces investment, noting the dollar size of their investment.³⁰ Ergo under the incumbents’ theory deregulation should have stimulated investment. However, the opposite has been true. In the period following the last competitive era spending commitments (2001) incumbent local exchange carrier CAPEX dropped off *sharply and immediately* and is not predicted to regain competitive era levels in the foreseeable future.³¹

Figure 1³²

2001	2002	2003	2004	2005	2006E	2007E	2008E
\$41.992	\$29.730	\$25.080	\$29.648	\$33.939	\$38.411	\$36.877	\$35.335

²⁸ WiMax services (using non-certified CPE) offer consumers between 512 Kbps and 1,536 Kbps — a far cry from the WiMAX Forum's 70 Mbps boast – Forrester Research, *Let’s Get Real About WiMax*, July 2005. Wi-Fi is a more highly contended and less secure service. It has been urged that Wi-Fi is a viable competitive alternative based on a 2006 experiment by Google for residential users in the town where it is headquartered. Sarah Jane Tribble, *Going Wireless in Mountain View, Google Launches Free WiFi Today*, San Jose Mercury News, Aug. 16, 2006, at 4 (“The network covers about 90 percent of the city’s 12 square miles and offers maximum data-transfer speeds of up to 1 [Mbps] -- slightly slower than DSL. . . . The Mountain View-based company spent in the ‘ballpark’ of \$1 million on the project And the company agreed to pay Mountain View \$36 per light pole, or about \$13,680, annually, although that number may grow slightly as the company plans to install a few more transceivers as residents request more access.”). This effort has not been replicated in other venues where Google would not have comparable “home town” advantages.

²⁹ In 2004 then FCC Chairman Powell said that the potential for BPL was bright. *Powell Says Interference Addressed in New Broadband Over Power Line Rule*, Pike and Fischer News & Analysis, Oct. 2004. Three years later, Chairman Martin testified before the Senate Energy and Commerce Committee that BPL is a potentially significant player in the broadband market despite its dismal market penetration. Written Statement of the Hon. Kevin J. Martin, Chairman, FCC, before the Committee on Science, Commerce and Transportation, U.S. Senate, Feb 1, 2007.

³⁰ *E.g.*, Verizon’s Comments at 6-8, 10-14; AT&T’s Comments at 2. 10-11.

³¹ CIBC, “3Q06 Communications and Cable Services Preview,” Oct. 6, 2006.

³² The dollar figures in Figure 1 above reflect billions of dollars. Estimates for 2006-2008 were calculated by CIBC in October 2006, based on filings, company projections and CIBC’s own independent estimates (which appear roughly shared by other major investment houses). The figures through 2005 are taken from SEC filings.

Most telling is the fact that the 2006, 2007 and 2008 estimates even include the substantial additions of AT&T with SBC and MCI with Verizon as a result of mergers. AT&T and MCI figures are not included in the 2001-2005 totals, which would be substantially higher otherwise. For example, in 2001, AT&T and MCI together would have increased the total capex by more than \$17.5 billion. That means that from 2001 to the end of 2008 will see an astounding 60% drop in capex by major Incumbent Local Exchange Carriers (“ILECs”).³³

Regulation that opens markets that otherwise continue to be dominated by the incumbents because of their control of bottleneck access facilities promotes investment by all market participants – including investments by competitive carriers that often leads to truly market driven innovation. In a market dominated by a few players, investment by the incumbents is focused on blocking competitive entry and on ensuring that investment in new technologies is timed so as not to replace old technologies until the investment in those old technologies has been fully recovered. In markets dominated by the incumbents the market investment of innovative entrants is displaced by the investment of incumbents seeking to control entry and the timing of innovation.

A good example is Ethernet. Ethernet is a protocol which is particularly efficient for the transfer of Internet Protocol (IP) packets and it is used in place of the traditional synchronous digital hierarchy (SDH) protocol. Ethernet provides higher bandwidth³⁴ at

³³ Information derived from a draft research paper being prepared for publication by Alain de Fontenay and Brian Savin, members of de Fontenay, Savin and Kiss. They are also affiliated researchers with the Columbia University Institute for Tele-Information. The paper is entitled:

“The Public Policy Challenges of the Internet: Assessing the Forces Identified by the Literature as Allowing Anomalously Large Networks to Acquire Market Power Over Internet Operation and the Impacts on Innovation, Investment and the Internet’s Welfare-Creating Dynamics.” (“de Fontenay and Savin”).

³⁴ Ethernet services are delivered at various bandwidths from 2mbps up to 10Gbps.

lower prices³⁵ than traditional special access.³⁶ This is good for businesses, consumers and the economy at large.

In the UK, BT's Ethernet products are available to virtually all enterprise sites in the country. In the U.S. however, Ethernet is primarily a Central Business District (metro) offer. Ethernet is more widely deployed in Europe than in U.S., even though enterprise customers want it wherever they do business.³⁷ Wholesale Ethernet access in the UK is also cheaper than it is in the US. For example, basic 10 Mbps point to point wholesale Ethernet in the UK is available at a quarter to one half the prices charged by the AT&T or Verizon.

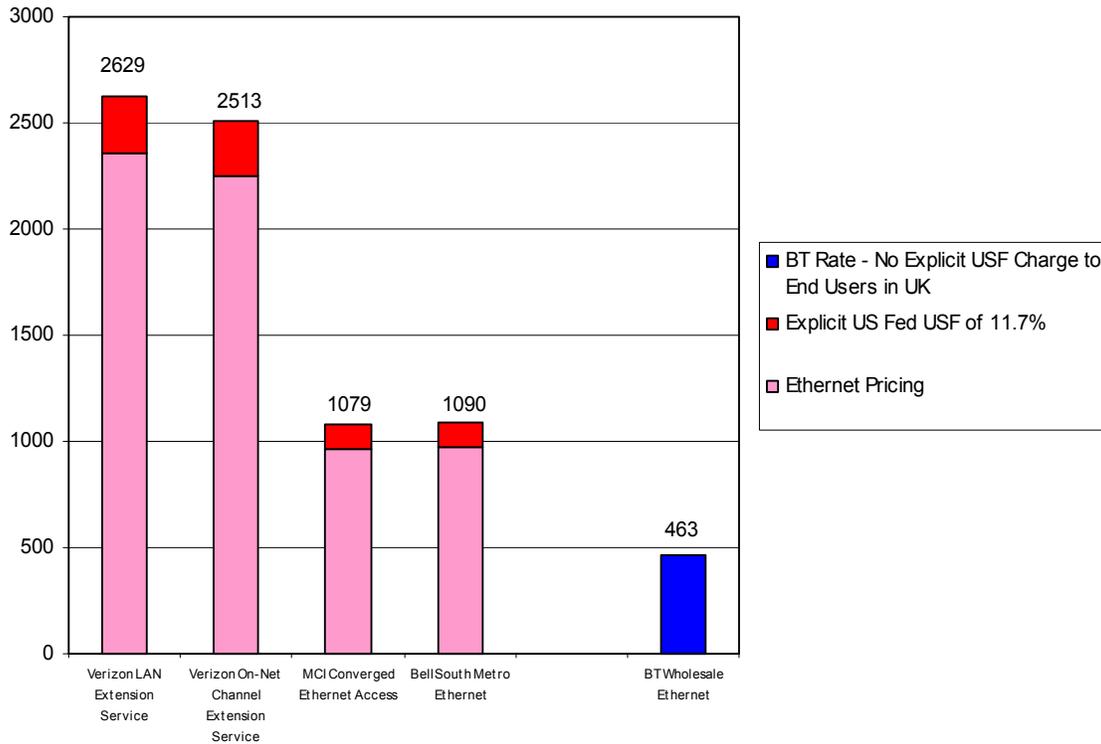
³⁵ Due to the simplicity of Ethernet service delivery and the cheaper equipment costs, Ethernet services can be deployed much more cost effectively than traditional SDH delivered services. Ethernet is the standard protocol in *intra*-office applications (*i.e.* the Local Area Network/LAN) and in open markets is becoming the standard protocol in *inter*-office applications (*i.e.* linking up LANs via a Wide Area Network/WAN). Standardisation and utilisation of the same protocol in the LAN and the WAN is driving efficiency gains for businesses and consumers. The electronic equipment for Ethernet is cheaper than for SDH, which should translate into cheaper prices. Furthermore, upgrading capacity usually does not require manual intervention, only a software change.

³⁶ *Cf.* Verizon's Comments at 29 (referring to dedicated high capacity access lines as an alternative for business customers; however enterprise customers want Ethernet access as their alternative source, and that is not available, even from the incumbents, at the level they want).

³⁷ Thus a recent analyst reported that "In Europe ... Ethernet access is more widely available [than in the U.S.] and typically lower priced ... Ethernet services ... offer less ability for carriers to work their way up the value chain alongside customers and ... requires carriers to invest in new service for which they then need to charge less, cannibalizing or preventing growth of customer bases of superior-quality services for which they charge more (e.g., private line, VPN) ... AT&T does not currently offer end-to-end international Ethernet services. It claims ongoing VPLS trials toward offering such service internationally by sometime in 2008. It ... appears — like many other carriers — to be waiting to see how much pressure the market will exert over the next couple of years in the direction of pushing Ethernet services internationally." Boyd Chastant, *International Ethernet Services: An Overview*, IDC (Apr 2007); *See also*, Phil Sayer, *Making Sense of European Ethernet Services*, Forrester, (May 1, 2007).

Figure 2

Ethernet Pricing (Data as of March 2007)



Assumptions: Less than 10 miles interoffice. Less than 1 mile channel terminations at each end.
5 year term rates. BT's UK prices converted using OECD's 2006 US/UK Purchasing Power Parities Rate of 1.62.³⁸

The reason for the lag in U.S. Ethernet deployment: as noted in Time Warner Telecom's filings in this and its filings in the AT&T/BLS merger,³⁹ the BOCs, which control the

³⁸ Verizon's rates are 5 year plan rates computed from rates elements in Verizon's FCC Tariff No. 1 Secs. 7.5.23 and 7.5.25. MCI's rate is a 5 year plan rate computed from rate elements at http://www.verizonbusiness.com/external/service_guide/reg/cp_cea_type_3_04_01_07.htm. BellSouth's rate is a 5 year plan rate computed from rate elements at FCC 1 Section 7.5.22(B). BT's wholesale Ethernet rates are available at http://www.openreach.co.uk/orpg/pricing/wes/downloads/ORPL_WBB_Wes.pdf.

³⁹ See TWTC's Comments at 12; TWTC Petition to Deny, *In the Matter of AT&T, Inc. and BellSouth Corporation Applications for Approval of Transfer of Control*, WC Docket No. 06-74, filed June 15, 2006 (TWTC claimed that they began negotiations with AT&T over Ethernet access over a year earlier and that

access bottleneck,⁴⁰ refuse to provide competitors with the facilities needed to provide an Ethernet solution, in order to retain the revenue and high margins of their legacy services.

B. The U.S. Has Adopted a Prematurely Deregulatory Model that Discourages Meaningful Broadband Investment and Innovation

The U.S. for the past six years has been deregulating the broadband market, granting the incumbents' broadband forbearance petitions without, as in the recent "deemed granted" Verizon forbearance petition,⁴¹ engaging in any market analysis, even as it fails to take any action on petitions filed by competitive carriers alleging anticompetitive conduct.⁴² This has resulted in competitive carriers being driven into bankruptcy, being acquired by the incumbents, or otherwise exiting the market, and discouraging entry by others. The result of this premature deregulation has been the dramatic decline in competition and with that a decline in broadband investment and innovation.

Effective U.S. regulatory policy up through 2000 promoted competition and through that, investment and innovation. This included, even before the enactment of the

AT&T has, to date, refused to sell them Ethernet at reasonable rates; supported by an affidavit of TWTC's Senior VP of Marketing)

⁴⁰ See Sprint Nextel's Comments at 2, 8-15.

⁴¹ *Verizon Telephone Companies Petition For Forbearance From Title II And Computer Inquiry Rules With Respect To Their Broadband Services Is Granted By Operation Of Law*, 2006 WL 707632, F.C.C., Mar 20, 2006, (No. 04-440).

⁴² For example, the Commission has never acted on AT&T's Petition for Rulemaking, filed in 2002, alleging anticompetitive pricing with respect to special access. *AT&T Corp. Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, RM No. 10593 ("Special Access Proceeding") (Oct. 15, 2002), even after AT&T filed a Petition for Mandamus with the D.C. Circuit Court of Appeals requesting the court to direct the Commission to act on its rulemaking petition. The proceedings were re-opened, 70 Fed. Reg. 19381 (April 15, 2005), *In the Matter of Special Access Rates for Price Cap Local Exchange Carriers*, WC Docket No. 05-25 but although the record has been completed the Commission has taken no action.

1996 Telecommunications act, rules promoting interconnection⁴³ and unbundling.⁴⁴ This proportional regulation contributed to intense price and service competition in consumer, enterprise and governmental communications services.

However, when the Commission prematurely deregulated broadband infrastructure bottlenecks after 2000, broadband investment declined. In 2003, the Commission adopted a decision to forbear from regulating any new fiber to the home and fiber to the curb investment by the dominant local exchange carriers.⁴⁵ In 2002 the Commission deregulated cable broadband services, a decision that was upheld by the

⁴³ *Expanded Interconnection with Local Telephone Company Facilities, Report and Order and NPRM*, 7 FCC Rcd 7369 (1992) and *Expanded Interconnection with Local Telephone Company Facilities, Second Memorandum Report and Order* 8 FCC Rcd 7341 (1993). While aspects of the FCC's decision relating to physical collocation were litigated and reversed by a court, by 1996 the U.S. Congress had passed the local market opening commitments in the Communications Act of 1996 including collocation laws effectively mooting the litigation around collocation ordered by the FCC.

⁴⁴ Including the Open Network Architecture ("ONA") and Comparably Efficient Interconnection ("CEI") rules, *Amendment of Sec. 64.702 of the Commission's Rules and Regulations (Third Computer Inquiry), Report and Order*, 104 FCC 2d 958 (1986), *vacated California v. FCC*, 905 F.2d 1217 (9th Cir. 1990). While these rules were also challenged, revisited by the FCC and challenged again by incumbent local exchange carriers, the issue was again ultimately mooted by the 1996 Act. State regulators also got involved in opening local communications markets to competition. See, e.g., *Opinion and Order Concerning Comparably Efficient Interconnection Arrangements and Instituting Proceeding*, opinion No. 91-24, *Proceeding on Motion of the Commission to Review Telecommunications Industry Interconnection Arrangements, Open Network Architecture and Comparably Efficient Interconnection*, Case 88-C-004 (N.Y.P.S.C. Nov 25, 1991) and *Order Instituting Rulemaking and Order Instituting Investigation at 24-27, Rulemaking on the Commission's Own Motion to Govern Open Access to Bottleneck Services*, R.93-04-003, I.93-04-002 (Cal. P.U.C. Apr. 7 1993). The FCC imposed a price cap regime on special access services critical to enterprise networks, *Policy and Rules Concerning Rates for Dominant Carriers, Second Report and Order*, 5 FCC Rcd 6786, 6818-20 (LEC Price Cap Order). In 1999, the FCC adopted rules allowing the BOCs to seek pricing flexibility in Metropolitan Statistical Areas ("MSAs") where they could show certain inapposite competitive triggers and as a result special access rates and margins have stayed artificially high.

⁴⁵ *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers; Implementation of the Local Competition Provisions of the Telecommunications Act of 1996; Deployment of Wireline Services Offering Advanced Telecommunications Capability*, Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, 18 FCC Rcd 16978 (2003) (*Triennial Review Order*) corrected by Errata, 18 FCC Rcd 19020 (2003) (*Triennial Review Order Errata*), *vacated and remanded in part, affirmed in part, United States Telecom Ass'n v. FCC*, 359 F.3d 554 (D.C. Cir. 2004) (*USTA II*) cert. den. 125 S. Ct. 313, 316, 345 (2004).

U.S. Supreme Court in 2005.⁴⁶ The Commission followed by disposing of any remaining regulation of DSL services.⁴⁷ And in early 2006 the Commission deregulated Verizon's Ethernet, fast packet and optical networking, hubbing and transmission services without any market analysis.⁴⁸ Moreover the Commission has, since 2000, sanctioned continued consolidation in the U.S. broadband industry, affecting broadband access (including DSL), Tier 1 Internet Backbone, and wireless markets. The Commission has done so, as the Commission itself stated, because it "will greatly improve the ability of the U.S. telecommunication industry to compete against foreign carriers."⁴⁹ However this "pro-U.S. consolidation" strategy⁵⁰ has limited the competitive incentives within the United States to invest and innovate in broadband services.

⁴⁶ *Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities, Internet Over Cable Declaratory Ruling, Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities, Declaratory Ruling and Notice of Proposed Rulemaking*, 17 FCC Rcd 4798 (2002); *National Cable & Telecommunications Ass'n v. Brand X Internet Services*, 125 S Ct 2688 (2005).

⁴⁷ *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities Universal Service Obligations of Broadband Providers*, Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd 14853 (2005) (Wireline Broadband Internet Access Service Order), petitions for review pending, *Time Warner Telecom v. FCC*, No. 05-4769 (and consolidated cases) (3rd Cir. filed October 26, 2005).

⁴⁸ *Verizon Telephone Companies Petition For Forbearance From Title II And Computer Inquiry Rules With Respect To Their Broadband Services Is Granted By Operation Of Law*, 2006 WL 707632, F.C.C., Mar 20, 2006, (No. 04-440).

⁴⁹ SBC Communications Inc. and AT&T Corp. Public Interest Statement, WC Dkt. No. 05-65 (February 21, 2005) at 14; *see also SBC/AT&T Merger Order, supra* n. 9, at ¶187 (the FCC found the merger was in the public interest, in part because "[w]e find that the merger will create a stable, reliable, U.S.-owned company that will provide improved service to government customers" emphasis added). A similar argument was made by the merging parties in the Verizon/MCI merger. Joint Opposition of Verizon and MCI to Petitions to Deny and Reply to Comments, WC Dkt. No. 05-75 (May 24, 2005) at 9 (the merger will result in the "creation of a strong U.S. competitor in the global market"). In the AT&T/BellSouth merger AT&T, relying on the sections of the *SBC/AT&T Merger Order* referred to above, argued that "[t]he merger of AT&T and BellSouth will provide significant benefits to government customers and strengthen national security by creating a stronger, more efficient US-owned and U.S. controlled supplier of critical communications capabilities." AT&T Inc. and BellSouth Corporation Public Interest Statement, WC Docket No. 06-74 (filed March 31, 2006) at 28-29 and n. 84 (emphasis added).

⁵⁰ In possible violation of *Section 1.1* of the WTO Reference Paper, GATS/SC/90/Suppl.2, 11 April 1997, which provides that "appropriate measures shall be maintained for the purpose of preventing suppliers who, alone or together, are a major supplier from engaging in or continuing anti-competitive practices."

As a result of the Commission’s premature decision to deregulate, new competitive local exchange carrier (“CLEC”) investment declined and there has been a lag in U.S. in innovative investment. The U.S. has dropped in the OECD broadband rankings since 2000. According to Senator Inouye:

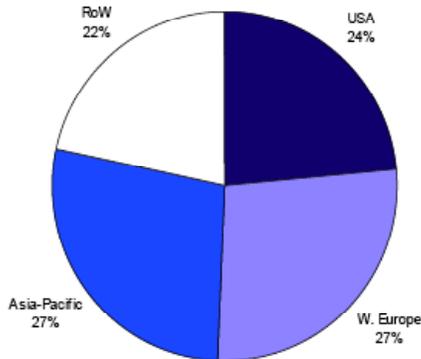
“In 2000 the United States ranked fourth; last year we dropped to twelfth; and just last month we dropped to fifteenth. The broadband bottom line is that too many of our international counterparts are passing us by. For this we are paying a price. Some experts estimate that universal broadband adoption would add \$500 billion to the U. S. economy and create more than a million new jobs.”⁵¹

Furthermore the US telecom sector is underperforming the U.S. GDP generally, lagging the growth of the U.S. GDP by 1-2% over each of the last five years.⁵²

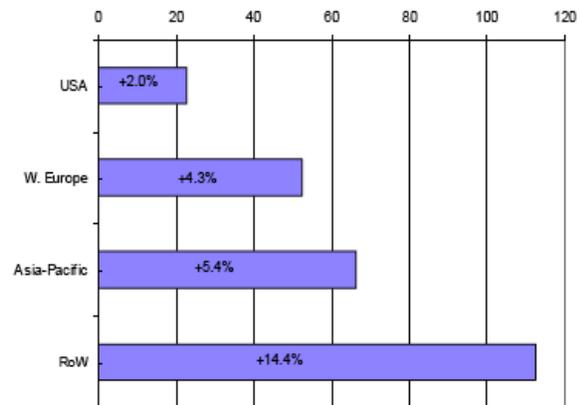
Figure 3

Telecom service markets by region
(2006 revenues in billion USD)

2006 worldwide market = 1.246 billion USD



Contribution to growth
(2002-2006 in billion USD and CAGR)



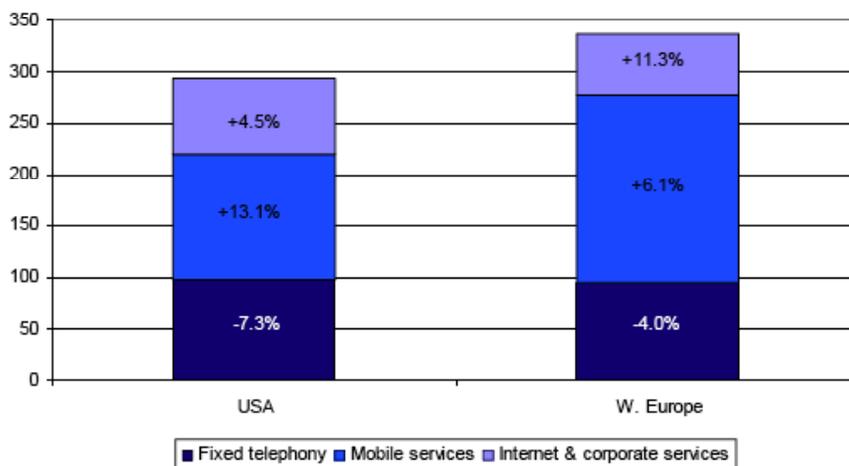
⁵¹ Inouye Introduces Broadband Data Improvement Act Press Release, May 24, 2007 available at http://commerce.senate.gov/public/index.cfm?FuseAction=PressReleases.Detail&PressRelease_id=248822&Month=5&Year=2007.

⁵² Presentation of Yves Gassot, CEO, Institut de l'Audiovisuel et des Télécommunications en Europe presented at Columbia University, October 20, 2006.

Compare this with economist findings that the production and use of information communications technology (“ICT”) dominated a productivity surge in the USA 1995-2000 which correlates with a period of market-opening regulation in the U.S.⁵³ Internet and corporate data revenues are also growing nearly two and a half times in Europe (which is regulated by a market power-based regulatory regime) over the growth being experienced in the United States.⁵⁴

Figure 4

Telecom service revenues broken down by segment
 (2006 revenues in billion USD,
 CAGR 2004-2006 in the blocks)



C. The U.K. Has Adopted a More Proportional Regulatory Model in the Form of Functional Separation of Access from Downstream Services

As noted in TWTC’s Comments, the U.K. has adopted a more appropriate proportional regulatory regime under which broadband innovation has thrived. The regulatory regime in the U.K. requires that the incumbent, BT establish a new line of

⁵³ Jorgenson, Ho and Stiroh, *The Sources of the Second Surge of US Productivity and Implications for the Future* (March 2006).

⁵⁴ *de Fontenay and Savin* citing to presentation by Chris Loh, Senior Analyst, Telecommunications, IDC (December 2006).

business for last mile access called Openreach which began operations on January 22, 2006. It is a multi-billion pound business, with 30,000 employees, responsible for running the U.K.'s local access network infrastructure. The regulator, Ofcom, required the creation of an Equality of Access Board (EAB), with a majority of independent external directors appointed in consultation with Ofcom, which monitors Openreach's performance, and ensures BT complies with the various non-discrimination undertakings it has made. This includes an "equivalence of inputs" requirement which requires Openreach to provide, the same (i) products and services for BT and others; (ii) time-scales, terms and conditions, including price; (iii) systems and processes; (iv) reliability and performance; and (v) commercial information.⁵⁵

And it is in the context of this regulatory model that BT is investing in its all IP next generation network called 21CN that will deliver 24Mbps or faster broadband access by 2011. This platform is also open to competition and third party innovation which will drive the business case for further upgrades in broadband access and core.⁵⁶ Indeed because the access separation model encourages competition, and thus investment and innovation it is being considered and to some extent implemented, in other countries as well. Thus the New Zealand Government passed a Bill calling for the functional separation of Telecom NZ into at least 3 units (access, wholesale and retail).⁵⁷ Italy is also considering the functional separation model.

⁵⁵ Subject only to: trivial differences, differences in credit vetting, payment, contract terms on termination, safe working, security, and other differences agreed by the U.K regulator, Ofcom.

⁵⁶ See Attachment A. *Cf.* Verizon's Comments at 26-27.

⁵⁷ http://www.parliament.nz/NR/rdonlyres/1C7CD11B-DB56-479F-BD9F-2C7AE7B165F5/49639/DBHOH_BILL_7413_39794.pdf.

CONCLUSION

As demonstrated above, an effective and proportional regulatory regime, which exists in the U.K. but not in the U.S., promotes broadband investment and innovation. As a result, absent a change in U.S. policies, one can anticipate that the U.S. will lag even further, as dominant incumbent providers choose the time it is best for them to introduce broadband innovation, regardless of the needs of its business customers, and even then at artificially high prices which will retard the adoption of ICT solutions requiring broadband connectivity.

Respectfully submitted.

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