

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Appropriate Framework for Broadband Access to the Internet over Wireline Facilities)	CC Docket No. 02-33
)	
Universal Service Obligations of Broadband Providers)	
)	
Computer III Further Remand Proceedings: Bell Operating Company Provision of Enhanced Services; 1998 Biennial Regulatory Review – Review of Computer III and ONA Safeguards and Requirements)	CC Dockets Nos. 95-20, 98-10
)	

REPLY COMMENTS OF GENERAL COMMUNICATION, INC.

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SUMMARY

The evidence indicates that while intermodal competition is beginning in some broadband product markets, in many product and geographic markets, the ILECs continue to have significant market power in the underlying transmission facilities used to provide "broadband" services. The ILEC's intermodal inquiry focuses almost exclusively on the residential market for Internet access, and does not even discuss the broadband market for small and medium businesses. The record shows, however, that residential and business broadband customers are not in the same product market, and that intermodal competition in business product markets is limited, especially in the market for small and medium businesses.

ILECs also ignore the relevant geographic market, and fail entirely to demonstrate that there are other competitors providing service that could limit an ILEC's ability to impose a small, but significant and non-transitory, increase in price in the small and medium business market. It is axiomatic that where a business is not served by cable, cable does not provide a competitive alternative to ILEC transmission facilities. Moreover, DTH satellite and fixed wireless do not provide an adequate alternative to wireline broadband services. The evidence thus establishes that the vast majority of small and medium sized business broadband customers do not have access to intermodal competition sufficient to preclude a small, but significant and non-transitory, increase in price.

It would be arbitrary and capricious to eliminate *Computer II* based on intermodal competition in only one product market in some geographic areas, especially on an across-the-board basis. *Computer II* was based on the ILECs' market power resulting

from their control of bottleneck facilities. Because the ILECs still have significant market power in many product and geographic markets, the basis for *Computer II* remains valid. Until intermodal competition matures to the point that ILECs no longer have significant market power in the delivery of broadband services, Computer II can not be eliminated, at least on an across-the-board basis.

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In this proceeding, the Commission asked whether it should abandon the *Computer II* safeguards that have ensured the development of a competitive information services industry for nearly twenty years. The comments clearly establish that there is no basis for such an action, especially on an across-the-board basis without specific market analysis. The ILECs continue to have significant market power in the provision of the underlying transmission services that they use to provide "broadband Internet access," especially in small and medium business markets. "Broadband Internet access" is not itself a relevant product market, but includes several relevant and distinct product markets. ILECs have made no market-specific showing that their market power has eroded in those markets. Until there is such an erosion in the ILECs' market power in the underlying transmission services, there is no basis for rolling back *Computer II*'s

requirement that ILECs offer underlying transmission services separately from their information services.

I. INTRODUCTION

In *Computer II*, the Commission declined to regulate information services (then termed “enhanced” services) because the market for information services was “truly competitive.”¹ While there was competition in the market for information services, there was no competition in the underlying transmission facilities necessary for the provision of information services, *i.e.*, the telephone network. The lack of competition in these transmission facilities gave the state-sanctioned monopoly ILECs (the largest of whom at that time were the pre-divestiture AT&T and GTE, but which includes the other ILECs) an opportunity to use their control over the local network bottleneck to deny other information service providers access to consumers and anticompetitively to use their monopoly service to cross-subsidize their offerings in the competitive information services market.² It was for both these reasons—which both stem from the ILECs’ market power primarily resulting from their control over bottleneck local exchange facilities—that the Commission required ILECs that provide information services to offer the transmission component of the information service separately pursuant to tariff.³

The ILECs would have the Commission now believe that it failed to consider the possibility of intermodal competition in *Computer II*, and that beginnings of intermodal competition in some relevant information services markets requires a complete

¹ Final Decision, *Amendment of Section 64.702 of the Commission’s Rules and Regulations (Second Computer Inquiry)*, FCC 80-189, 77 FCC2d 384, 433, ¶ 128 (1980) [hereinafter *Computer II*].

² *See id.* at 467, ¶ 216.

³ *See id.*

reevaluation of *Computer II*'s tariff requirements.⁴ A simple reading of *Computer II* shows those arguments to be revisionist history. The prospect of intermodal competition is not new to the *Computer II* regime. Even in 1980 the Commission was aware that “technological trends suggest that hard-wire access provided by a telephone company will not be the only alternative [for provision of information services].”⁵ But while the Commission contemplated that wireline facilities provided by ILECs would not necessarily forever remain the only alternative for transmission of information services it also recognized that the telephone network’s “ubiquity and the amount of underlying investment suggest that whatever changes do occur will be implemented gradually.”⁶ The Commission thus concluded that the mere potential for intermodal competition was not enough to justify overlooking the ILECs’ ability to exercise market power through bottleneck control of local exchange facilities.⁷ Nothing in our six years of experience since the enactment of the Telecommunications Act of 1996 (“1996 Act”) suggests that the Commission was wrong when it concluded that change in the bottleneck monopolies

⁴ See *Comments of Verizon*, CC Docket Nos. 02-33, 95-20 and 98-10 at 34 (filed May 3, 2002) (“The existing *Computer Inquiry* rules were designed for the narrowband world and were premised on the notion that the Bell companies retained some measure of bottleneck control over narrowband telecommunications services.”); *Comments of SBC Communications, Inc.*, CC Docket Nos. 02-33, 95-20 and 98-10 at 18 (filed May 3, 2002) [hereinafter *SBC Broadband Framework Comments*] (“It is time – indeed past time – for the Commission to repeal this outdated [*Computer II* tariff] requirement, at least as it applies to broadband information services.”); *Comments of BellSouth Corporation*, CC Docket Nos. 02-33, 95-20 and 98-10 at 15 (filed May 3, 2002) (“Any conceivable rationale for *Computer Inquiry* safeguards over information service is no longer valid.”); *Comments of Qwest Communications International, Inc.*, CC Docket Nos. 02-33, 95-20 and 98-10 at 25-26 (filed May 3, 2002).

⁵ *Computer II* at 468, ¶ 219.

⁶ *Id.*

⁷ *See id.*

would be gradual -- indeed, experience has proven the truth of that prediction. Until intermodal competition has matured to the point that the ILECs can no longer exercise significant market power through bottleneck control of local exchange facilities, the underlying basis for the *Computer II* tariff requirement remains valid.⁸

II. THE RECORD CONFIRMS ILECS RETAIN MARKET POWER, AT A MINIMUM, FOR BUSINESS SERVICES

In order to try to justify an across-the-board dismantling of competitive safeguards against abuse by carriers with significant market power, the ILECs jump from evidence of intermodal competition in one product market (residential mass-market, “best efforts” Internet access) in some (but not all) geographic markets, to an assertion that the ILECs lack market power in all product and geographic markets without even attempting to analyze what product markets may be relevant using the market definition techniques previously recognized by the Commission.⁹ As the comments in this and the Commission’s Triennial Review¹⁰ proceedings document, this overreaching assertion is simply untrue. The record reveals that there are multiple product markets served by

⁸ See, e.g., Comments of Allegiance Telecom, Inc., CC Docket Nos. 02-33, 95-20 and 98-10 at 35 (filed May 3, 2002) [hereinafter *Allegiance Broadband Framework Comments*] (“[T]he legal, technological and market factors underlying the fundamental principles of the *Computer Inquiry* proceedings, upon which the safeguards are based, are equally valid today in the broadband services market.”).

⁹ See, e.g., Broadband Fact Report, CC Docket Nos. 02-33, 95-20 and 98-10 at 4 (filed Mar. 1, 2002) [hereinafter *Broadband “Fact” Report*]; Comments of the United States Telecom Association, CC Docket Nos. 02-33, 95-20 and 98-10 at 8-9 (filed May 3, 2002). While the *Broadband “Fact” Report* discusses competition in the residential market for Internet access and touches on competition in the market for broadband services to large businesses, it conspicuously does not discuss competition in the market for small and medium businesses.

¹⁰ See *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, Notice of Proposed Rulemaking, FCC 01-361, 16 FCC Rcd. 22781 (2001) [hereinafter *Triennial Review NPRM*].

technologies that could be loosely and imprecisely termed “broadband.”¹¹ Moreover, both the Commission’s prior decisions and the facts establish that the geographic market for those services is local.¹² There are thus many parts of the country in which the ILECs possess the only facilities that are able to provide services of the type and quality desired by the customer.¹³ In these relevant product and geographic markets, ILECs retain significant market power, which they have as a result of their position as the historical monopolist, and retain their ability to raise rivals’ costs or deny rivals’ access to necessary inputs.¹⁴ These are the same facts that justified imposition of the *Computer II* safeguards in the first place, and in those relevant markets, nothing has changed to justify elimination of the safeguards.

¹¹ See, e.g., Comments of WorldCom, Inc., CC Docket Nos. 01-338, 96-98, and 98-147 at 42 (filed April 4, 2002) [hereinafter *WorldCom Triennial Comments*]; *Time Warner Broadband Framework Comments* at 32-34; Joint Declaration of Anjali Joshi, Eric Moyer, Mark Richman, and Michael Zulevic on Behalf of Covad Communications Company at ¶¶ 14-18 (attached to *Covad Triennial Comments*) [hereinafter *Covad Communications Company Joint Declaration*]; Comments of DSL.net Communications, Inc., CC Docket Nos. 02-33, 95-20 and 98-10 at 38 (filed May 3, 2002) [hereinafter *DSL.net Communications, Inc. Comments*].

¹² See discussion and accompanying footnotes, *infra*, Part II.B.2.

¹³ “During 2001, Covad had to turn away over 24,000 end users across the country because they could only be served over a fiber-fed DSL-capable loop configuration, which the ILECs argue (incorrectly) incorporates a packet switching function and thus is not subject to unbundling.” Comments of Covad Communications Company, CC Docket Nos. 01-338, 96-98, and 98-147 at 59 (filed April 5, 2002) [hereinafter *Covad Triennial Comments*] (emphasis added).

¹⁴ See, e.g., Comments of Time Warner Telecom, CC Docket Nos. 02-33, 95-20 and 98-10 at 16 (filed May 3, 2002) [hereinafter *Time Warner Broadband Framework Comments*] (“The fact that the ILECs continue to have market power because of their control over bottleneck end-user facilities has been exhaustively documented in the *Non-Dominance* proceeding.”).

**A. RESIDENTIAL AND BUSINESS CUSTOMERS ARE NOT IN THE SAME
PRODUCT MARKET**

The failure of the ILECs to analyze all relevant product markets begins with their so-called *Broadband “Fact” Report*, which focuses on the residential market for Internet access, and contains no discussion of other product markets, such as the market for small and medium businesses. However, the record reveals that the service needs of businesses, including small and medium businesses, differ significantly from the service needs of casual residential users.¹⁵ Small and medium businesses often require multiple voice connections, high-speed Internet access, and data throughput with enhanced reliability and security, features that are typically not required by residential users.¹⁶ The record therefore confirms GCI’s experience that differing service needs put small and medium businesses in a product market distinct from that of residential users.¹⁷

The “broadband” market for small and medium businesses is likewise separate from that of large businesses. Although small and medium size businesses require far greater network reliability and security than do residential customers, as AT&T’s

¹⁵ See, e.g., *WorldCom Triennial Comments* at 39 (“[B]usiness customers – regardless of size – demand a higher quality of broadband services than that demanded by residential consumers.”); *Time Warner Broadband Framework Comments* at 32 (“Regardless of its determinations with regard to mass market broadband services, the Commission can come to no other conclusion than that the only competitors in the provision of broadband service to medium and large businesses are intramodal and that ILECs continue to control high-capacity end-user connections used by those intramodal competitors.”); *Covad Triennial Comments* at 36 (“In particular, cable plant is deficient because, even if CLECs could access it (which they cannot do under the law), broadband services offered thereon are not dedicated to the customer, lack the security of dedicated DSL facilities, and are rarely, if ever, available to business customers.”).

¹⁶ See *id.*

¹⁷ See Comments of General Communication, Inc., CC Docket Nos. 02-33, 95-20 and 98-10 at 13-15 (filed May 3, 2002) [hereinafter *GCI Broadband Framework Comments*].

comments in the Triennial Review proceeding indicate, many small and medium size businesses who require these network traits typically cannot afford to install and do not need higher capacity Frame Relay, ATM, or Gigabit Ethernet services, which are the preferred methods of broadband delivery to large businesses.¹⁸ However, small and medium businesses typically can afford DSL or other high-speed data services provided over conditioned loops, which provide sufficient bandwidth capacity as well as enhanced reliability and security at a relatively low cost by using already existing copper loops.¹⁹ Accordingly, the record indicates that there are at least three distinct “broadband” product groups—residential, small and medium businesses, and large businesses—and probably more given the various types of broadband services available.²⁰

Given that there are at least three product markets for broadband, rather than the single product market espoused by the ILECs, the Commission cannot look solely at the residential Internet access market in determining whether to retain *Computer II* safeguards. Whether there is competition in a residential broadband product market has

¹⁸ “Services requiring a transmission rate in excess of 1.5 Mbps must employ a fiber or radio based connection,” and “fiber has an uneconomically high cost per unit of transmission carried, unless the customer has enormous transmission requirements for its loop.” Comments of AT&T Corp., CC Docket Nos. 01-338, 96-98, and 98-147 at 131-32 (filed April 5, 2002) [hereinafter *AT&T Triennial Comments*]. Time Warner Telecom noted that it serves its medium and large business customers using either ILEC special access end-user connections or fiber end-user connections it builds. *Time Warner Broadband Framework Comments* at 33.

¹⁹ DSL’s ability to provide the functionality necessary for small and medium businesses at a relatively low cost is why DSL technology remains the option of choice for business broadband users. See *WorldCom Triennial Comments* at 40.

²⁰ The significant variety of services within any given category of broadband technology, such as DSL services, some of which are particularly well-suited to the residential market (ADSL) and some of which are geared almost exclusively to the business market (SDSL), suggests that there is more than three “broadband” product markets, and that broadband product markets are still evolving.

no bearing on whether there is competition in the market for broadband service to small and medium businesses, where those businesses demand different services with different characteristics. Accordingly, the Commission must determine whether the ILECs possess market power in each of the relevant product and geographic markets, as determined in accordance with the *1992 Horizontal Merger Guidelines*.²¹ To conclude otherwise would show “indifference” to the “state of competition” in the relevant markets.²²

**B. THERE ARE NOT SUFFICIENT INTERMODAL ALTERNATIVES TO
CONSTRAIN ILEC MARKET POWER IN BUSINESS SERVICES**

The record reveals that the ILECs retain bottleneck control of local facilities capable of serving the product market for small and medium businesses and face little to no prospect of intermodal competition in those markets in the near future.

1. Wireless and Satellite Services Do Not Constrain ILEC Market Power in Business Services

Most non-ILEC commenters that addressed the issue, including providers of such services themselves,²³ concluded that neither wireless nor satellite delivered “broadband”

²¹ See Comments of General Communication, Inc., CC Docket No. 01-337 at 9-12 (filed April 22, 2002) (noting that the Commission has previously relied on the DOJ's merger guidelines when analyzing market power).

²² See *United States Telecom Ass'n v. Federal Communications Commission*, Case No. 00-1012 (D.C. Cir., May 24, 2002), slip op. at 15 [hereinafter *U.S. Telecom Ass'n v. FCC*].

²³ See Comments of SES Americom, Inc., CC Docket No. 02-33 at 2-3 (filed May 3, 2002) (satellite broadband service); Comments of Hughes Network Systems, Inc., Hughes Communications, Inc., and Hughes Communications Galaxy, Inc., CC Docket Nos. 02-33, 95-20 and 98-10 at 2 (filed May 3, 2002) (satellite broadband service); *AT&T Triennial Comments* at 58 (fixed wireless broadband service); Comments of Sprint Corporation, CC Docket Nos. 01-338, 96-98, and 98-147 at 24-25 (filed April 5, 2002) [hereinafter *Sprint Triennial Comments*] (fixed wireless broadband service).

services currently provide a competitive alternative to high speed services provided over ILEC transmission facilities in *any* of the broadband product markets.

Mobile wireless is not substitutable for services provided over conditioned loops because it does not offer competitive throughput rates. As WorldCom noted, second-generation mobile wireless services typically operate at 10 kbps, and the average per user rate of third-generation services is expected to be only between 50 kbps and 100 kbps.²⁴ According to the National Research Council, “While so-called third-generation (3G) wireless will provide more capabilities than present systems do, the throughput per user falls short of a reasonable definition of broadband.”²⁵ In addition to low throughput, it is common knowledge that mobile wireless services still lack reliable connectivity and, due to the size of the receiving equipment, offer limited functionality. As a result of these capacity and service constraints, neither residential nor business consumers would switch to mobile wireless “broadband” in response to a small but significant and non-transitory price increase in DSL-based services.²⁶

The Regulatory Commission of Alaska -- the state regulator in the markets that GCI serves -- as well as AT&T and Sprint support GCI’s conclusion in its initial comments regarding fixed wireless services: Fixed wireless is not a viable alternative to ILEC transmission facilities at this time, either for the end user consumer or for a service provider seeking to provide its own broadband services.²⁷ As both AT&T and Sprint

²⁴ *Worldcom Triennial Comments* at 43-44.

²⁵ Committee on Broadband Last Mile Technology, National Research Council, *Broadband: Bringing Home the Bits*, 20 (2001) [hereinafter *NRC Broadband Report*].

²⁶ *See id.*

²⁷ *See Reply Comments of the Regulatory Commission of Alaska, CC Docket Nos. 02-33, 95-20, and 98-10 at 7-8 (filed June 26, 2002) [hereinafter *RCA Reply Comments*]*

noted in their comments, carriers that vigorously pursued fixed wireless service have either pulled out of the market or gone bankrupt.²⁸ Fixed wireless licensees, including GCI, have encountered significant technical and economic problems in the delivery of reliable broadband service on a mass-market basis, including weak transmission signals, lack of features and functions, and difficulty in receiving local approval for tower sites.²⁹ Consumers cannot switch to an unavailable service, and will not switch to a service with less functionality, in response to a small but significant and nontransitory price increase in wireline broadband services.

The ILECs' *Broadband "Fact" Report* also misses the mark widely when it suggests that direct to home (DTH) satellite broadband services are substitutable for wireline broadband services. While DTH broadband satellite services are useful in rural areas not served by wireline broadband, the National Research Council found that "it is unclear at this point whether [satellite broadband] services will be able to achieve and maintain sufficient performance levels to serve as adequate substitutes for the functionality of wireline services, or how their cost and price will compare in the long run with wireline service in more densely populated areas."³⁰ Indeed, the ILECs themselves

("Fixed wireless and satellite are not currently viable competitive options in most areas and may never be.") (footnote omitted); *AT&T Triennial Comments* at 58; *Sprint Triennial Comments* at 24-25.

²⁸ *AT&T Triennial Comments* at 58; *Sprint Triennial Comments* at 24-25.

²⁹ *GCI Broadband Framework Comments* at 19, 19 n.42. See also *Sprint Triennial Comments* at 24 (noting that it is not aggressively pursuing fixed wireless service at this time "due to limitations of current technology"); *NRC Broadband Report* at 20 (stating that, due to its current limitations, fixed wireless remains a "niche player" in the broadband market that lacks the functionality and availability of wireline broadband services).

³⁰ *NRC Broadband Report* at 20.

admit that DTH satellite broadband is technically inferior, that the typical monthly service fee for 2-way satellite service is \$60 to \$70 per month compared to \$30 to \$50 per month for ADSL, and that the total installation and equipment cost for satellite service is \$600 to \$849 compared to \$99 to \$375 for ADSL.³¹ In addition to this disparity in price, the ILECs also concede that DTH satellite broadband service suffers from a disparity in speed.³² According to the ILEC's own report, DTH satellite broadband service has much lower maximum downstream and upstream speeds than wireline broadband services.³³ Moreover, because DTH satellite broadband radio signals must travel a considerable distance from the satellite to the earth, DTH satellite broadband service suffers from significant lag times.³⁴ The lag times inherent in current DTH satellite broadband makes it unsuitable for some real-time broadband applications.³⁵ These facts make it highly unlikely that consumers would switch from wireline broadband to DTH satellite broadband in response to a small but significant and nontransitory price increase in wireline broadband. The Commission should not remove the *Computer II* safeguards, which remain necessary now to safeguard competition, on the hope and prayer that satellite DTH broadband may someday mature into a true competitive alternative rather than a niche service.

³¹ *Broadband "Fact" Report* at 12, Table 2. The NRC recognized this dramatic cost disparity in its Report, which noted that satellite broadband has a "cost and performance factor inferior to what would be possible with access through alternative [wireline] technologies" such as DSL and cable modem. *NRC Broadband Report* at 21.

³² *Broadband "Fact" Report* at 8, Table 1.

³³ *Id.*

³⁴ *See NRC Broadband Report* at 87.

³⁵ *See id.* ("[D]elays of as little as 50 milliseconds can impair game play.").

2. Cable Modem Service Does Not Constrain ILEC Market Power in Business Services

While cable modem does compete with some DSL-based services in the residential broadband product market in some geographic markets, the comments make clear that cable modem service is not a ubiquitous alternative for business customers "for a number of reasons, including limitations in geographic availability as well as insufficient service quality, reliability, and security."³⁶ Put in terms of the relevant product market, while cable modem service is suitable for the residential broadband market, in some instances its technical characteristics render it unable to compete in the business product markets.³⁷ The comments also confirm GCI's common sense point that, even if cable modem service could routinely serve all business customers' service needs, it is not available in most, let alone all, business geographic markets.³⁸ Whatever intermodal competition cable modem service provides in broadband product markets, it does not provide *any* competition in areas not passed by cable plant, and "cable modem

³⁶ *Worldcom Triennial Comments* at 42.

³⁷ *See, e.g., id.; Time Warner Broadband Framework Comments* at 32-34 (noting that only ILEC broadband services "provide the consistently high speeds and advanced features required by medium and large businesses."); *Covad Communications Company Joint Declaration* at ¶¶ 14-18; *DSL.net Communications, Inc. Comments* at 38 ("Differences between their respective customer bases render cable modem services, which focuses primarily on residential customers, an inadequate substitute for broadband access provides such as DSL.net which target business customers.").

³⁸ *See, e.g., AT&T Triennial Comments* at 93 ("[T]here is almost no intermodal competition for small business customers."); *Covad Communications Company Joint Declaration* at ¶ 15; *Allegiance Broadband Framework Comments* ("[W]hile cable and wireline providers compete in some residential markets, there is no such intermodal competition in business markets, and adoption of the Commission's tentative conclusions threatens to eliminate what little intramodal competition exists in the SME market today.").

service is generally not available to businesses.”³⁹ As GCI stated in its opening comments, in Anchorage, for example, 50% of businesses do not have access to a cable drop, but a telephone line serves every one of them.⁴⁰ It is axiomatic that where a business is not served by cable, cable does not provide a competitive alternative to ILEC transmission facilities, and where there is no alternative, the ILECs clearly have market power.

The geographic market analysis does not stop there, however. As WorldCom noted in its Triennial Review comments: “One of the key characteristics of the enterprise segment of the business market is that enterprise customers typically require service in multiple locations scattered throughout a city or the nation.”⁴¹ Thus, to compete effectively for an enterprise customer’s business, a CLEC must be able to provide broadband and other services to all of the customer’s locations.⁴² Because cable plant is not ubiquitous, “there is almost no chance that *all* of a multi-location customer’s buildings can be served over [cable] facilities.”⁴³ Thus, where cable modem service can serve some but not all of a multi-location customer’s buildings, a CLEC seeking to use cable plant would still require access to ILEC wireline facilities in order to be able to reach all of the customer’s locations.⁴⁴ Moreover, in the event the customer desires uniform network technology but has locations that are not served by the cable network, a cable modem provider would not be able to serve the customer at all.

³⁹ *Covad Communications Company Joint Declaration* ¶ 15.

⁴⁰ *GCI Broadband Framework Comments* at 3, 20.

⁴¹ *Worldcom Triennial Comments* at 14.

⁴² *Id.*

⁴³ *Id.* at 18.

The ILECs attempt to overcome the overwhelming evidence that cable modem service is largely unavailable to businesses by arguing that the relevant geographic market for broadband services is nationwide, rather than local.⁴⁵ This argument fails on both the law and the facts.

The ILECs reach their erroneous conclusion regarding the relevant geographic market by relying on the “customer aggregation approach” that the Commission applied to long distance,⁴⁶ where the Commission aggregated discrete local point-to-point markets into a national geographic market because in long distance there was “no credible evidence suggesting that there is, or could be, different competitive conditions in a particular point-to-point market, or groups of point-to-point markets.”⁴⁷ However, the ILECs make no effort to explain how consumers in various geographic markets face similar competitive choices for “broadband” (whatever product market that means) when even they admit that only one-in three residential consumers in the U.S. has access to both cable modem and DSL service,⁴⁸ “terrestrial wireless services are small in scale at

⁴⁴ *See id.*

⁴⁵ *See* Comments and Contingent Petition for Forbearance of Verizon Telephone Companies, CC Docket Nos. 01-338, 96-98, and 98-147 at 81 (filed April 5, 2002) [hereinafter *Verizon Triennial Comments*]; Comments of SBC Communications Inc., CC Docket No. 01-337 at 32 (filed Mar. 1, 2002).

⁴⁶ Comments of Verizon, CC Docket No. 01-337 at 23-24 (filed Mar. 1, 2002) [hereinafter *Verizon Non-Dom Comments*].

⁴⁷ *WorldCom/MCI Merger Order*, 13 FCC Rcd. at 18042-43, ¶¶ 30-31.

⁴⁸ *Broadband "Fact" Report* at 1.

present,”⁴⁹ and high-speed Internet access over satellite, in addition to its current technical limitations, is priced significantly higher than DSL or cable modem service.⁵⁰

The ILECs do not explain this obvious contradiction—between their assertion that consumers face similar choices nationwide for “broadband” access and the vast differences in “broadband” availability, technical capability and pricing—because it is inexplicable. As many commenters in this and the Triennial Review proceeding recognized, the fact is, “[i]n many places, the ILEC is essentially [a CLEC’s] only option (outside of cost-prohibitive self-deployment) to extend the broadband capabilities of [a CLEC’s] network to end user customers.”⁵¹ The broadband markets do not meet the Commission’s criteria for application of market aggregation techniques, and to do so in the face of record evidence to the contrary would be patently arbitrary and capricious.

Even more inexplicable is Verizon’s contention that the Commission has already concluded in the *AOL/Time Warner Merger Order* that the relevant geographic market for “broadband” services is nationwide⁵² when, in that very same order, the Commission concluded exactly the opposite:

The relevant geographic markets for residential high-speed Internet access services are *local*. That is, a consumer’s choices are limited to those companies that offer high-speed Internet access services in his or her area, and the only way to obtain different choices is to move. While high-speed ISPs other than cable operators may offer service over different local areas (*e.g.*, DSL or wireless), or may offer service over much wider areas, even nationally (*e.g.*, satellite), a consumer’s choices are dictated by what is offered in his or her locality.⁵³

⁴⁹ *Verizon Non-Dom Comments* at 23.

⁵⁰ *See Broadband "Fact" Report* at 1.

⁵¹ Comments of Norlight Telecommunications, Inc., CC Docket Nos. 01-338, 96-98, and 98-147 at 4-5 (filed April 5, 2002).

⁵² *Verizon Triennial Comments* at 81, 81 n.272.

⁵³ *AOL/Time Warner Merger Order*, FCC 01-12, 16 FCC Rcd. 6547, 6578, ¶ 74 (2001) (emphasis added) (footnote omitted).

Given the clarity of the Commission’s language in *AOL/Time Warner*, there simply is no explanation for Verizon’s assertion regarding precedent.

The fact is, there is more than merely “credible evidence” that there are different competitive conditions for “broadband” in particular point-to-point markets. By the ILECs own estimates, at least 34% of residential households do not have access to cable modem service,⁵⁴ and since cable networks were originally built to provide video service to residential markets, it can be expected that a significantly greater percentage of businesses do not have access to cable modem service. The ILECs also aver that DSL is currently available to only 40% of U.S. homes, and that only 33% of U.S. homes have access to both DSL and cable modem service. These statistics indicate that only about one out of three homes has access to high-speed Internet service over both DSL and cable modem, that approximately one out of three homes has no access to either service at all, and that the remaining one-third have access to either DSL or cable modem, but not both. The ILECs’ own evidence thus establishes that the intermodal availability of broadband service varies dramatically among geographic areas and that consumer choice in any given area is substantially limited.⁵⁵ As the National Research Council recently concluded, while facilities-based competition in broadband is beginning to occur, “overall availability masks considerable variability in competition at a local level—by

⁵⁴ *Broadband "Fact" Report* at 4.

⁵⁵ The inclusion of fixed terrestrial wireless and satellite services does not alter this analysis. The ILECs provide no statistics regarding the deployment levels of fixed terrestrial wireless, presumably because there has been little deployment of such services, and in some markets where service had been provided, it has since been withdrawn. And although satellite delivered broadband is theoretically available nationwide (but is not as a practical matter due to site and capacity issues), its pricing and technical characteristics (such as lag) place it in a different product market.

state, by community, or even by household.”⁵⁶ Accordingly, the geographic market for broadband services is local, and the “customer aggregation approach” is inapplicable.

GCI's experience in Alaska further drives home this point. GCI is the cable operator in Anchorage, Fairbanks and Juneau. However, its cable facilities do not reach all businesses. In Anchorage, for example, nearly 50% of businesses do not have access to the cable system. Without access to conditioned ILEC loops, these businesses (other than those few that GCI serves from its own fiber) would have only one provider of high capacity services. While the number of competitive alternatives differs by geographic location, it would be extremely costly and time consuming to construct facilities to reach those businesses not passed by cable or without access to a cable drop. This creates a large barrier to entry and removes any possibility that entry could forestall a small, but significant, and nontransitory increase in price. The Commission cannot ignore this on-the-ground reality.

III. UNBUNDLING REMAINS NECESSARY IN BUSINESS MARKETS AT LEAST UNTIL THE ILECS NO LONGER HAVE MARKET POWER

A. *COMPUTER II* – SEPARATION OF INFORMATION SERVICES FROM UNDERLYING TELECOMMUNICATIONS

While the large ILECs argue that price cap regulation has eliminated their ability to cross-subsidize information services, this argument is inapplicable to the rate-of-return LECs that are also subject to *Computer II*. This is particularly important in Alaska, which is served only by rate-of-return ILECs with extremely high access charges.⁵⁷ Moreover, their only argument regarding *Computer II*'s finding that, absent safeguards,

⁵⁶ *NRC Broadband Report* at 188.

ILECs would deny access to their bottleneck facilities or otherwise distort broadband competition is that they no longer have bottleneck control over broadband transmission facilities.⁵⁸ However, as demonstrated above and by the comments in this proceeding, “[t]he market power considerations (including those related to discrimination and cross-subsidy) that caused the Commission initially to impose the *Computer II* obligations . . . remain and are unquestionably a sufficient basis for retaining the *Computer II* requirements.”⁵⁹ The ILECs still have bottleneck control of broadband transmission facilities in many product and geographic markets, especially with respect to business customers. In those markets, the ILECs’ ability and incentive to distort competition by denying access to necessary inputs or raising competitive broadband providers’ costs remains essentially unchanged from the time when *Computer II* was adopted. Accordingly, *Computer II*’s requirement that ILECs separate information services from the underlying transmission facilities in those markets is necessary to prevent competitive harm stemming from the ILECs’ historical monopolies and to permit robust competition in the information services markets.

⁵⁷ See Reply Comments of the Alaska Telephone Association, CC Docket Nos. 02-33, 95-20, and 98-10 at 2 (filed June 19, 2002).

⁵⁸ *SBC Broadband Framework Comments* at 21-22.

⁵⁹ *Time Warner Broadband Framework Comments* at 16. See also Initial Comments of Sprint Corporation, CC Docket Nos. 02-33, 95-20 and 98-10 at 12 (filed May 3, 2002) (“In the over 6 years since the passage of the 1996 Telecom Act, there has been little erosion in the ILECs’ bottleneck control over last mile facilities.”); *Allegiance Broadband Framework Comments* at 37-38 (“The status of market conditions for broadband Internet access services has not changed so dramatically in the last year to justify such a radical departure in the Commission’s regulations aimed at protecting competing providers from discrimination.”).

B. SECTION 251(C)(3) – UNBUNDLED LOOPS

The theoretical availability of unbundled loops, *i.e.*, intramodal competition to the ILEC transmission facilities, does not alter the analysis. Intramodal competition is still hindered by (1) network configurations such as DLC loops that preclude the use of unbundled loops, (2) problems with provisioning service over unbundled loops, and (3) the lack of true TELRIC-based rates in some areas. Until these difficulties in providing broadband service using the unbundled loop are resolved, *Computer II* safeguards remain necessary for any competitive service provider that wishes to provide ubiquitous service.

Moreover, the Commission is currently threatening to eliminate intramodal competition through unbundling in its related Triennial Review proceeding.⁶⁰ Were the Commission to eliminate unbundled access to conditioned loops, the only competitive option in those product and geographic markets where the ILECs retain bottleneck control over local transmission facilities would be through *Computer II* access to the transmission services that the ILEC must make available under tariff separate from their information services. Thus, until the Commission determines whether conditioned loops will remain unbundled, it cannot make a determination as to whether intramodal competition would be able to constrain a small but significant and non-transitory increase in price.

It is important to note that failure to require unbundling of “conditioned loops” under Section 251(c)(6) would affect more than just markets for Internet access or information services. Conditioned loops are just loops, with certain impediments such as loading coils and bridge taps removed. They can also be assigned to prevent cross-talk

⁶⁰ See *Triennial Review NPRM*.

among lines within the same binder group. Like all loops, these “conditioned loops” can be used to offer a wide range of services, including telecommunication services.

Moreover, especially in areas without realistic intermodal alternatives, carriers like GCI would be impaired in offering the services they seek to offer to their customers. GCI can use conditioned loops, in conjunction with GCI’s own electronics, to offer high capacity transmission and information services that the incumbent LEC has not chosen to offer. This competitive market innovation is part of what the Telecommunications Act of 1996 was intended to enable.

IV. ILECS ARE ALREADY INVESTING IN BROADBAND FACILITIES AT OR NEAR THEIR MAXIMUM ECONOMIC RATE

Despite their retention of bottleneck control over broadband transmission facilities in many product and geographic markets, the ILECs argue that *Computer II* safeguards should be eliminated across the board because they reduce the ILEC’s incentive to invest in broadband facilities.⁶¹ However, “[t]he ILECs’ actions belie their claims that they will curtail their investments in broadband unless advanced services are exempted from [*Computer II* and] the unbundling requirements of the 1996 Act.”⁶² Reliable data establishes that the BOCs’ investment in facilities has actually increased dramatically in recent years.⁶³ As the Regulatory Commission of Alaska points out, according to the Commission’s own advanced services reports, the number of ADSL lines has grown 700% since 1999.⁶⁴ And as GCI noted in its initial comments, it is clear

⁶¹ See, e.g., *SBC Broadband Framework Comments* at 24-26.

⁶² *Worldcom Triennial Comments* at 98. See also *AT&T Triennial Comments* at 65-84 (discussing ILECs’ significant investment in broadband facilities).

⁶³ *Worldcom Triennial Comments* at 98.

⁶⁴ *RCA Reply Comments* at 5.

that independent ILECs also continue to invest in their network facilities.⁶⁵ For example, the largest independent ILEC in Alaska has recently represented to the Alaska Regulatory Commission that, without any regard to unbundling, it will completely upgrade its switching network statewide within approximately 3 to 5 years to substitute ATM packet switching for circuit switching technology.

Despite clear evidence that ILECs have not slowed investment in their networks, and have indeed increased it, GCI expects the ILECs to argue in their reply comments that “[t]he question is how investment compares with what would have occurred in the absence of [*Computer II*].”⁶⁶ GCI notes that the ILECs themselves have never attempted to answer this question. While the ILECs are good at making armchair economist arguments about competitive theory, they have not yet put “theory aside”⁶⁷ and stated how much they would have invested were they not subject to *Computer II*.

The fact is, regardless of the level of investment incentive, “simple economics gates the pace of deployment.”⁶⁸ Capital is not unlimited. Given their huge debt loads and the scarcity of capital, it is unlikely that the ILECs could invest a dollar more in their plant than they already are, regardless of what their economic theorists say the incentives would be without regulation. For example, Qwest is currently “buckling under a \$26 billion debt load,” 40% of which Qwest created “in the past two years” in its bet “on an

⁶⁵ *GCI Broadband Framework Comments* at 25-26.

⁶⁶ *See U.S. Telecom Ass’n v. FCC*, slip op. at 11.

⁶⁷ *Verizon Communications, Inc. v. Federal Communications Commission*, 535 U.S. - (2002), slip op. at 45.

⁶⁸ *NRC Broadband Report* at 158.

Internet and communications market that has yet to develop.”⁶⁹ It borders on ludicrous to suggest that Qwest would or even could have somehow found even more capital to build plant even faster if it were not subject to *Computer II*.

In addition to limits on the availability of capital, the pace of investment in broadband is limited by factors—including the availability of trained personnel to perform installation, the availability of materials and manufacturing capacity to make the necessary equipment, and obtaining governmental approval.⁷⁰—that would be unaffected by elimination of *Computer II* safeguards. Greatly increased facilities deployment “means increasing and training an ever-larger workforce devoted to this task” and increasing equipment production, which in turn means increasing labor and equipment costs.⁷¹ Because “an accelerated pace of deployment and installation” would increase these costs, it would also “bring with it an increased per-household cost.”⁷² This is true with or without *Computer II* (as is the need for any broadband provider to limit per-household costs, and thus investment).

⁶⁹ Jennifer Beauprez and Kris Hudson, *Qwest Faces Several Paths, But Each Leads Down*, DENV. POST, May 26, 2002, available at <http://www.denverpost.com/framework/0%2C1918%2C36%257E33%257E633978%2C00.html>. Verizon has about \$46.6 billion in long-term debt and \$16.3 billion in debt due within a year, a hefty total of \$62.9 billion. Paul R. La Monica, *Have the Bells Bottomed?*, CNNMONEY, May 2, 2002, available at http://money.cnn.com/2002/04/30/pf/investing/q_bells/index.htm.

⁷⁰ “Industry experts estimate that approximately 10% of the entry costs for metropolitan fiber rings and spurs are related to obtaining government approval.” T. Randolph Beard, George S. Ford, and Lawrence J. Spiwak, *Why ADCo? Why Now? An Economic Exploration into the Future of Industry Structure for the "Last Mile" in Local Telecommunications Markets*, 54 FED COMM. L.J. 421, 432 (2002).

⁷¹ *NRC Broadband Report* at 158.

⁷² *NRC Broadband Report* at 158.

As the Regulatory Commission of Alaska noted in its reply comments, the “current need is not for more wireline or intermodal facility investment, but rather for lower broadband prices.”⁷³ The fix advocated by the largest ILECs—reducing competition through the elimination of *Computer II* safeguards and unbundling obligations—would do nothing to lower prices and increase take rates, especially in the business markets in which ILECs would, in effect, be reestablished as the state-sanctioned monopolist. As noted by the National Research Council, where intramodal competition has been reduced, “there is less price pressure on ILECs offering broadband and one less option for access to alternative ISPs.”⁷⁴ Higher broadband prices, the result of reduced intramodal competition in the many product and geographic markets where the ILECs maintain bottleneck control of broadband transmission facilities, would not achieve the Commission’s goal of increasing the availability of broadband. Rather, “increasing numbers of broadband users will stimulate more competition and facility investment.”⁷⁵

Despite their rhetoric about incentives, the ILECs have not produced a shred of evidence regarding the level of investment that would have occurred had they not been subject to *Computer II* safeguards—whether and to what extent they could have attained additional capital and shouldered additional debt burdens; whether and to what extent they could have deployed additional labor; and whether and to what extent they could have obtained materials, manufacturing capacity, equipment, and regulatory approval. The reason for their reliance on rhetoric, rather than evidence, is that, given their already

⁷³ See *RCA Reply Comments at 8*].

⁷⁴ *NRC Broadband Report at 22*.

⁷⁵ *RCA Reply Comments at 9*.

massive level of investment in broadband facilities and the economic limits on overall investment, the level of investment absent *Computer II* safeguards would not have increased significantly, if at all. At the end of the day, the incremental gain in investment that could be achieved by eliminating *Computer II* safeguards, if any, would be far outweighed by the resulting harm to the many consumers that would once again be subject to a monopoly provider and the resulting higher prices and lower customer service standards.

V. CONCLUSION

The ILEC's assertion that intermodal competition has left them without bottleneck control of local exchange facilities is based on fallacious assumptions regarding the relevant product and geographic markets for "broadband" services. Because there are various broadband product markets in which the ILECs continue to exercise monopoly control of local exchange facilities, and because ILECs control the only broadband transmission facilities -- especially to businesses -- in many geographic markets, it would be arbitrary and capricious to eliminate *Computer II*, especially on an

across-the-board basis. Until true intermodal competition is available in all product and geographic markets, *Computer II* safeguards must be retained, at least in those markets without adequate competition.

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