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REDACTED - FOR PUBLIC INSPECTION

October 15, 2010

VIA COURIER

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW, Room TW-A325
Washington, DC 20554

Re: ***In re Business Broadband Marketplace,*** **WC Dkt. No. 10-188**

Dear Ms. Dortch:

Please find enclosed for filing in the above-referenced proceeding two copies of the redacted version of the Comments of Cbeyond, Inc., Integra Telecom, Inc., MegaPath, Inc., Covad Communications Company and tw telecom inc. Pursuant to the September 15, 2010 *Public Notice* in this proceeding,[1] electronic copies of the redacted version of the Comments will be sent to Heather Hendrickson of the Competition Policy Division of the Wireline Competition Bureau and Best Copy and Printing, Inc. The redacted version of the Comments will also be filed via ECFS.

Pursuant to the *Second Protective Order* in the above-referenced proceeding,[2] one original of the highly confidential version of the Comments is being filed with the Secretary's Office under separate cover today. Also pursuant to the *Second Protective Order*, two copies of the highly confidential version of the Comments will be provided to Tim Stelzig and Gary Remondino of the Wireline Competition Bureau.

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[1] *See Wireline Competition Bureau Seeks Comment on Business Broadband Marketplace*, Public Notice, WC Dkt. No. 10-188, DA 10-1743 (rel. Sept. 15, 2010) ("*Public Notice*").

[2] *See In re Business Broadband Marketplace*, Second Protective Order, WC Dkt. No. 10-188, DA 10-1973 (rel. Oct. 14, 2010) ("*Second Protective Order*").

Please do not hesitate to contact me if you have any questions or concerns about this submission.

Respectfully submitted,

Thomas Jones
Nirali Patel

Attorneys for Cbeyond, Inc., Integra Telecom, Inc., MegaPath, Inc., Covad Communications Company and tw telecom, inc.

Enclosure

REDACTED - FOR PUBLIC INSPECTION

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Business Broadband Marketplace	)	WC Docket No. 10-188

COMMENTS OF CBEYOND, INC., INTEGRA TELECOM, INC., MEGAPATH, INC., COVAD COMMUNICATIONS COMPANY AND TW TELECOM INC.

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October 15, 2010

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REDACTED - FOR PUBLIC INSPECTION

Before the
Federal Communications Commission
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In the Matter of	)	
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Business Broadband Marketplace	)	WC Docket No. 10-188

COMMENTS OF CBEYOND, INC., INTEGRA TELECOM, INC., MEGAPATH, INC., COVAD COMMUNICATIONS COMPANY AND TW TELECOM INC.

Cbeyond, Inc. ("Cbeyond"), Integra Telecom, Inc. ("Integra"), MegaPath, Inc. and Covad Communications Company ("MegaPath"), and tw telecom inc. ("tw telecom") (collectively, the "Joint Commenters"), through their undersigned counsel, hereby submit these comments in response to the September 15, 2010 *Public Notice*[1] in the above-captioned proceeding.

I. INTRODUCTION AND SUMMARY.

As the FCC recognized in the National Broadband Plan, ensuring "robust competition" in the provision of broadband services to American businesses "requires particular attention to the role of wholesale markets, through which providers of broadband services secure critical inputs from one another."[2] The unfortunate reality is that, today, glaring deficiencies in the FCC's regulatory regime for incumbent LEC wholesale services are preventing competitors from obtaining the inputs they need to offer the cutting edge, efficiency-enhancing services that American businesses so desperately need. The "robust competition" that the Commission seeks cannot be achieved in the business broadband market unless and until the FCC fixes the flaws in its existing wholesale regulations.

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[1] *See Wireline Competition Bureau Seeks Comment on Business Broadband Marketplace*, Public Notice, WC Dkt. No. 10-188, DA 10-1743 (rel. Sept. 15, 2010) ("*Public Notice*").

[2] National Broadband Plan at 47.

There is little doubt that competitors such as the Joint Commenters serve a crucial role in the business broadband marketplace. Competitors like Cbeyond, Integra and MegaPath have excelled at delivering innovative services and applications to small and medium-sized businesses. They have done so in part by developing close consultative relationships with businesses and by teaching them the value of integrated services, managed services and efficient new applications. Competitors like the Joint Commenters are often the only companies focusing on small and medium-sized businesses because, in most geographic areas, neither the incumbent LEC nor the cable company can meet the needs of small and medium-sized businesses.

Similarly, tw telecom has driven innovation in the provision of Ethernet services to medium-sized and large business customers. tw telecom's Ethernet customers experience enormous efficiencies because, among other things, Ethernet enables them to purchase scalable, flexible bandwidth growth that businesses need to support their application requirements.

But while the benefits delivered by competitors today are significant, they could be far greater. The Joint Commenters are ready to expand their network footprints more aggressively and to introduce more sophisticated services and applications to businesses of all kinds than are generally available today. The broader availability of managed network services would enable businesses to use more bandwidth at a lower cost. Such services would allow health care providers to store, access and share files more efficiently. They would allow companies to utilize virtual presence videoconferencing applications more fully, thereby reducing travel costs and improving communications. They would also allow companies to use remote, secure servers to meet their data backup and storage needs as well as their software needs, thereby lowering costs and enabling companies to scale their businesses more quickly.

To deliver these benefits, the Joint Commenters and other competitors must be able to access incumbent LEC local transmission facilities on just, reasonable and nondiscriminatory terms and conditions. This is because the incumbent LECs own the only loop facility serving the vast majority of American business locations. Nor is it possible for competitors to deploy their own loop facilities to most locations. This is true of virtually all small and medium-sized business locations as well as of the smaller locations of large, multi-location business customers. As a result, the Joint Commenters have no choice but to rely on incumbent LEC loops to serve the overwhelming majority of their customer locations.

Unfortunately, current FCC regulations do not require that the incumbent LECs provide competitors with the types of loops they need to deliver 21st century broadband services and applications to American businesses. *First*, under the current regulations, the incumbent LECs' packetized loops, including Ethernet loops, are free of any unbundling or dominant carrier regulation (indeed, Verizon's packetized services are free of even bedrock common carrier regulation). In the absence of such regulations, incumbent LECs have in many cases failed to offer a wholesale finished Ethernet product line on reasonable and nondiscriminatory rates, terms and conditions. Without access to such services and facilities, the Joint Commenters cannot deliver the next generation of high-bandwidth applications to small businesses. Competitors are also often unable to serve larger multi-location businesses that demand that a single carrier serve all of their locations, including those that can only be served by incumbent LEC loops.

Second, incumbent LECs are currently allowed to retire copper loops without any meaningful oversight, and, in addition, at least Qwest has willfully refused to provide competitors with conditioned copper loops. Given that copper loops can be a critically important

input for innovative xDSL and Ethernet-in-the-first-mile services, these shortcomings are extremely harmful to small businesses.

Finally, incumbent LECs' OCn loops are also free of any unbundling or dominant carrier regulation. In the absence of such regulation, competitors are unable to obtain reasonably priced optical backhaul services for the transmission of broadband traffic.

It should be clear by now that these flaws in the FCC's wholesale regulatory regime require prompt and comprehensive reform. Every day that the Commission delays such reform is another day that businesses of all sizes are denied the lower prices and increased innovation yielded by competition from multiple service providers. The Commission must therefore promptly adopt a Notice of Proposed Rulemaking in this proceeding for the purpose of (1) reestablishing appropriate price and service quality regulation for incumbent LEC Ethernet and other packetized local transmission facilities; (2) establishing robust regulatory review of incumbent LEC copper loop retirement; and (3) reestablishing appropriate price and service quality regulation for incumbent LEC OCn backhaul transmission facilities. In the meantime, the Commission should use all of the regulatory tools available to it, including merger conditions in the pending acquisition of Qwest by CenturyLink, to ensure that incumbent LECs comply with their existing legal duty to provide unbundled conditioned copper loops.

II. COMPETITORS ARE PROVIDING INNOVATIVE IP-BASED SERVICES TO BUSINESSES OF ALL SIZES.

Competitors in the business broadband marketplace today are providing innovative services, many of which are IP-based, to businesses of all sizes across a multitude of industries, including retail, health care, hospitality, professional services, financial services, insurance and real estate. In serving these critical sectors of the economy, competitors are responding to seismic shifts in demand patterns among business customers. Indeed, businesses of all sizes

increasingly seek to utilize competitors' services to (1) simplify their networks and combine voice, data, video, and Internet traffic over a single connection; (2) choose Quality of Service ("QoS") parameters to prioritize key traffic and applications; (3) connect multiple offices, branches, or stores over a private network provided by a single service provider; (4) support high-bandwidth applications at a lower cost; (5) transport and store critical business data reliably and securely; and (6) scale bandwidth as their businesses grow. As discussed herein, incumbent LECs and cable companies have often failed to tailor their services to meet these evolving demands as well as the Joint Commenters have.

A. Cbeyond

Cbeyond is a managed services provider that delivers integrated packages of voice, mobile and broadband services to more than 53,000 small businesses in 14 markets nationwide. Cbeyond offers core communications services such as local and long-distance voice, mobile, and broadband Internet access as well as productivity-enhancing applications such as voicemail, email, Web hosting, data backup, file-sharing, and virtual private networking. The company provides these services over a private, 100 percent IP, managed-packet network.

Cbeyond's target market is small businesses with between 5 and 249 employees. The average Cbeyond customer has 12 employees, purchases 8 voice lines and 7.3 applications, generates revenue for Cbeyond of approximately $750 per month, and has a 3-year contract.

Cbeyond has been successful in selling applications and services (e.g., Hosted Microsoft Exchange, Cbeyond Secure Backup & Fileshare, Cbeyond Secure VPN, and SIP Trunking Service) to small businesses because, unlike either incumbent LECs or cable operators (who frequently mass market their services via media advertisements and mailings), Cbeyond utilizes a field-based and consultative sales model. Cbeyond relies on approximately 55 direct sales representatives per market to make on-site visits to potential customers. During these

consultative sales visits, Cbeyond representatives explain the benefits associated with its small business applications and services.

Cbeyond works closely with every one of its small business customers in all of its 14 markets to provide the IT and telecommunications applications that maximize the efficiency of those businesses. The benefits yielded by these services are far too numerous to describe here. Several examples of customer experiences in the Atlanta, Georgia area illustrate the point, however. For instance, Cbeyond's BeyondVoice package, which includes local and long distance calling and high speed Internet as well as voicemail, email, PC backup, security software and Web hosting, allowed a small financial services firm in Atlanta to save $1,500 to $2,000 per month by using idle voice lines for broadband Internet access.[3] Cbeyond's scheduled call forwarding service allowed a small specialty healthcare practice in Atlanta to both save $12,000 annually by replacing its costly answering service and increase productivity by reducing the number of after-hours phone calls back and forth with the answering service.[4] By using Cbeyond's applications and services, including Cbeyond's BeyondVoice package and productivity-enhancing applications such as Webmail, Fax to Email, and BeyondOffice, a mid-sized real estate brokerage firm in an Atlanta suburb was able to save at least $65,000 annually by outsourcing its IT needs and hiring fewer IT support personnel.[5]

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[3] *See* Cbeyond Customer Stories, "Reliable Service for Critical Communications," *available at* http://www.cbeyond.net/Portals/0/docs/stories/harris-harris.pdf.

[4] *See* Cbeyond Success Story, "Piedmont Rheumatology Consultants," *available at* http://www.cbeyond.net/Portals/0/docs/stories/piedmont-rheumatology.pdf.

[5] *See* Cbeyond Success Story, "Solid Source Realty," *available at* http://www.cbeyond.net/Portals/0/docs/stories/SSR_Case_Study.pdf.

Cbeyond has found that it loses few customers to incumbent LECs or cable operators because small businesses do not perceive the offerings of incumbent LECs and cable operators as viable substitutes for the applications and services that Cbeyond offers. Incumbent LECs appear not to be focused on serving small and medium-sized businesses in the geographic areas that Cbeyond serves. Moreover, many small businesses demand guaranteed bandwidth that the shared network architecture used by cable operators often cannot provide. Nor do Cbeyond's customers view fixed wireless services as substitutes for the services that Cbeyond provides. This is because, among other things, (1) fixed wireless providers rely on a shared network architecture and cannot guarantee QoS; (2) voice traffic over fixed wireless networks is subject to distortion, jitter, and latency; and (3) fixed wireless networks cannot support a number of data applications that require constant communication with the server, such as Cbeyond's Hosted Microsoft Exchange application and videoconferencing applications.

B. Integra

Integra is the fourth largest competitive LEC in the U.S. It provides integrated communications to more than 100,000 business and carrier customers across 33 metropolitan areas in 11 Western states. Integra owns and operates a 2,800 route mile metropolitan area network and a 4,900 mile high-speed long-haul fiber network.

In addition to standalone local voice, long distance voice, and Internet access services, Integra offers a host of integrated voice and data services and applications delivered over a full range of access methods, including DSL, Broadband (Bonded DSL), T1s, Ethernet-over-Copper, and Ethernet-over-Fiber. These services and applications include Internet access, PRI, Digital Trunking, Business Lines, and SIP Trunking.

Integra also offers Network and VPN Solutions that allow businesses to connect their multiple locations over a private network. These solutions use Multi-protocol Label Switching

("MPLS") technology to simplify a business customer's network by converging multiple protocols and traffic types over a single connection and to enable businesses to more quickly deploy powerful business applications such as VoIP, supply chain management, and customer relationship management applications. Integra's Network Solutions product is a Layer 2 data networking service that provides point-to-point or point-to-multipoint Ethernet connectivity over one or more Virtual LANs. Network Solutions offers a diverse selection of bandwidth options, from T1 to GigEthernet, to provide businesses with the flexibility to select the required bandwidth at each of their locations based on their current requirements and to upgrade as their needs change.

Integra's MPLS IP-VPN Solutions product is a fully managed Layer 3 VPN network service. Integra uses MPLS to enhance the flow of IP traffic by making better use of all available network paths. MPLS creates labels for each IP packet and these labels "inherit" the QoS marking,[6] which network designers use to schedule the packet's movement across a network. Integra's MPLS IP-VPN Solutions product benefits businesses by enabling them to (1) prioritize key applications using flexible QoS options; (2) scale bandwidth easily by upgrading bandwidth and changing the network configuration with minimal effort and capital expenditure; and (3) reduce network costs by eliminating the cost of supporting many types of equipment required for legacy networks.

Additionally, Integra offers a variety of managed services, including email, Web hosting, data storage backup, collocation services, network utilization monitoring, network notification service, and an online customer portal. For example, Integra's network utilization monitoring

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[6] That is, Integra will honor the QoS marking (i.e., the value that designates the quality or priority of the traffic) chosen by the customer rather than resetting it to a default "generic" value.

service enables customers to visualize the volume of traffic traversing their circuits and to determine whether they have sufficient bandwidth to meet their current and future needs. Integra also delivers an array of managed telephony services, including equipment sales and rentals, integrated equipment and network services, and hosted IP-PBX services.

Integra derives **[***BEGIN HIGHLY CONFIDENTIAL***]**

[*END HIGHLY CONFIDENTIAL***]** from small and medium-sized business customers **[***BEGIN HIGHLY CONFIDENTIAL***]**

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[*END HIGHLY CONFIDENTIAL***]** Integra's small and medium-sized business customers are increasingly demanding IP-based services. For instance, **[***BEGIN HIGHLY CONFIDENTIAL***]**

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Integra's IP Backbone uses MPLS protocol to supply QoS that enables Integra to provide many new integrated voice and data solutions or standalone data solutions to small and medium-sized business customers. The following case study examples are illustrative:

- A retailer with nine locations in two Western states using legacy services was experiencing high customer dissatisfaction due to long lines at checkout counters. The retailer needed an IP-based Wide Area Network ("WAN") service to facilitate faster point-of-sale throughput at each checkout station. Integra provided a data solution using its MPLS network to increase point-of-sale throughput at each checkout counter by prioritizing the point-of-sale transactions over other traffic. Integra's solution increased labor efficiency and overall customer satisfaction because each checkout station could serve more customers with greater speed than previous solutions lacking QoS. The impact to the retailer's overall business has been quantified in growing sales revenues in a difficult economy and increased customer satisfaction rates.

- A financial services company with five satellite offices across one state needed to increase bandwidth to each office and consolidate all voice traffic onto a private IP network. The company's legacy data services were low-band ISDN-based services, which provided insufficient bandwidth for each satellite office to serve its customers. Integra provided the company with a converged voice and data solution which managed QoS and increased transactional speeds for each office and reduced overall voice communication costs by more than 20 percent. The company was also able to better meet peak demands.

- A freight forwarding company with four locations was using legacy Frame Relay services provided by an incumbent LEC which required an upgrade to support the higher-bandwidth applications running over the company WAN. In response to the customer's request for a service upgrade, the incumbent LEC proposed to increase the capacity of the customer's connections on the incumbent's legacy Frame Relay platform. This was an extremely expensive solution that offered the customer only marginal relief for its bandwidth problem. Integra built an MPLS solution that doubled the effective bandwidth at each customer location and prioritized applications above Internet traffic, while only increasing the customer's total network expense outlay by 10 percent. Integra's solution met the small business customer's growing need to separate critical data applications by prioritizing traffic.

Integra has found that incumbent LECs and cable operators sometimes market voice and broadband products to small and medium-sized businesses, but those service providers do not offer truly robust and affordable "managed services" that are tailored to the needs of small and medium-sized businesses. Rather, in Integra's experience, the managed services offered by incumbent LEC and cable companies are targeted to the medium-to-large enterprise customer

segment. Moreover, Integra has found increased demand and sales opportunities in providing managed MPLS-based services to small and medium-sized businesses with QoS via IP connections that utilize a 2-wire UNE conditioned copper loop. Many small businesses operate simple client-server based applications and protocols that can be successfully managed with a connection speed of 2 Mbps. Integra utilizes 2-wire UNE conditioned copper loops to provide this level of connectivity as part of a managed network solution to multi-location small businesses with less than 20 locations at an affordable price.

C. MegaPath and Covad

MegaPath operates one of the largest end-to-end communications networks in the country. In 2010, MegaPath combined with Covad Communications Company and Speakeasy to form a single company providing a full range of voice, data, Internet access, private networking and managed security solutions to business customers. MegaPath offers turnkey solutions for enabling businesses to communicate with customers, partners and employees and serves more than 85,000 businesses of all sizes.

MegaPath has found that the vast majority of small businesses continue to use inefficient best-efforts, consumer-class broadband services, which rely on shared networks and do not provide the QoS that businesses need to compete in the global economy. Price is a major reason for this. Small businesses often must choose between the less expensive, but lower-speed and less-reliable mass market xDSL and cable modem services[7] on the one hand and the very

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[7] As Comcast has explained, its "Business Class" cable modem service is "technically very similar" to that which it sells to its residential customers. *See* Application of CIMCO Communications, Inc., Assignor, and Comcast Phone, LLC, Comcast Phone of Michigan, LLC, and Comcast Business Communications, LLC, Assignees, WC Dkt. No. 09-183, at 13 (filed Oct. 7, 2009). In MegaPath's experience, cable companies also lack the expertise in designing applications and providing the level of customer care necessary to meet the needs of small and medium-sized business customers.

expensive, guaranteed bandwidth services offered to enterprise customers under Service Level Agreements on the other hand. MegaPath has been filling a significant gap in these offerings by developing broadband offerings especially for small and medium-sized businesses. These offerings include business Ethernet services with reliable speeds of up to 20 Mbps. MegaPath offers a variety of applications over these access services, including voice, Internet service, email, Web hosting, and value-added services such as managed security services. Small and medium-sized businesses are increasingly demanding MegaPath's business Ethernet services because they provide more bandwidth at a lower cost, scalability to meet a growing business' bandwidth needs, and business-critical reliability, all using the customer's existing infrastructure.

In general, MegaPath's customer solutions leverage the company's MPLS-enabled Tier-1, all-optical IP network. MegaPath's intelligent network platform offers various levels of QoS and Class of Service ("CoS") options which allow businesses to proactively manage bandwidth effectively and optimize application performance across MegaPath's core network and customers' loops. MegaPath defines QoS as how quickly traffic will traverse the network and CoS as how quickly traffic gets onto the network. QoS and CoS can be adjusted to support specialized application requirements to deliver efficiencies that are currently not readily available from incumbent LECs and cable companies for many businesses, especially small and medium-sized businesses.

MegaPath's services enable business customers to match QoS levels to customers' highest priority applications to meet network priority, delivery and latency targets in order to ensure optimized performance over MegaPath's network. For example, a "best effort" level of service is typically appropriate for residential Internet service, while a higher level of QoS with increased packet delivery is more appropriate for business data applications (i.e., application

hosting). An even higher level of priority is required for low latency and low jitter voice or data applications. The highest level of priority, which provides the lowest possible jitter and latency, is appropriate for customers that require dedicated real-time video conferencing service.

MegaPath also allows business customers to designate their traffic over their own loops with differentiated CoS levels based on the end user's requirements and to ensure that the packets are managed appropriately onto the WAN. CoS also allows business customers to manage their own network congestion as needed. For example, different gradations of CoS levels are appropriate for different applications and each of the following applications may require increasing levels of CoS: (1) email that requires little to no packet prioritization in order to function properly, (2) general Internet surfing, (3) routing of business-transaction data, (4) higher quality VoIP and video applications, and (5) certain network control and related protocols. Businesses use these gradations in CoS as well as QoS to improve their efficiency, reduce their costs, and increase their revenues by reaching more customers.

D. tw telecom

tw telecom provides managed network services, specializing in converged services, Ethernet and transport data networking, Internet access, local and long distance voice, VoIP, VPN, and security, to federal, state, and local government, higher educational institutions, enterprises and communications services companies throughout the U.S. and globally. tw telecom connects more commercial buildings to its fiber network throughout the country than any other competitive communications provider. The company has the third-highest market share of retail Ethernet ports in service and one of the ten most interconnected IP backbones in the world.

tw telecom has been a leader in Ethernet innovation, enabling U.S. businesses of all sizes, hospitals, universities, and other institutions to benefit in concrete ways from the inherent

efficiencies of Ethernet networks. As tw telecom has explained, Ethernet services provide significantly more bandwidth at substantially lower costs than legacy broadband services (e.g., Frame Relay and ATM).[8] Ethernet services are also more flexible and scalable than legacy broadband services (i.e., service providers can increase capacity or change service features through simple remote adjustments rather than through the deployment of new electronics).[9] The following examples are illustrative:

- tw telecom provided 100 Mbps Ethernet connections to eight locations of a multi-location radiology practice in Tucson, Arizona in order to support the transfer of medical images between patient sites and radiologists for interpretation.[10] tw telecom's Ethernet service provided the high bandwidth necessary for teleradiology and enabled radiologists to transmit the results of their readings to physicians within five minutes after completion.[11] tw telecom's solution also provided "high reliability" and the scalability to enable the practice "to deploy cutting edge technology without fear of being limited by bandwidth considerations."[12]

- A daily newspaper with a circulation of nearly 300,000 that also publishes several local papers and operates 25 websites and blogs relied on legacy services that could not

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[8] *See* Letter from Thomas Jones, Counsel for tw telecom inc., to Marlene H. Dortch, Secretary, FCC, GN Dkt. Nos. 09-47, 09-51 & 09-137, at 2 (filed Dec. 22, 2009) ("*tw telecom December 22, 2009 Letter*").

[9] *See id.*

[10] *See generally* Press Release, Time Warner Telecom, "Time Warner Telecom Native LAN Speeds Sharing of Digital Patient Exams to Improve Patient Care at Radiology Ltd." (Feb. 23, 2004), *available at* http://www.twtelecom.com/Documents/Announcements/News/2004/News2004_Radiology_Limited.pdf ("tw telecom-Radiology Ltd. Press Release"); Press Release, Time Warner Telecom, "Time Warner Delivers Additional Data Services To Tucson's Radiology Ltd." (July 29, 2005), *available at* http://www.twtelecom.com/Documents/Announcements/News/2005/PR-Radiology_Ltd.pdf.

[11] *See* tw telecom-Radiology Ltd. Press Release at 2.

[12] *Id.*

support its growing bandwidth needs.[13] tw telecom installed a 10-site Ethernet-based data, Internet, and voice network that significantly improved connectivity across the entire company.[14] The network provides 40 Mbps of Ethernet Internet connectivity and voice services to all of the paper's locations as well as 20 Mbps of metro Ethernet to support the paper's transport of large amounts of data.[15] tw telecom's solution also provided increased security and reliability and "immediately reduced [the paper's] costs by more than 10 percent."[16]

- tw telecom installed a 31-site voice and Ethernet network for a regional bank in southwest Louisiana with 275 employees.[17] The bank had "an aging TDM-based network" and sought to streamline its network management and enhance its ability to securely move financial data between its branch locations.[18] tw telecom deployed its VersiPak Integrated LAN service to provide scalable, integrated voice and data connectivity between all of the bank's locations.[19] tw telecom also installed a 45 Mbps Ethernet data circuit for connectivity to the bank's data center, thereby improving business continuity in the event of severe weather or a natural disaster.[20]

tw telecom began driving Ethernet deployment and delivering its attendant benefits to businesses years before Ethernet was considered the inevitable replacement for legacy ATM and Frame Relay services. While incumbent LECs have now recognized the promise of Ethernet, they initially slow-rolled the deployment of Ethernet in order to protect revenues from more

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[13] *See generally* Press Release, tw telecom, "Kansas City Star Builds for the Future with tw telecom Ethernet Solutions" (June 9, 2009), *available at* http://www.twtelecom.com/Documents/Announcements/News/2009/KCSTARFINAL.pdf.

[14] *See id.*

[15] *See id.* at 2.

[16] *See id.* at 1.

[17] *See generally* Press Release, tw telecom, "Cameron State Bank Boosts Reach and Reliability with 31-Site Voice and Data Solution from tw telecom" (Feb. 2, 2009), *available at* http://www.twtelecom.com/Documents/Announcements/News/2009/CameronStateBankFINAL.pdf.

[18] *Id.* at 1.

[19] *See id.*

[20] *See id.*

expensive legacy ATM and Frame Relay services.[21] By contrast, today, tw telecom is continuing to innovate by pushing the deployment of Ethernet transmission to end-user business customers that will allow them to monitor the service characteristics of the transmission (e.g., jitter, packet loss, and throughput) in real time.

III. DEFICIENCIES IN THE REGULATION OF INCUMBENT LEC WHOLESALE SERVICES ARE PREVENTING COMPETITORS FROM EXPANDING THE AVAILABILITY AND IMPROVING THE QUALITY OF THE SERVICES THEY OFFER TO BUSINESSES.

While competitors such as the Joint Commenters have driven innovation and deployment of services tailored to the particular needs of American businesses, the availability and quality of those services is artificially and unnecessarily constrained by the manner in which the Commission regulates incumbent LEC wholesale offerings.

A. Competitors Are Ready Today To Expand The Availability And Improve The Quality Of Services Offered To American Businesses.

Competitors are ready and willing to bring the benefits of their current service offerings to more businesses within their existing footprints as well as to businesses in new geographic areas. For example, Integra and MegaPath would like to extend the geographic footprint of their IP service offerings into locations that are beyond the reach of their networks today. Cbeyond would like to increase the rate at which it enters new markets and at which it expands its service offerings within existing markets. tw telecom would like to expand the availability of Ethernet to millions of new business customers.

In addition, competitors are ready and willing to increase the quality of services they offer to American businesses. Indeed, as mentioned, small and medium-sized businesses are increasingly demanding services that require both greater and more flexible bandwidth as well as

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[21] *See tw telecom December 22, 2009 Letter* at n.18.

more sophisticated features than the DSn-based services available today. Cbeyond, Integra, and MegaPath seek to meet this demand with productivity-enhancing applications and services such as cloud computing, software-as-a-service, virtualized desktops, robust data protection, cloud-based backup, sophisticated video security systems, and high-capacity imaging and video services to support telemedicine, distance learning and telecommuting. Small and medium-sized businesses would be able to leverage these "big business" applications to increase their efficiency in a weak economy.[22]

For example, Cbeyond could offer virtualized desktops which obviate the need for a small business to purchase and maintain costly hardware and software. In particular, a virtualized desktop, which hosts an end user's computing environment in the cloud, would allow a small business to lower equipment costs, immediately upgrade to the latest versions of software at no additional cost, enable collaboration among employees, and allow employees to access their documents from around the globe. Cbeyond could provide a high-resolution video conferencing service that would diminish a small business' reliance on expensive and inefficient travel for in-person meetings. Cbeyond could also offer hosted digital image management, which would provide physicians with the vast amounts of capacity they need for the secure, long-term storage of high-resolution images such as x-rays and CAT scans. Cbeyond could also offer software-as-a-service, which provides access to software and its functions as a Web-based service, to enable small businesses to lower start-up costs, eliminate the need for on-site hardware, and provide complete scalability as their businesses grow.

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[22] *See also* Small Business Administration Office of Advocacy Comments, WC Dkt. No. 09-223, at 2 (filed Jan. 22, 2010).

Similarly, Integra could offer bandwidth-intensive third-party services provided via Internet access, such as cloud-based backup and storage, to small and medium-sized businesses. Integra could provide small and medium-sized health care practices with high-capacity imaging services to exchange high-resolution patient images with hospitals. In addition, the company could offer IPTV services to support video conferencing and distance learning. Integra could also provide off-site storage, business continuity and disaster recovery services, and server consolidation to businesses with multiple locations.

Additionally, Integra could provide advanced packetized telephony services to small and medium-sized businesses. These services, which include advanced trunking, IP PBX services, and hosted Centrex services, would allow small and medium-sized business customers to engage in multiple simultaneous voice calls at multiple locations on a scale that is neither technically nor economically feasible with current DS1-based services. This is because packet-based IP telephony is significantly more bandwidth-efficient than circuit-switched telephony. For instance, a DS1-based service provides up to 28 circuit-switched voice channels which must be shared with any data transmitted over the DS1 facility. By contrast, when IP telephony is provided over a high-capacity packetized loop, a medium-sized business could engage in 30, 40, or even 50 simultaneous voice conversations while still retaining substantial spare capacity for data transmission or Internet access on the facility.

tw telecom could offer extraordinary new efficiencies to medium and large businesses if it were able to make the next-generation of Ethernet services more widely available. Such efficiencies would enable customers to monitor the performance of transmission services in categories such as jitter and latency on a real-time basis. Customers would also be able to dynamically allocate bandwidth on a real-time basis to meet their needs. All of these efficiencies

would enhance American businesses' ability to take advantage of virtual presence services, cloud computing and virtual desktop applications.

B. Incumbent LECs Retain Overwhelming Market Power Over The Inputs Competitors Need To Expand The Availability And Improve The Quality Of Services Offered To American Businesses.

While competitors are ready to increase the availability and improve the quality of the services they provide to U.S. businesses, they can only do so if they are able to obtain access to the necessary incumbent LEC local transmission facilities. This is because incumbent LECs continue to own the only loop facilities serving the vast majority of business customer locations in the U.S.[23] Furthermore, as the Commission has recognized, it is generally not economically feasible for competitors to self-deploy loop facilities.[24] The Joint Commenters' experience confirms this fact.

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[23] *See, e.g.,* Government Accountability Office, Report to the Chairman, Committee on Government Reform, House of Representatives, *FCC Needs to Improve Its Ability to Monitor and Determine the Extent of Competition in Dedicated Access Services*, GAO-07-80, at 12 (Nov. 2006) ("In the 16 major metropolitan areas we examined, facilities-based competition for dedicated access services exists in a relatively small subset of buildings. Our analysis of data on the presence of competitors in commercial buildings suggests that competitors are serving, on average, less than 6 percent of the buildings with at least a DS-1 level of demand."); *see also In re Petition of Qwest Communications International Inc. for Forbearance from Enforcement of the Commission's Dominant Carrier Rules As They Apply After Section 272 Sunsets*, Memorandum Opinion and Order, 22 FCC Rcd. 5207, ¶ 47 (2007) (finding that "Qwest continues to possess exclusionary market power within its region by reason of its control over these bottleneck access facilities"); *In re Petitions of the Verizon Telephone Companies for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Boston, New York, Philadelphia, Pittsburgh, Providence and Virginia Beach Metropolitan Statistical Areas*, Memorandum Opinion and Order, 22 FCC Rcd. 21293, ¶ 37 (2007) (finding no evidence that competitors had "deployed their own extensive last-mile facilities for use in serving the enterprise market" in any of the six markets at issue).

[24] *See In re Unbundled Access to Network Elements; Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, Order on Remand, 20 FCC Rcd. 2533, ¶ 166 (2004) ("*TRRO*") (finding that it is "rarely if ever economic" for a reasonably efficient competitor to construct DS1 loops in the vast majority of wire centers in the country).

For example, Cbeyond relies entirely upon incumbent LEC loops or enhanced extended links to serve its customers in a cost-effective manner. It is not economically rational for Cbeyond to self-provision loop facilities because the revenue opportunities associated with serving the vast majority of small business customers are insufficient to cover the cost of loop construction. Indeed, as mentioned above, Cbeyond's average revenue per user is approximately $750 per month. Similarly, MegaPath's subsidiary, Covad, relies exclusively on incumbent LEC last-mile facilities to serve small and medium-sized business customers.

Integra would prefer to build, own, and operate all of the facilities it uses to serve its small and medium-sized business customers. However, as a general matter, it is not economically feasible for Integra to self-deploy loop or transport facilities. This is especially true with regard to loops. Integra evaluates whether it will construct loop facilities to an individual customer by forecasting the future cash flows associated with the build and calculating the Internal Rate of Return ("IRR"). The IRR takes into account future revenues, capital spending, operating costs, taxes, the length of the customer contract, and the creditworthiness of the customer. Capital spending and operating costs are based on a number of factors, including: (1) the distance between Integra's transport network and the customer building; (2) the franchise fees for laying fiber, which can range from $3-$5 per foot for aerial construction to as much as $150 per foot for underground construction (which is sometimes mandated by counties or municipalities); (3) payment for easements or other private rights-of-way; (4) license agreements entered into with the owner of the building; (5) labor; (6) equipment; and (7) ongoing costs to operate and maintain the loop.

Integra has found that in order to justify loop construction to a particular building, it must earn at least an approximate monthly recurring revenue of **[***BEGIN HIGHLY**

CONFIDENTIAL*]** **[***END HIGHLY CONFIDENTIAL***]** for services provided to customers in the building. This revenue requirement can be satisfied only if customers demand substantial volumes of high-capacity services. For instance, because the monthly recurring revenue from a typical Integra customer is approximately **[***BEGIN HIGHLY CONFIDENTIAL***]**

[*END HIGHLY CONFIDENTIAL***]** in order to justify loop deployment to a building. Integra is unable to meet this revenue requirement in the vast majority of commercial buildings in which it serves small and medium-sized business customers. Accordingly, as of the end of the second quarter of 2010, Integra had constructed its own loop facilities to **[***BEGIN HIGHLY CONFIDENTIAL***]** **[***END HIGHLY CONFIDENTIAL***]** buildings across its entire footprint. By contrast, as of the end of the second quarter of 2010, Integra served **[***BEGIN HIGHLY CONFIDENTIAL***]** **[***END HIGHLY CONFIDENTIAL***]** As these data demonstrate, it is not cost effective for Integra to deploy loop facilities to the overwhelming majority of its customer locations. Nor is it generally economically feasible for Integra to deploy transport along routes where traffic volumes are relatively low (e.g., less than three DS3s of capacity).

tw telecom has also found that there are many locations where it cannot economically construct its own loop facilities. In order to determine whether it is cost-effective to deploy its own loop facilities, tw telecom conducts a "build vs. buy" analysis in which it assesses whether the revenue opportunity associated with a given building or customer is large enough to justify construction.[25] The potential revenue must be sufficient to cover the total cost of construction

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[25] *See generally* Declaration of Scott Liestman on Behalf of tw telecom inc. (Sept. 21, 2009), attached as Attachment C to Opposition of Integra Telecom, Inc., tw telecom inc., Cbeyond, Inc., and One Communications Corp., WC Dkt. No. 09-135 (filed Sept. 21, 2009).

and recurring expenses and simultaneously achieve a reasonable rate of return on investment.[26] Costs vary based on the distance between tw telecom's transport network and the customer location as well as on the costs associated with obtaining access to poles, ducts, conduits, rights-of-way, and commercial buildings, the type of services provided, and the customer's willingness to enter into a longer-term contract.[27] As a result of these factors, as of the end of the first quarter of 2010, tw telecom had constructed loops to only **[***BEGIN HIGHLY CONFIDENTIAL***]** **[***END HIGHLY CONFIDENTIAL***]** of the buildings it served nationwide.

Furthermore, in the Joint Commenters' experience, there are very few viable alternatives to the incumbent LEC for the loop inputs needed to serve business customers. For instance, Cbeyond has not found any non-incumbent LEC wholesaler, including any cable company, that offers efficient rates, terms and conditions, has sufficiently extensive network coverage, or has sufficiently sophisticated and reliable wholesale operations support systems for Cbeyond to rely on it as a wholesale provider of loop facilities in any geographic market in which Cbeyond offers service.

Integra has had the same experience. It has been unable to rely on any cable provider as its primary wholesale provider of loop facilities in any of the markets in which it provides service.[28] In addition, Integra has found that fixed wireless providers cannot offer end-user

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[26] *See id.* ¶ 5.

[27] *See id.*

[28] *See, e.g.,* Declaration of Steve Fisher on Behalf of Integra Telecom, Inc. (Sept. 21, 2009), attached as Attachment D to Opposition of Integra Telecom, Inc., tw telecom inc., Cbeyond, Inc., and One Communications Corp., WC Dkt. No. 09-135, ¶¶ 7-9 (filed Sept. 21, 2009) (explaining that Cox is not a viable alternative to Qwest for the wholesale loops needed to serve Integra's business customers in Phoenix because (1) Cox only offers wholesale loop customers access to

customer connections at prices that are low enough or at levels of service quality that are sufficient to enable Integra to rely on those facilities to serve business customers.[29] Thus, Integra relies on the incumbent LEC for the vast majority of the loops its purchases. In fact, as of the end of the second quarter of 2010, **[***BEGIN HIGHLY CONFIDENTIAL***]**

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Notably, it has become increasingly important for Integra to have access to incumbent LEC loop facilities over as broad a footprint as possible in order to meet the needs of multi-location customers. Integra has found that small and medium-sized business customers increasingly demand Integra's MPLS IP-VPN Solutions to connect their multiple locations. The downward trend in the cost of customer hardware and the ability to provide this networking solution over loops with xDSL capacity levels has made this solution more accessible to smaller businesses with multiple locations. Because it is not practical for a typical small or medium-sized business customer to tie private IP-VPN connections from multiple vendors into a single

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the relatively limited number of buildings served by its fiber loop facilities; (2) Cox does not offer wholesale loop customers access to its coaxial loop facilities and thus, Cox does not offer wholesale loop substitutes for the conditioned copper loops and DS0 loops that Integra purchases from Qwest; (3) Cox's prices are high in the limited number of locations in which it offers wholesale loop facilities; and (4) Cox's wholesale operations support system capabilities have many serious limitations).

[29] *See id.* ¶ 10.

network, competitors like Integra must be able to serve all of the customer's locations in order to win the customer's business.

tw telecom is also becoming increasingly reliant upon incumbent LEC loop facilities as more of its multi-location customers demand that a single carrier serve all of their locations. The number of locations per tw telecom customer has grown by **[***BEGIN HIGHLY CONFIDENTIAL***]** **[***END HIGHLY CONFIDENTIAL***]**

C. Deficiencies In FCC Regulations Governing Incumbent LEC Wholesale Offerings Prevent Competitors From Obtaining The Inputs They Need To Expand The Availability And Improve The Quality Of Services Offered To American Businesses.

Although all of the available evidence demonstrates that incumbent LECs retain market power over the inputs needed to increase the availability and improve the quality of services offered to businesses, the FCC has deregulated many of these inputs. In at least one case, an incumbent LEC has refused to comply with the regulations that do require incumbent LECs to provide inputs to competitors. These deficiencies in the FCC's regulations and oversight have enabled incumbent LECs to exercise their market power by reducing the availability of critical inputs and/or increasing the prices for these inputs. For instance, competitors (1) are being denied access to reasonably priced inputs that are needed to expand the availability of and drive down prices for services such as Ethernet; (2) cannot access copper facilities in many locations due to copper retirement; (3) are being denied access to conditioned copper loops in compliance with Commission rules; and (4) cannot access optical-level transport circuits on just and reasonable rates, terms, and conditions. Competitors also face barriers to entry in the market for productivity-enhancing applications and services that deliver capacity at or above 6 Mbps but below DS3 (i.e., 45 Mbps) to small and medium-sized businesses. As a result, American

businesses have fewer providers from which they can purchase IP-based services than they otherwise would.

1. *Packetized Loops*

a. Packetized Capabilities of Fiber and Hybrid Loops

In 2003, the Commission eliminated Section 251 unbundling for newly deployed fiber loops[30] and certain components of hybrid fiber-copper loops,[31] even where competitors faced impairment, in order to give incumbent LECs the incentive to deploy next-generation broadband facilities.[32] The following year, using the same rationale, the FCC eliminated the BOCs' independent obligation to provide unbundled access to these broadband network elements under Section 271 of the Act.[33] As a result, today, competitors lack unbundled access to the packetized bandwidth of fiber loops and hybrid fiber-copper loops needed to provide the affordable "big business" applications and services to small and medium-sized businesses described above.[34] As the Joint Commenters have explained, small and medium-sized businesses are increasingly

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[30] *See In re Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, 18 FCC Rcd. 16978, ¶¶ 273-280 (2003) ("*TRO*") (subsequent history omitted).

[31] *See id.* ¶¶ 286-295.

[32] *See id.* ¶¶ 173, 244, 290.

[33] *See In re Petition for Forbearance of the Verizon Telephone Companies Pursuant to 47 U.S.C. § 160(c); SBC Communications Inc.'s Petition for Forbearance Under 47 U.S.C. § 160(c); Qwest Communications International Inc. Petition for Forbearance Under 47 U.S.C. § 160(c); BellSouth Telecommunications, Inc. Petition for Forbearance Under 47 U.S.C. § 160(c)*, Memorandum Opinion and Order, 19 FCC Rcd. 21496, ¶¶ 21-25 (2004) ("*Section 271 Broadband Forbearance Order*").

[34] *See generally* Petition for Expedited Rulemaking, *In re Cbeyond, Inc. Petition for Expedited Rulemaking to Require Unbundling of Hybrid, FTTH, and FTTC Loops Pursuant to 47 U.S.C. § 251(c)(3) of the Act*, WC Dkt. No. 09-223 (filed Nov. 16, 2009) ("Cbeyond Petition for Expedited Rulemaking").

demanding applications and services that require both greater bandwidth and more sophisticated features than those which can be provided using DS1 loops. Moreover, while existing UNEs can in some cases be used to provide broadband solutions to small and medium-sized business customers, there are many situations in which competitors cannot use such facilities.

First, while competitors such as Integra and MegaPath have been able to use Ethernet-over-Copper technology to provide higher bandwidth services to small and medium-sized businesses, they have been able to do so in only a subset of customer locations. This is because copper is unavailable in many suburban areas as a result of copper retirement or failure to maintain the copper. In addition, copper loops used to provide Ethernet-over-Copper services cannot exceed a certain length.[35] As a result, Cbeyond has found that it can serve only 37 percent of its existing small business customer base in the AT&T territory using Ethernet-over-Copper technology.[36]

Second, reliance on copper subloops in combination with remote terminal collocation is not a viable strategy in at least some circumstances. Indeed, QSI Consulting has found that "[a]lthough the distribution portions of those [fiber-to-the-curb or fiber-to-the-home] loops may remain on copper and in theory could be purchased on an unbundled basis, the economic reality is that accessing them at the ILECs' remote terminals ('RTs') is almost always economically infeasible, because the high costs of collocating the CLECs' DSLAMs at the RT (as well as the transport required from the RT) cannot be spread across a sufficiently large customer base, in

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[35] *See* Cbeyond Petition for Expedited Rulemaking at 18-19.

[36] *See id.* at 19 (describing Cbeyond study). As Cbeyond has explained, given the breadth of Cbeyond's network coverage in the large metropolitan areas in which it operates in that territory, Cbeyond's analysis provides a representative survey of the feasibility of using Ethernet-over-Copper to serve small and medium-sized business customers throughout the country. *See id.* at 19-20.

contrast to what can be achieved at the higher level of aggregation occurring upstream at the ILEC central office."[37] For example, because there are multiple remote terminals in a wire center, competitors would be required to deploy multiple pieces of equipment to reach the same number of customers as a single piece of equipment in the central office. Moreover, in Integra's experience, AT&T and Verizon do not provide information on the geographic areas served by their remote terminals. Integra has also found that the TELRIC rates for access to remote terminals are uneconomically and unrealistically high. As a result of these barriers to entry, competitors that relied on the remote terminal collocation strategy have either gone out of business or abandoned reliance on remote terminals.

Third, TDM inputs cannot be relied upon to efficiently provide services at or above 6 Mbps of capacity to small and medium-sized businesses. For instance, it is generally economically infeasible for competitors to bond multiple DS1 UNE loops together in order to provide packetized services at or above 6 Mbps of capacity to small and medium-sized business customers.[38] It is also uneconomic to rely on a DS3 loop for this purpose.[39] Moreover, in

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[37] *See* QSI Consulting, Inc., *Viability of Broadband Competition in Business Markets: An Analysis of Broadband Network Unbundling Policies and CLEC Broadband Competition*, at 21 (Jan. 21, 2010), attached as Exhibit A to Comments of Covad Communications Company, WC Dkt. No. 09-223 (filed Jan. 22, 2010) ("*QSI Business Broadband Study*").

[38] *See* Cbeyond Petition for Expedited Rulemaking at 13-14 (explaining that in most cases, the cost of multiple DS1 inputs exceeds the revenues that can be generated).

[39] *See, e.g.,* Reply Comments of Cbeyond, Inc., WC Dkt. No. 09-223, at 14 & n.35 (filed Feb. 22, 2010) ("Cbeyond Reply Comments") (providing examples demonstrating the differentials between the DS3 input costs and the retail prices for 6+ Mbps ADSL services); *see also* Comments of Integra Telecom, Inc. and One Communications Corp., WC Dkt. No. 09-223, at 5 (filed Jan. 22, 2010) (explaining that "if a customer demands a service requiring 20 megabits of bandwidth, it is not efficient, or in many cases economically feasible, for the retail carrier to . . . 'overbuy' a single DS-3 from the incumbent").

Integra's experience, DS3 loops must generally be obtained by making a *bona fide* request for purchase from the incumbent LEC, which can further increase the cost of a DS3 input.

Fourth, self-deployment of facilities to deliver services at or above 6 Mbps of capacity to small and medium-sized businesses is not economically feasible. As the Commission has found, self-deployment is not economic unless a competitor can provide at least 2 DS3s to a given customer location.[40] Thus, one can assume that a competitor can only self-deploy a loop where the service to be provided via the loop yields revenues similar to the retail price of 2 DS3s. As Cbeyond has shown, however, even the costs of a single DS3 UNE loop input is orders of magnitude higher than the price of 6+ Mbps ADSL services for small businesses in the downstream retail market.[41] The retail price for 2 DS3s is almost certainly much higher than the single DS3 loop price. Thus, competitors are foreclosed from relying on self-deployment to deliver 6+ Mbps services to small and medium-sized business customers.

In a study released earlier this year, QSI Consulting reached similar conclusions. QSI Consulting examined the incremental revenues and costs associated with offering Ethernet services at speeds of 5 Mbps to 20 Mbps to small and medium-sized business customers to determine whether and when self-deployment of fiber loop facilities is a viable option for competitors.[42] It found that "CLECs are generally unable to viably construct and operate their own facilities except under very favorable circumstances when a large number of customers

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[40] *See TRO* ¶¶ 321 (holding that self-deployment is economically feasible only where a competitive LEC can provide multiple DS3s to a specific customer location); *id.* ¶ 324 (holding that an incumbent LEC's unbundling obligation will be limited to a total of 2 DS3s per requesting carrier to any single customer location).

[41] *See* Cbeyond Reply Comments at 14 & n.35.

[42] *See QSI Business Broadband Study* at 12.

(upwards of 24) are located very short distances [(i.e., 0.5 mile or less)] from an already existing metropolitan fiber ring."[43] In addition, the study concluded that there are other practical considerations which further limit a competitor's ability to viably self-deploy loop facilities including the significant time that it would take for a competitor to plan, construct, and turn-up broadband service in response to a new customer's request (in contrast to an incumbent LEC, which is typically able to deploy its overlay fiber networks on a market-by-market basis in advance of actual customer demand).[44]

b. Ethernet Loops

In recent years, the Commission has deregulated Ethernet special access services offered by incumbent LECs.[45] In 2006, the FCC failed to act by the statutory deadline under Section 10 of the Act on Verizon's petition for forbearance from Title II and *Computer Inquiry* requirements for non-TDM-based, packetized and optical special access inputs, including inputs used to provide Ethernet services. The petition was therefore granted by operation of law.[46] In 2007 and

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[43] *Id.* at 34-35.

[44] *See id.* at 22, 36.

[45] *See generally In re Qwest Petition for Forbearance Under 47 U.S.C. § 160(c) from Title II and Computer Inquiry Rules with Respect to Broadband Services*, Memorandum Opinion and Order, 23 FCC Rcd. 12260 (rel. Aug. 5, 2008) ("*Qwest Broadband Forbearance Order*"); *In re Petition of the Embarq Local Operating Companies for Forbearance Under 47 U.S.C. § 160(c) from Application of Computer Inquiry and Certain Title II Common-Carriage Requirements et al.*, Memorandum Opinion and Order, 22 FCC Rcd. 19478 (rel. Oct. 24, 2007) ("*Embarq & Frontier/Citizens Broadband Forbearance Order*"); *In re Petition of AT&T Inc. for Forbearance Under 47 U.S.C. § 160(c) from Title II and Computer Inquiry Rules with Respect to Its Broadband Services et al.*, Memorandum Opinion and Order, 22 FCC Rcd. 18705 (rel. Oct. 12, 2007) ("*AT&T Broadband Forbearance Order*"); *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*, News Release, WC Dkt. No. 04-440 (rel. Mar. 20, 2006) ("*Verizon Default Forbearance Grant*").

[46] *See generally Verizon Default Forbearance Grant.*

2008, the FCC granted similar relief to AT&T, Qwest, and other incumbent LECs.[47] As a direct result of these decisions, competitors such as tw telecom have been unable to obtain Ethernet loops at wholesale on just, reasonable and nondiscriminatory rates, terms, and conditions. Incumbent LECs often charge extremely high rates and insist on unreasonable terms and conditions for wholesale Ethernet loops.[48]

tw telecom will be limited to providing Ethernet to a small percentage of the business customer locations across the country if it cannot obtain access to off-net Ethernet loops from incumbent LECs.[49] This is because the number of customer locations to which tw telecom can economically deploy its own loop facilities is limited and in the vast majority of locations to which it cannot efficiently deploy its own loops, the incumbent LEC owns the only loop facility connected to the building.[50] In addition, because business customers seeking to take advantage of the efficiencies of Ethernet generally require that a single carrier serve all of their customer locations, tw telecom will be unable to deliver the benefits of Ethernet services to more multi-location businesses without access to reasonably priced off-net Ethernet loops.[51] Furthermore, as

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[47] *See generally Qwest Broadband Forbearance Order*; *Embarq & Frontier/Citizens Broadband Forbearance Order*; *AT&T Broadband Forbearance Order*. The Commission eliminated rate regulation, in particular, of non-TDM-based special access inputs on the basis that it was retaining rate regulation of TDM-based DS1 and DS3 special access services. *See Qwest Broadband Forbearance Order* ¶ 28; *Embarq & Frontier/Citizens Broadband Forbearance Order* ¶ 24; *AT&T Broadband Forbearance Order* ¶ 25.

[48] *See, e.g., tw telecom December 22, 2009 Letter* at 7-9; Letter from Thomas Jones, Counsel for tw telecom inc., to Marlene H. Dortch, Secretary, FCC, WC Dkt. No. 05-25, at 3, 19 (filed June 14, 2010).

[49] *See tw telecom December 22, 2009 Letter* at 6.

[50] *See id.*

[51] *See id.* at 7 (explaining that, for example, even if tw telecom can efficiently self-deploy loop facilities to two locations of a multi-location business that require high-capacity Ethernet

tw telecom and others have explained, competitors can only partially rely on TDM-based inputs as a substitute for wholesale Ethernet inputs due to the expense and inefficiency of translating TDM signals to Ethernet.[52] Accordingly where, as is often the case, the incumbent LEC's wholesale Ethernet price is higher than the incumbent LEC's retail prices, tw telecom can be caught in a price squeeze, thereby foreclosing tw telecom from competing.[53]

2. *Copper Loops*

As discussed above, competitors such as Integra and MegaPath have been utilizing unbundled copper loops and Ethernet-over-Copper technology to provide higher-bandwidth applications and services to small and medium-sized businesses. As compression and transmission standards continue to evolve, the bandwidth that can be delivered via copper loops will only increase, making the copper network an increasingly viable means of providing business broadband services.[54] Indeed, Cbeyond is investing heavily in the equipment required to provide Ethernet-over-Copper services to small businesses in its footprint wherever it is economically rational to do so. Unfortunately, however, in many suburban areas, incumbent LECs have removed copper from locations served by fiber[55] or failed to maintain copper loops.

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connections (e.g., 100 Mbps), tw telecom will not win the customer's business unless it can obtain reasonably priced off-net facilities to serve the customer's other four locations which require relatively low-capacity Ethernet connections (e.g., 10 Mbps)). Thus, the lack of access to reasonably priced off-net Ethernet loops can undermine competitors' deployment of fiber. *See id.*

[52] *See id.* at 9.

[53] *See id.* at 8-9.

[54] *See* Reply Comments of Time Warner Telecom Inc. and One Communications Corp., RM-11358, at 16-17 & nn.14-15 (filed Apr. 2, 2007) ("tw telecom Copper Retirement Rulemaking Reply Comments").

[55] *See, e.g., QSI Business Broadband Studyr* at 12 & n.32.

The Commission's existing rules do not require incumbent LECs to obtain Commission approval before retiring spare copper loop facilities.[56] Thus, there is a risk that the availability of copper loop facilities and the availability of innovative business broadband services that can be provided using such facilities will be further reduced.

Competitors such as Integra have in some cases been unable to obtain access to conditioned copper loops on just and reasonable terms and conditions. In Integra's experience, Qwest has failed to provide competitive LECs with conditioned copper loops in compliance with applicable interconnection agreements and state and federal law.[57] When installing and repairing loops, for instance, Qwest refuses to test conditioned copper loops to digital levels despite the Commission's requirement that testing not be limited to voice levels.[58] Thus, Qwest discriminates against competitors seeking to provide innovative forms of xDSL service to small and medium-sized business customers over copper loops.

3. *OCn-Level Transport Facilities*

As discussed above, in a series of decisions in recent years, the Commission has

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[56] *See TRO* ¶ 281 (declining to "require affirmative regulatory approval prior to the retirement of any copper loop facilities"); *see also* 47 C.F.R. § 51.319(a)(3)(iv) & *id.* §§ 51.325-.333 (requiring incumbent LECs merely to provide notice of network changes, including retirement of copper loops and copper subloops).

[57] *See, e.g.,* Joint CLEC Initial Comments, *In the Matter of a Commission Investigation into Qwest Corporation's Provision of Network Elements to CLECs and into Related Marketing Practices Targeting CLEC Customers*, Minnesota PUC Dkt. Nos. P-421/CI-09-1066, at 12-49 (filed Nov. 24, 2009) (describing Qwest's practices throughout its 14-state territory regarding the provision of xDSL-capable copper loops).

[58] *See* 47 C.F.R. § 51.319(a)(1)(iii)(C) ("Insofar as it is technically feasible, the incumbent LEC shall test and report troubles for all the features, functions, and capabilities of conditioned copper lines, and may not restrict its testing to voice transmission only.").

deregulated incumbent LECs' optical special access services.[59] As a result, MegaPath and other competitors lack access to optical-level transport facilities on just and reasonable terms and conditions. These facilities are critical for efficient backhaul of broadband traffic now and in the future. Indeed, there is widespread agreement that carriers need to migrate to fiber backhaul networking in order to accommodate anticipated broadband traffic volumes.[60] Without access to these high-capacity transport facilities, MegaPath and other competitors will be unable to support the deployment of more affordable and more widely available broadband services to businesses.

IV. MARKET REFORMS ARE NEEDED TO ENSURE THAT COMPETITORS CAN EXPAND THE AVAILABILITY AND IMPROVE THE QUALITY OF SERVICES OFFERED TO AMERICAN BUSINESSES.

The Commission must address the flaws in wholesale regulatory regime in order to lower barriers to entry and increase competition in the business broadband marketplace. The Commission should promptly adopt an NPRM in this proceeding for the purpose of adopting the following changes to the wholesale regulatory regime.

First, the Commission should reestablish appropriate price and service quality regulation for incumbent LEC Ethernet and other packetized local transmission facilities. In particular, the Commission should require incumbent LECs to provide Section 251 unbundled access to the packetized capabilities of fiber and hybrid-copper loops.[61] As the Joint Commenters have

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[59] *See generally Verizon Default Forbearance Grant; see also Qwest Broadband Forbearance Order* ¶¶ 13, 35; *Embarq/Frontier Broadband Forbearance Order* ¶¶ 12, 31; *AT&T Broadband Forbearance Order* ¶¶ 12, 32.

[60] *See, e.g.,* Comments of Covad Communications Company, GN Dkt. No. 09-51, at 5-6 (Nov. 4, 2009) (discussing the need for affordable and high-capacity middle mile transport to deliver next-generation services and applications); Comments of New Edge Networks, Inc. et al., GN Dkt. No. 09-51, at 3-4 (filed Nov. 4, 2009) (explaining that continued investment in middle mile fiber facilities is needed "to support the burgeoning bandwidth demands" of enterprises).

[61] *See generally* Cbeyond Petition for Expedited Rulemaking.

explained, the premise underlying the Commission's decision to eliminate unbundling of these elements—that doing so would remove disincentives to invest in next-generation broadband facilities and spur broadband deployment—has proven to be false.[62] In fact, the experience in the U.S. and in other countries indicates that regulation of last mile incumbent LEC facilities does not deter investment and may actually stimulate investment in certain circumstances.[63] Furthermore, because competitors are impaired in the absence of unbundled fiber and hybrid loops,[64] the Commission's decision to deny those network elements to competitors has also failed to increase competitors' investment.[65]

Second, the Commission must reestablish dominant common carrier regulation for wholesale Ethernet special access service offered by incumbent LECs. Such regulation should include price cap regulation that yields incumbent LEC Ethernet special access prices that are below competitors' retail prices for Ethernet. Moreover, incumbent LECs must be required to provide wholesale customers with the same level and type of service, including the provision of real-time performance monitoring for such categories as jitter and latency, that they provide to their own retail Ethernet customers. Only then will widespread deployment of affordable Ethernet services to U.S. businesses be possible.

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[62] *See id.* at 5, 14-20; *see also* Comments of Covad Communications Company, WC Dkt. No. 09-223, at 7-8 (filed Jan. 22, 2010).

[63] *See, e.g.,* Cbeyond Petition for Expedited Rulemaking at 15-16 & 22-27; Cbeyond Reply Comments at 22-26; Reply Comments of PAETEC Holdings Corp. and TDS Metrocom, LLC, WC Dkt. No. 09-223, at 13-17 (filed Feb. 22, 2010) ("PAETEC Comments").

[64] *See, e.g.,* Cbeyond Reply Comments at 10-21; PAETEC Comments at 4-10.

[65] *See* Cbeyond Petition for Rulemaking at 15-16 (citing Lee L. Selwyn et al., Economics and Technology, Inc., *The Role of Regulation in a Competitive Telecom Environment: How Smart Regulation of Essential Wholesale Facilities Stimulates Investment and Promotes Competition*, at 21-28 (Mar. 2009)).

Third, the Commission must establish rules to prevent incumbent LECs from exploiting the copper loop retirement process to foreclose competition in the small business broadband market. The FCC should require incumbent LECs to seek prior approval for copper loop retirement, and, as part of the agency's review of retirement requests, interested parties should be given a meaningful opportunity to explain why such a request should be denied. This reform is warranted for several reasons. To begin with, the Commission has consistently found that competitors are impaired without access to copper loops needed to provide broadband services.[66] In addition, the benefits of allowing incumbent LECs to retire copper loops are minimal. As tw telecom has explained, retiring copper loops does not increase incumbent LECs' incentives to deploy fiber; rather, incumbent LECs deploy fiber because of the efficiencies and revenue opportunities associated with those facilities.[67] Moreover, as discussed, given that technological advances since the *TRO* have made copper loops an increasingly viable means of offering new broadband services, the costs of retiring copper loops are high.

Fourth, the Commission should reestablish robust price and service quality regulation for incumbent LEC OCn backhaul transmission facilities. This reform is needed particularly because MegaPath has found that incumbent LECs hold a monopoly or near-monopoly position on certain transport routes.

In addition, the FCC should exercise greater oversight of incumbent LECs' provision of conditioned copper loops. For example, it would be appropriate for the Commission to conduct

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[66] *See* tw telecom Copper Retirement Rulemaking Reply Comments at 6 & nn.3-4.

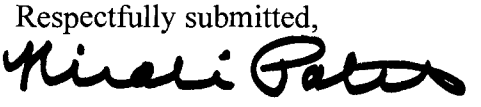
[67] *See id.* at 9-13.

an investigation into Qwest's noncompliance with the applicable rules.[68] Moreover, where there is such an obvious failure to comply with the Commission's rules, the FCC should use all of the regulatory tools available to it, including its broad authority under Section 214 to impose conditions on its approval of a transaction in furtherance of the public interest.[69] In particular, as Integra has explained in the Commission's CenturyLink-Qwest merger review proceeding, the FCC should impose conditions on CenturyLink and Qwest to ensure that the merged company complies with its existing obligations to provide conditioned copper loops.[70]

V. CONCLUSION.

For the foregoing reasons, the Commission should adopt the market reforms discussed herein.

Respectfully submitted,



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[68] *See* 47 U.S.C. § 403 (authorizing the Commission to institute an investigation on its own motion in order to enforce provisions of the Act).

[69] *See id.* § 214(c); *see generally In re Applications Filed for the Transfer of Control of Embarq Corporation to CenturyTel, Inc.*, Memorandum Opinion and Order, 24 FCC Rcd. 8741 (2009) (using broad public interest authority to impose conditions).

[70] *See* Comments of Cbeyond, Integra Telecom, Socket Telecom, and tw telecom, WC Dkt. No. 10-110, Attachment C, at 10 (filed July 12, 2010); Letter from Thomas Jones, Counsel for Cbeyond, Inc., Integra Telecom, Inc., Socket Telecom, LLC, and tw telecom, inc., to Marlene H. Dortch, Secretary, FCC, WC Dkt. No. 10-110, Attachment, at 6 (filed Sept. 24, 2010).