

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

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

**REPLY COMMENTS OF BELLSOUTH CORPORATION**

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**REPLY COMMENTS OF BELLSOUTH CORPORATION**

BellSouth Corporation, for itself and its wholly owned affiliated companies (collectively “BellSouth”), submits the following reply comments in the Common Carrier Bureau’s recent *Notice of Proposed Rulemaking* in the above referenced proceeding.<sup>1</sup>

**I. Introduction and Summary**

The Commission’s goal is evident. It should implement a regulatory policy that will ensure deployment of broadband capabilities to all Americans. This was not only the intent of Congress in passing the Telecommunications Act of 1996 (“1996 Act”), but has become an increasing necessity in a time of convergence of information technology and communications.

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<sup>1</sup> *In the Matter of Appropriate Framework for Broadband Access to the Internet over Wireline Facilities; 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 Docket Nos. 02-33, 95-20 and 98-10, FCC 02-42 (rel. Feb. 15, 2002) (“Notice”).

Despite the claims of many commenters, achieving that goal will occur only through implementation of a policy that will incent investment in facilities needed to provide broadband capabilities. The policies in place today clearly do not provide such incentives. Accordingly, the Commission should: (1) adopt its tentative conclusion in the *Notice* that broadband Internet access service is an information service with the transmission offered via telecommunications and not a telecommunications service; (2) find that to the extent an ILEC offers a stand-alone transmission service for broadband services that it does so as private carriage and not common carriage; and (3) eliminate the *Computer Inquiry*<sup>2</sup> requirements from BOCs for their provision of

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<sup>2</sup> *Regulatory & Policy Problems Presented by the Interdependence of Computer & Communications Services & Facilities*, 28 FCC2d 291 (1970) (“*Computer I Tentative Decision*”); 28 FCC2d 267 (1971) (“*Computer I Final Decision*”), *aff’d in part sub nom. GTE Service Corp. v. FCC*, 474 F.2d 724 (2d Cir. 1973), *decision on remand*, 40 FCC2d 293 (1973). *Amendment of Section 64.702 of the Commission’s Rules and Regulations (Computer II)*, 77 FCC2d 384 (1980) (“*Computer II Final Decision*”), *recon.*, 84 FCC2d 50 (1980) (“*Computer II Reconsideration Order*”), *further recon.*, 88 FCC2d 512 (1981) (“*Computer II Further Reconsideration Order*”), *affirmed sub nom., Computer and Communications Industry Ass’n v. FCC*, 693 F.2d 198 (D.C. Cir. 1982), *cert. denied*, 461 U.S. 938 (1983); *Amendment of Section 64.702 of the Commission’s Rules and Regulations (Computer III)*, CC Docket No. 85-229, Phase I, 104 FCC2d 958 (1986) (“*Computer III Phase I Order*”), *recon.*, 2 FCC Rcd 3035 (1987) (“*Computer III Phase I Reconsideration Order*”), *further recon.*, 3 FCC Rcd 1135 (1988) (“*Computer III Phase I Further Reconsideration Order*”), *second further recon.*, 4 FCC Rcd 5927 (1989) (“*Computer III Phase I Second Further Reconsideration Order*”) (*Computer III Phase I Order and Computer III Phase I Reconsideration Order vacated California v. FCC*, 905 F.2d 1217 (9th Cir. 1990) (“*California I*”)); Phase II, 2 FCC Rcd 3072 (1987) (“*Computer III Phase II Order*”), *recon.*, 3 FCC Rcd 1150 (1988) (“*Computer III Phase II Reconsideration Order*”) *further recon.*, 4 FCC Rcd 5927 (1989) (“*Computer III Phase II Further Reconsideration Order*”) (*Computer III Phase II Order vacated California I*, 905 F.2d 1217 (9th Cir. 1990)); *Computer III Remand Proceeding*, 5 FCC Rcd 7719 (1990) (“*ONA Remand Order*”), *recon.*, 7 FCC Rcd 909 (1992), *pets. for review denied, California v. FCC*, 4 F.3d 1505 (9th Cir. 1993) (“*California II*”); *Computer III Remand Proceedings: Bell Operating Company Safeguards and Tier I Local Exchange Company Safeguards*, 6 FCC Rcd 7571 (1991) (“*BOC Safeguards Order*”), *BOC Safeguards Order vacated in part and remanded, California v. FCC*, 39 F.3d 919 (9th Cir. 1994) (“*California III*”), *cert. denied*, 514 U.S. 1050 (1995). *See also Bell Operating Companies’ Joint Petition for Waiver of Computer II Rules*, 10 FCC Rcd 1724 (1995); *Computer III Further Remand Proceedings: Bell Operating Company Provision of Enhanced Services*, 10 FCC Rcd 8360 (1995); *Computer III Further Remand Proceedings: Bell Operating Company Provision of Enhanced Services; 1998 Biennial Review – Review of Computer III and ONA Safeguards and Requirements*, CC Docket Nos 95-20, 98-10; *Further Notice of Proposed Rulemaking, Report and Order*, 13 FCC Rcd 6040 (1998) (“*Computer Inquiry Further Notice*”), *Report and Order*, 14 FCC Rcd 4289 (1999), *on reconsideration, Order*, 14 FCC Rcd 21628 (1999) (“*Computer III Further Remand Proceeding*”).

broadband information services. Moreover, the Commission must act in the *UNE Triennial Review*<sup>3</sup> to eliminate existing unbundled network elements related to broadband.<sup>4</sup> All of these actions are necessary if Americans are to receive adequate choices among broadband providers.

Today, every provider of broadband services except one – ILECs – operates virtually free of regulatory constraints. Not surprisingly, the providers that are free from regulation are the loudest voices against the ILECs receiving fair regulatory treatment in the broadband services arena. Their protestations against the ILECs are documented in the comments filed in this proceeding.<sup>5</sup> Some of these commenters have a significant interest in keeping ILECs crippled by regulation as long as possible. AT&T is a prime example. It owns one of the largest cable companies in the world, and its cable modem service competes directly with ILECs in the provision of broadband services. Their comments must be read with the self-interest they serve to perpetuate in mind. Other commenters, Internet service providers (“ISP”), are fearful that deregulated ILECs will leave them without a captive supplier of transmission services.<sup>6</sup> These fears are unwarranted. ILECs will continue to provide wholesale transmission services to customers; however, in a competitive environment such as broadband, they should be able to do so under private carriage at commercial terms and conditions.

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<sup>3</sup> *In the Matter of Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, et al.*, CC Docket No. 01-338, *Notice of Proposed Rulemaking*, FCC 01-361 (rel. Dec. 20, 2001) (“*UNE Triennial Review*”).

<sup>4</sup> The UNE Triennial Review proceeding becomes extremely important given the recent D.C. Circuit decision, which remanded the UNE list to the Commission and vacated and remanded the decision adopting line sharing. *United States Telecom Ass’n v. FCC*, No. 00-0012, 2002 U.S. App. LEXIS 9834 (D.C. Cir. May 24, 2002). The court made very clear that the Commission must consider competition in the market when considering broadband issues. See discussion of the decision at section III. B. below.

<sup>5</sup> See, e.g., Comments of AT&T; WorldCom, the Competitive Telecommunications Association and the Association for Local Telecommunications Services (“WorldCom”); Covad.

<sup>6</sup> See, e.g., Comments of EarthLink; Big Planet, Inc.; California Internet Service Providers Association.

Regardless of their motives, one glaring fact is evident throughout the comments: all of the entities opposing ILEC broadband deregulation ignore the current competitive intermodal broadband environment. ILECs are clearly not the dominant provider of broadband services. The record is replete with facts that fully demonstrate that ILECs are not only merely one of multiple providers of broadband services, but that the non-ILEC providers dominate the market. Moreover, these other broadband providers continue to grow.<sup>7</sup>

All of the commenters that oppose the ILECs' attempt to dismiss intermodal competition by either claiming that such competition is limited, that it is irrelevant to the ILECs' request for less deregulation, or by simply ignoring it and limiting their analysis to competition among DSL providers (intramodal competition). Their reason for attempting to dismiss intermodal competition is obvious. The regulation that impedes the ILECs was based on regulatory policies established to address the voice market where ILECs have traditionally been the dominant carrier. By continuing to focus only on traditional phone wire as the only mode of broadband service delivery, the other providers hope to continue the application of past regulation to these new services. Indeed, once a competitive market is introduced into the calculus, the regulations no longer make sense.

But, of course, the Commission cannot ignore the realities of competition. Cable modem providers dominate the broadband services market.<sup>8</sup> They outpace DSL subscribers two to

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<sup>7</sup> *In the Matter of Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services*, CC Docket No. 01-337, *Notice of Proposed Rulemaking*, 16 FCC Rcd 22745 (2001) (“*Broadband Non-Dominant Proceeding*”); see Comments of Verizon, CC Docket No. 01-337 (filed Mar. 1, 2002).

<sup>8</sup> *See In the Matter of Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable And Timely Fashion, and Possible Steps To Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996*, CC Docket No. 98-146, *Third Report*, FCC 02-33 (rel. Feb. 6, 2002) (“*Third Report*”).

one.<sup>9</sup> Cable companies currently have the ability to provide cable modem services to 73 percent of their customers and are continually upgrading their networks to allow for even greater coverage.<sup>10</sup> Moreover, any claim that cable companies are limited to residential areas and therefore do not provide service to businesses is without merit. Cable companies have the capability to expand quickly into the business market and are doing so. The Commission cannot turn a blind eye to this expansion. It must be forward-looking in its policy making and consider the realities of the competitive market.

Likewise, the Commission cannot give credence to the claims that intermodal competition is irrelevant to the classification of ILECs' broadband services. Under this theory, commenters argue that no matter how much competition exists in forms other than ILECs' wirelines, the Commission must continue to regulate the ILECs simply because of their status as ILECs. This argument defies logic. Even the Commission has long recognized that regulation is simply a surrogate for competition.<sup>11</sup> When competition is present, the need for regulation subsides. Regulating ILECs simply for the sake of regulation not only applies bad economic policy, it also is in violation of the 1996 Act.<sup>12</sup>

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<sup>9</sup> *Id.*

<sup>10</sup> *In the Matter of Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities, Internet Over Cable Declaratory Ruling, Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities*, GN Docket No. 00-185, CS Docket No. 02-52, *Declaratory Ruling and Notice of Proposed Rulemaking*, FCC 02-77, ¶ 1 (rel. Mar. 15, 2002) (“*Cable Modem Declaratory Ruling*”).

<sup>11</sup> *See, e.g., In the Matter of Price Cap Performance Review for Local Exchange Carriers*, CC Docket No. 94-1, *First Report and Order*, 10 FCC Rcd 8961, 9253 (1995) (separate statement of Commissioner Rachelle B. Chong) (“[A]ny form of regulation is an imperfect surrogate for full-fledged competition. Where it can be shown that a particular market is fully competitive, our regulation should give way to competitive market forces . . .”).

<sup>12</sup> 47 U.S.C. § 161. The Commission is statutorily required to “repeal or modify any regulation it determines to be no longer necessary in the public interest.” Clearly, competition removes the necessity for regulation to protect the public interest. *See Fox Television Stations, Inc. v. FCC*, 280 F.3d 1027, 1050 (D.C. Cir. 2002) (“a regulation should be retained only insofar as it is necessary in, not merely consonant with, the public interest”).

Similar to trying to explain away intermodal competition as irrelevant, some commenters simply ignore the facts and only analyze the broadband market within the limited confines of DSL. Just as intermodal competition cannot be dismissed as irrelevant, it likewise cannot be completely ignored. These commenters are quick to point out that ILECs control 93% of all DSL lines. But it is this information that is irrelevant to the broadband market analysis. Citing market share numbers within the DSL market is the equivalent of stating that because Ford has the dominant share in the sports utility vehicle market that it should be regulated within the transportation market. The Commission must evaluate the entire broadband market and the extensive competition that it has acknowledged exists within it. The 1996 Act requires the Commission to consider this information and to deregulate the broadband market.<sup>13</sup>

Covad attempts to dismiss the competitive markets by arguing that the *Notice* offers a “solution in search of the wrong problem.” Covad suggests that the problem within the broadband market is not a shortage of broadband capability but instead blames every broadband ill on an alleged ILEC conspiracy to destroy the CLECs. Covad contends that continued ILEC deployment in the face of draconian regulatory requirements placed on the ILECs is evidence that such regulation has not impeded broadband availability. Covad further contends that instead of correcting any deployment problem, the Commission should concentrate on righting the alleged wrongs that CLECs face, at the hands of the ILECs, in the broadband market. Covad lists an alleged parade of horrors that it claims has had destructive effects on the CLEC industry.

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<sup>13</sup> See Section 706(a) and (b) of the *Telecommunications Act of 1996*, Pub. L. 104-104, 110 STAT. 56 (1996), reproduced in the notes under 47 U.S.C. § 157 (Section 706 of the Act requires the Commission to use regulatory forbearance and other measures to encourage the rapid deployment of advanced services to American consumers). See also, *United States Telecom Ass’n v. FCC*, 2002 U.S. App. LEXIS 9834 at \*37-41.

The Commission must move beyond the rhetoric of Covad's victim mentality and its cry for more regulation to ensure CLECs' survival. The CLECs' problems are the direct result of poor business plans and a struggling economy.<sup>14</sup> Even the CLECs acknowledge this fact. For example, Royce Holland, CEO of Allegiance,

described the CLEC shakeout as only natural – the result of the overheated capital markets of 1999 and early 2000. In those days, there was 'no business plan too weak or management team too inexperienced to get funded,' he said.

...

Many companies were dragged down by an over-reliance on high-yield debt, Mr. Holland asserted. 'For a year or two, it was really easy to get high-yield debt... Over time, you'd see these balance sheets with high-yield debt [levels] three or four times higher than the market value of the company, he said. 'Anyone with that high a debt is in big trouble.'<sup>15</sup>

It is illusory for the CLECs now to suggest that the market woes they currently face are of someone else's doing. It is time for the CLECs, and the Commission, to realize the market is risky. As Chairman Powell stated "the marketplace can be a killer." It can "strangle bad business models . . . doing what regulators fear to do."<sup>16</sup> The Commission must not substitute its judgment for that of the market by favoring one provider of broadband service over another. Specifically, it must not allow one provider to ride the investment of another provider risk-free,

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<sup>14</sup> Indeed, even large established companies in the telecommunications industry have suffered from a sluggish economy. See Yuki Noguchi & Renae Merle, *WorldCom Says Its Books Are Off By \$3.8 Billion*, Wash. Post, June 26, 2002, at A01, <http://www.washingtonpost.com/wp-dyn/articles/A44367-2002Jun25.html> (WorldCom apparently applied unorthodox accounting treatment to current expenses in an attempt to cover up declining margins). These problems demonstrate that under the current economic conditions no company in the telecommunications industry is exempt from establishing and maintaining a solid business plan.

<sup>15</sup> Telecommunications Report Daily, May 15, 2001.

<sup>16</sup> Communications Daily, March 8, 2001.

especially considering the amount of competition that currently exists in the broadband market. This cannot possibly be the intent of Section 706 of the 1996 Act.

Covad further argues that ILECs will continue broadband deployment if current regulation is continued or even if further regulation is adopted. This claim is irrational. No entity will continue to invest in facilities, taking on all the risk of such investment under the current regulatory constraints. This is especially true considering that current regulations, and proposed future regulations, require unbundling of broadband facilities, which require ILECs to provide their investment to their competitors (who have none of the risk of investment) at prices below cost.

Investment disincentives are fully demonstrated in a business case analysis prepared by Dr. Robert Harris, which documents that loss of investment on the deployment of mass-market equipment is more than a mere possibility; it is a reality.<sup>17</sup> The business case is an “analysis of Regional Bell Operating Company (RBOC) investment in infrastructure improvements to enable the delivery of broadband access via digital subscriber line (DSL) technology over their telephone networks.”<sup>18</sup> The business case assesses the “financial returns for DSL investments and the sensitivity of those returns to possible changes in market penetration and regulatory requirements.”<sup>19</sup> The business case found that, assuming certain “‘baseline’ conditions and expectations” DSL does “not turn cash flow positive until 2004, with an accumulated \$7 billion

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<sup>17</sup> Declaration of Professor Robert G. Harris, attached as Exhibit A to BellSouth’s Reply Comments filed April 22, 2002 in CC Docket 01-337 (“Harris Declaration”). The Declaration is also provided at Exhibit 1 to these Reply Comments.

<sup>18</sup> *Id.*, ¶ 4.

<sup>19</sup> *Id.*

in negative cash flow. Only after six years of positive cash flow will the RBOCs have recovered their DSL investment.”<sup>20</sup>

What is more revealing about the business case, however, is its demonstration of the extraordinary market, technology, and regulatory risks that DSL faces. For example, if RBOCs achieve a penetration rate 25% lower than the penetration rate assumed in the baseline conditions, the RBOCs “would realize \$1.2 billion less in cash flow.”<sup>21</sup> As Dr. Harris points out, this factor alone would threaten the financial viability of the investment.<sup>22</sup>

Even more concerning are the regulatory risks. The business case found that if the Commission “were to impose unbundled network element platform (UNE-P)<sup>23</sup> pricing of DSL service, cash flow would be reduced by \$2.5 billion through 2011.”<sup>24</sup> Dr. Harris concludes that this would make “further investments in expanding the availability of DSL a losing proposition.”<sup>25</sup>

The ILECs cannot extend deployment of broadband services as they would like under the current regulatory environment. Even though they are willing to accept the market and technology risks, as the business case fully demonstrates, risk of regulation that the Commission

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<sup>20</sup> *Id.*

<sup>21</sup> *Id.*

<sup>22</sup> *Id.*

<sup>23</sup> The Commission sought comments in the *Third Further Notice* in the Advanced Services proceeding on whether it should implement a UNE platform for data just as it did for voice. *In the Matter of Deployment of Wireline Services Offering Advanced Telecommunications Capability and Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket Nos. 98-147 and 96-98, *Third Report and Order on Reconsideration in CC Docket No. 98-147*, *Fourth Report and Order on Reconsideration in CC Docket No. 96-98*, *Third Further Notice of Proposed Ruling in CC Docket No. 98-147* and *Sixth Further Notice of Proposed Rulemaking in CC Docket No. 96-98*, 16 FCC Rcd 2101 (2001). Essentially a platform would require ILECs to combine all elements necessary to provide DSL service for a CLEC and price the combined elements at the TELRIC price for each individual element.

<sup>24</sup> Harris Declaration, ¶ 4

<sup>25</sup> *Id.*

is currently considering implementing makes DSL a “losing proposition.” The prospect of these regulations, along with current regulations, are stifling market growth and allowing competitors to gain unfair advantages over the ILECs. The choice should be clear for the Commission. Burgeoning competition within the broadband market obviates the need for current and proposed regulations.

Moreover, past broadband deployment is not indicative of future deployment. The CLECs point to the fact that ILECs have invested in broadband facilities even under the current regulations and therefore will continue to invest even if more regulations are adopted. This ignores the dynamics of the network and the market. ILECs have continued to deploy facilities to provide DSL because past business case analysis deemed it a viable risk. The risks associated with deployment, however, increase as conditions change. For example, as Professor Harris discusses, the cost of broadband increases significantly as deployment moves “from the ‘core’ of the network to its ‘periphery.’” Professor Harris states “[w]hen the fixed costs of network investment can be spread across many customers (i.e., dense urban areas), unit costs are considerably lower. When upgrading in low density towns and rural areas, those facilities can be shared by many fewer users, causing the cost of providing DSL service to be much more costly than in urban areas.”<sup>26</sup> Professor Harris goes on to conclude that “[u]nless the Commission acts to remove regulations that disincent network investment, extending the availability of DSL to the large majority of households will not be financially viable.”<sup>27</sup>

The answer to almost any policy question concerning broadband today begins with policy makers realizing and embracing the unmistakable fact that broadband is a competitive market

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<sup>26</sup> Harris Paper, ¶ 19.

<sup>27</sup> *Id.*

with multiple providers and none of these providers should face differing regulatory treatment.<sup>28</sup> Accepting and embracing these facts will produce policies that strengthen broadband deployment by allowing the market, not regulators, to determine winners and losers. Unless these facts are acknowledged, applying the same old regulatory models to broadband may change the wrapping but not the contents of the package. Moreover, embracing these facts will shift thinking about broadband and produce a new regulatory paradigm – one with a deregulatory focus – that will allow consumer demand and the competitive marketplace to drive broadband growth unencumbered by regulatory market distortion.

## **II. The Commission Should Adopt its Tentative Conclusion and Find Broadband Internet Access Services to be Information Services**

The Commission's conclusion that broadband Internet access service is an information service was met with little opposition. Indeed, most of the commenters agreed with the Commission's conclusion that a service cannot be both an information service and a telecommunication service at the same time.<sup>29</sup> The parties agreed that the Commission's tentative conclusion that broadband Internet access service is an information service and not a telecommunications service, therefore, was nothing more than an affirmation of existing law.<sup>30</sup>

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<sup>28</sup> AT&T attempts to undermine regulatory parity by suggesting that cable companies are also regulated, only differently. AT&T Comments at 73-74. AT&T then presents a litany of regulations that cable companies are under pursuant to Title VI of the Act. This discussion is meaningless. It attempts to compare apples and oranges. The regulations AT&T lists are related to the provision of cable services. BellSouth does not dispute that cable companies are regulated in the provision of cable services. Cable modem service, however, is not a cable service; it is an information service. *Cable Modem Declaratory Ruling*, ¶ 38. Indeed, AT&T's argument proves BellSouth's point – any similarly situated company offering the same type of services should be regulated equally. If BellSouth, through a separate affiliate, offered cable services it would, and should, be subject to the same regulations as AT&T's cable services. Likewise, BellSouth should be subject to the same regulations as AT&T for the provision of broadband services.

<sup>29</sup> See, e.g., Covad at 67-68; EarthLink at 5-8.

<sup>30</sup> See Verizon Comments at 7-9; Covad's Comments at 66.

Some commenters opposed the Commission's conclusion that the underlying transmission component is "telecommunications" and not a "telecommunications service." Such opposition, however, was not based on the classification of offering a bundled service incorporating a telecommunications component as an information service but on the implication of what regulations would apply to the telecommunications component.<sup>31</sup> That is, will ILECs be required to offer the underlying telecommunications component as a stand-alone service or will they be free from such obligations?<sup>32</sup> As fully discussed in the next section, just as no other provider of an information service is required to break down a component of their service into a telecommunications service, neither should ILECs. In addition to the discussion below regarding stand-alone broadband services, the Commission must adopt its tentative conclusion that broadband Internet access service is an information service.

### **III. ILECs Should be Free to Offer Stand-Alone Broadband Services Under Private Carriage and Not Common Carriage**

Most of the discussion in the comments can be boiled down to one issue – should the ILECs be required to offer stand-alone transmission service, i.e., the telecommunications component of the information service? Many of the commenters argued that ILECs must be required to provide such services no matter how the Commission classifies broadband Internet access services. They claim ILECs should be required to provide stand-alone transmission services on a common carrier basis because of past Commission precedent, an alleged need for such service in order to ensure their availability for entities such as ISPs to provision their

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<sup>31</sup> Covad Comments at 65-66.

<sup>32</sup> *See Id.* at 65.

information services, or to ensure the success of a specific business case.<sup>33</sup> None of these are valid reasons for the Commission to continue bad regulatory policies concerning broadband services.

**A. The Commission has Full Legal Authority to Allow ILECs to Provide Stand-Alone Transmission Service as Private Carriage and Not Common Carriage**

Several commenters take issue with the Commission's legal authority to allow ILECs to offer stand-alone broadband transmission services on a private carriage basis. They claim that the Commission has "no authority to exempt the Bell's common carriage broadband services from Title II regulation by declaring them to be 'private' carriage."<sup>34</sup> In reaching this conclusion, AT&T, and other commenters, manipulate the Commission's legal authority regarding common and private carriage to meet their end. The Commission should not allow this procrustean analysis to dictate the outcome of this proceeding.

Commission proceedings and case law have determined the proper analysis to determine when a carrier is offering a service as common versus private carriage. This analysis pivots on whether the carrier has taken on a "quasi-public" character in providing a service arising either by legal compulsion or choice. The commenters argue that ILECs provide broadband stand-alone services on an indiscriminate basis undertaking to provide these services to all people indifferently. What the commenters fail to acknowledge is that ILECs were required to offer these services pursuant to public tariffs. This tariffing obligation was the result of forcing the

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<sup>33</sup> Some CLECs claim that stand-alone services are telecommunications services that ILECs must offer on a common carrier basis. Their argument is based on the desired ability to obtain unbundled network elements used to provide such services. That is, pursuant to statute, ILECs are required to provide access to unbundled elements only for those network elements used to provide a telecommunications services. 47 U.S.C. § 153(2a) and § 251(c)(3). Accordingly, if stand-alone transmission services were deemed not to be a telecommunications service, ILECs would not be required to unbundle them for CLECs solely for the purpose of providing information services.

<sup>34</sup> AT&T comments at 24.

regulation created for voice services on broadband services without adequately considering the differences between the two. As Verizon points out, the onerous regulations placed on ILECs broadband transmission services as opposed to the regulatory freedom that other broadband providers enjoy “did not represent a considered judgment on the part of the Commission. Rather, the difference resulted from ‘regulatory creep.’ That is, because the telephone companies provided voice services subject to Title II, the Commission reflexively subjected them to Title II regulation in their provision of broadband as well.”<sup>35</sup> The ILECs cannot be deemed to have willingly chosen to provide these services on a common carrier basis.<sup>36</sup>

Accordingly, the question that remains is should the Commission compel the ILECs to continue to offer broadband stand-alone transmission services as common carriage? Clearly, the answer to this question is no. The Commission’s past decisions to compel common carriage on carriers has been based on the fact that competition is lacking in the market.<sup>37</sup> When competition enters the market, Title II type regulations are no longer needed to ensure consumers can receive services under reasonable and nondiscriminatory terms and conditions. Competition is the equalizer for consumers. If a consumer cannot receive desired terms and conditions from one competitor, he or she can simply move on to the next competitor for the services.

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<sup>35</sup> Verizon comments at 11.

<sup>36</sup> *Southwestern Bell Telephone Co. v. FCC*, 19 F.3d 1475 (D.C. Cir. 1994); *Computer and Communications Indus. Ass’n v. FCC*, 693 F.2d 198 (D.C. Cir. 1982), *cert. denied*, 461 U.S. 938 (1983).

<sup>37</sup> For example, the *Computer Inquiry* requirements, which are the basis for compelling the offering of transmission services used by ISPs to provision their information services, were established with the core assumption “that the telephone network is the primary, if not exclusive, means through which information service providers can obtain access to customers.” *Notice*, ¶ 36. The logical conclusion of this assumption is that once information services have access to multiple providers such rules are no longer necessary.

Scores of data have been placed in the *Non-Dominant Proceeding*<sup>38</sup> that demonstrate the competitiveness of the broadband market. Not only can consumers obtain broadband services from cable modem providers, the dominant broadband service provider,<sup>39</sup> but numerous wireless companies are continuing to upgrade their networks to provide broadband services to more and more customers. Indeed, recent reports indicate that some unlicensed spectrum providers predict that they can extend wireless fidelity (“Wi-Fi”) range to provide data at 10 megabits per second (“mbps”) for up to 50 miles.<sup>40</sup> Competition for the provision of broadband services is growing exponentially. The Commission must allow all competitors to compete on equal footing.

The Commission cannot stand on the grounds that ILECs have offered these services in the past, where cable companies have not, as a basis to support treating them differently in the provision of stand-alone transmission services. The Commission has ample authority to re-classify ILECs’ stand-alone transmission service as private carriage.<sup>41</sup> The Commission should therefore allow ILECs to offer these services free of common carrier regulation, which is consistent with its recent finding for cable modem providers offering the same type of service.

Moreover, the Commission must follow its recent precedent that no regulatory compulsion exists to warrant requiring the transmission component for broadband Internet access to be provided on a common carrier basis. In the *Cable Modem Declaratory Ruling* the Commission concluded that broadband Internet access is the same regardless of the mode used to

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<sup>38</sup> See *Broadband Non-Dominant Proceeding*.

<sup>39</sup> See *Cable Modem Declaratory Ruling*, ¶ 9 (“Throughout the brief history of the residential broadband business, cable modem service has been the most widely subscribed technology, with industry analysts estimating that approximately 68% of residential broadband subscribers today use cable modem services.”)

<sup>40</sup> Jim Goldman, *Wireless Broadband's Holy Grail?* (June 25, 2002) at [http://abcnews.go.com/sections/business/TechTV/TechTV\\_Wireless\\_020625.html](http://abcnews.go.com/sections/business/TechTV/TechTV_Wireless_020625.html)

<sup>41</sup> See SBC Comments at 9-18.

provide the service. The Commission found that “cable modem service, an Internet access service, is an information service.”<sup>42</sup> The Commission further concluded that “[c]able modem service is not itself and does not include an offering of telecommunications service to subscribers.”<sup>43</sup> In reaching these conclusions, the Commission specifically considered, yet declined to find a regulatory compulsion for cable companies to offer a stand-alone transmission service associated with their information service offering. The Commission stated that “EarthLink invites us, in essence, to find a telecommunications service inside every information service, extract it, and make it a stand-alone offering to be regulated under Title II of the Act. Such radical surgery is not required.”<sup>44</sup>

The Commission cannot reach identical conclusions in defining cable modem and ILEC broadband Internet access services but then reach different conclusions regarding the need for the transmission component of these virtually identical services to be provided on a common carriage basis. Either there is a regulatory requirement needed for stand-alone transmission services – which there is not – and each party should be compelled to provide them, or there is no reason to compel such an offering.

Clearly, the Commission got it right in the *Cable Modem Declaratory Ruling*. There should be no regulatory compulsion requiring providers of broadband services to provide a stand-alone transmission service. This is a service that ILECs, like cable modem providers, should have the freedom to negotiate with customers on an individual basis.

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<sup>42</sup> *Cable Modem Declaratory Ruling*, ¶ 38.

<sup>43</sup> *Id.*, ¶ 39.

<sup>44</sup> *Id.*, ¶ 43.

**B. Competition in the Broadband Market Requires the Commission to Treat All Competitors Equal in the Provision of Wholesale Broadband Services**

As much as they try, the commenters in this proceeding cannot cover-up the immense amount of competition in the broadband market. Indeed, it should be *sine qua non* of the Commission's broadband policies. Facilities-based competition is the very thing that Congress sought to accomplish through the 1996 Act.

Only recently the D.C. Circuit court recognized the impact of intermodal competition on regulatory policy.<sup>45</sup> In vacating the *Line Sharing Order*,<sup>46</sup> the Court agreed that "the Commission, in ordering the unbundling of the high frequency spectrum of copper loop so as to enable CLECs to provide DSL services, completely failed to consider the relevance of competition in broadband services coming from cable (and to a lesser extent satellite.)"<sup>47</sup> The court stated, "[t]he Commission's own findings. . . repeatedly confirm both the robust competition, and the dominance of cable, in the broadband market."<sup>48</sup> Based on these findings the court vacated line sharing as a network element that ILECs must unbundle.

This case has several applications to the current proceeding. First, and most important, the case affirms the ILECs' position that competition in the broadband market must control how the Commission implements regulation regarding broadband services. Indeed, the court's ruling vacating line sharing as a network element is based entirely on the fact that competition among various modes of providers obviates the need for regulation that requires the ILECs to unbundle

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<sup>45</sup> *United States Telecom Ass'n v. FCC*, 2002 U.S. App. LEXIS 9834.

<sup>46</sup> *In the Matter of Deployment of Wireline Services Offering Advanced Telecommunications Capability and Implementation of the Local Competition Provisions of the Telecommunication Act of 1996*, CC Docket Nos. 98-147 and 96-98, *Third Report and Order in CC Docket No. 98-147 and Fourth Report and Order in CC Docket No. 96-98*, 14 FCC Rcd 20912 (1999) ("*Line Sharing Order*").

<sup>47</sup> *United States Telecom Ass'n v. FCC*, 2002 U.S. App. LEXIS 9834 at \*37.

<sup>48</sup> *Id.*

the high frequency portion of the loop. The court also recognized the cost of unnecessary regulation in a competitive market. Citing Justice Breyer's separate opinion in the Supreme Court's decision in *Iowa Utilities Board*,<sup>49</sup> the court explained "mandatory unbundling comes at a cost, including disincentives to research and development by both ILECs and CLECs and the tangled management inherent in shared use of a common resource."<sup>50</sup> The court concluded "[i]n sum, nothing in the Act appears a license to the Commission to inflict on the economy the sort of costs noted by Justice Breyer under the conditions where it had no reason to think doing so would bring on a significant enhancement of competition. The Commission's naked disregard of the competition context risks exactly that result."<sup>51</sup> Just as the court found that it was unreasonable for the Commission to ignore competition in the broadband market in requiring the unbundling of the high frequency portion the loop used for the provision of broadband services, it would be unreasonable for the Commission to continue to force ILECs to offer stand-alone transmission services for broadband on a common carrier basis.

#### **IV. The Commission Must Eliminate the *Computer Inquiry* Requirements for the ILECs**

Many commenters argued for the continuation of the *Computer Inquiry* requirements. For the same reasons discussed for allowing ILECs to provide broadband transmission services as private carriage instead of common carriage, the Commission should also eliminate the *Computer Inquiry* requirements for ILECs' broadband information services. Indeed, regardless of how the Commission decides the common and private carriage issue, the Commission must remove the *Computer Inquiry* requirements from ILECs' broadband information service

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<sup>49</sup> *AT&T Corp. v. Iowa Utilities Board*, 525 U.S. 366 (1999).

<sup>50</sup> *United States Telecom Ass'n v. FCC* at \*40.

<sup>51</sup> *Id.* at \*40-41. *See Id.* at \*25 ("If parties who have not shared the risks are able to come in as equal partners on the successes, and avoid payment for the losers, the incentive to invest plainly declines.").

offerings.<sup>52</sup> As discussed previously, most commenters agree that the Commission's tentative conclusion that broadband Internet access service is an information service with a telecommunications component to be nothing more than an affirmation of existing law. Unless the Commission eliminates the *Computer Inquiry* obligations that ILECs currently face, e.g., Open Network Architecture ("ONA") and Comparably Efficient Interconnection ("CEI") requirements, this proceeding will have done nothing to implement the principle and policy goals the Commission identified to "form the foundation of [its] broadband policymaking."<sup>53</sup> Instead, the Commission will continue to have the same outdated rules and regulations that were implemented to address a problem that is nonexistent in the broadband market.

As the Commission recognized "the core assumption underlying the *Computer Inquiries* was that the telephone network is the primary, if not exclusive, means through which information service providers can obtain access to customers. . . . Yet now information service providers may access customers over a variety of network platforms, such as cable, wireless and satellite."<sup>54</sup> This is exactly the reasoning the D.C. Circuit relied upon in finding that unbundling of the high frequency spectrum for the provision of broadband services was unreasonable. Likewise, the Commission should use the same reasoning to eliminate the *Computer Inquiry* rules, which force ILECs to provision underlying wholesale service to entities for the provision

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<sup>52</sup> If the Commission determines that the ILECs' provision of the underlying transmission service is private carriage, the *Computer Inquiry* requirements should not apply as a matter of law. In such a situation, however, the Commission should clearly state that ILECs are free from such obligations for a Title I service.

<sup>53</sup> See Notice, ¶¶ 3-6. The Commission identified the following as its principle and policy goals: (1) "to encourage the ubiquitous availability of broadband to all Americans;" (2) a "regulatory framework [that] will conceptualize broadband broadly to include any and all platforms capable of fusing communications power, computing power, high-bandwidth intensive content, and access to the Internet;" (3) "a minimal regulatory environment that promotes investment and innovation in a competitive market;" and (4) "an analytical framework that is consistent, to the extent possible, across multiple platforms."

<sup>54</sup> Notice, ¶ 36. See also, *Cable Modem Declaratory Ruling*, ¶ 44.

of broadband information services. As BellSouth demonstrated in its comments, various carriers will provide wholesale services, over different networks, to ISPs to allow them to provide information services to their customers.

Finally, the commenters claim that the Commission should continue to regulate ILECs as dominant carriers to ensure that they continue to provide wholesale services to ISPs so the ISPs will have access to customers. This argument is misplaced in a competitive market. When competition exists, each competitor must be treated equally. Indeed, the Commission must apply provider parity to all providers or face distorting the market by disadvantaging one competitor with unequal regulation.

Competition for ISP customers will succeed in a non-regulatory competitive market. Clearly, the economics of any network support maximizing the amount of utilized capacity. Economies of scale and scope are achieved when a carrier maximizes the number of users on the network in order to share fixed costs. Accordingly, multiple providers of broadband services will compete for wholesale customers just as fiercely as they will for retail customers. Encouraging competing networks is not only preferable, from an economic model, to forcing one carrier, through heavy-handed regulation, to be the designated wholesale carrier, it will also work to the advantage of the ISPs. Currently ILECs are limited in the wholesale services that they provide to ISPs. ILECs, for example, cannot negotiate individual services, terms, and conditions for specific products or deals but must provide generic services to all takers pursuant to tariff. Without doubt, BellSouth will continue to offer wholesale services. It must, however, be allowed to offer these services on commercial terms and conditions.

**V. Conclusion**

Nothing provided in the comments should deter the Commission from adopting its tentative conclusion that broadband Internet access service is an information service provided via telecommunications and is not a telecommunications service. The Commission must, however, go further and remove underlying regulations that apply only to ILECs in the provision of information services such as, but not limited to, *Computer Inquiry* requirements and Part 64 cost allocation requirements. Finally, the Commission should allow ILECs, just as it allows cable modem providers, to offer the stand-alone component of broadband information services as private carriage.

Respectfully submitted,

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Date: July 1, 2002

**DECLARATION OF PROFESSOR ROBERT G. HARRIS**

**April 22, 2002**

**DECLARATION OF PROFESSOR ROBERT G. HARRIS**

**April 22, 2002**

**I. QUALIFICATIONS AND SUMMARY**

1. I, Robert G. Harris, am Professor Emeritus at the Walter A. Haas School of Business, University of California, Berkeley and a Director at LECG, the law and economics consulting group. I earned Bachelor of Arts and Master of Arts degrees in Social Science from Michigan State University and Master of Arts and Doctor of Philosophy degrees in Economics from the University of California, Berkeley. At Berkeley, I taught undergraduate, MBA and doctoral courses in managerial economics; business and public policy; industry analysis and competitive strategy; and telecommunications economics, policy and strategy. In addition, I have conducted original academic research on antitrust, regulation, telecommunications, and transportation on competition and regulatory policy, technological innovation, competitive strategy, telecommunications and transportation. This research has been published in more than 50 articles in refereed academic journals of business, economics, law, management and public policy.

2. I have testified before Congress, state legislatures, the Federal Communications Commission, Interstate Commerce Commission, Department of Justice, Canadian Radio-TV Commission, the Secretariat of Communications and Transportation of Mexico, 27 state regulatory commissions and numerous State and Federal Courts on competition, interconnection pricing and costing, intellectual property and other public policy matters. As the Deputy Director of the Interstate Commerce Commission, I played an instrumental role in the implementation of Congressional Acts deregulating the railroad and motor carrier industries. I have also been a consultant to numerous government agencies, including the Office of Technology Assessment, California and U.S. Departments of Justice, California Department of Consumer Affairs, U.S. Department of Transportation, U.S. General Accounting Office, and the

Economic Planning Agency of Japan on regulatory and competition policy in the telecommunications and transportation industries.

3. I prepared a white paper on the “Deployment of Broadband Networks and Advanced Telecommunications,” which was filed on December 19, 2001, in response to the Notice & Request for Comments (Docket No. 011109273-1273-01) by the National Telecommunications and Information Administration and was included as an attachment to the Comments of BellSouth Corporation, filed in this proceeding on March 1, 2002. My curriculum vitae was also attached to the BellSouth comments.

4. BellSouth Corporation requested LECG to conduct a business case analysis of Regional Bell Operating Company (RBOC) investment in infrastructure improvements to enable the delivery of broadband access via digital subscriber line (DSL) technology over their telephone networks. The purpose of that analysis, which is presented in Attachment 1 to this declaration, was to assess the financial returns for DSL investments and the sensitivity of those returns to possible changes in market penetration and regulatory requirements. This declaration will draw upon, and refer to, the results of that analysis, which found that, assuming “baseline” conditions and expectations, RBOCs’ investment in DSL network upgrades will not turn cash flow positive until 2004, with an accumulated \$7 billion in negative cash flow. Only after six years of positive cash flow will the RBOCs have recovered their DSL investment. The business case analysis also shows that DSL investment returns are subject to enormous market and technology risks. If, for example, RBOCs achieve a 25% lower market penetration (compared to the baseline case), they would realize \$1.2 billion less in cash flow, threatening the financial viability of those investments. RBOCs’ DSL investments are also subject to extraordinary regulatory risk: if, for example, this Commission were to impose unbundled network element platform (UNE-P) pricing of DSL service, cash flow would be reduced by \$2.5 billion through 2011, making further investments in expanding the availability of DSL a losing proposition.

5. In addition to the business case analysis, the purpose of this declaration is to reply to the comments filed by several parties in the initial round of this proceeding. As voluminous as those comments are, there is nothing in them that would surprise anyone familiar with the long history of regulation, namely, the “the private use of the public interest.” Though they offer many different arguments in support of their positions, competitors of the RBOCs seem to agree that more regulation of the RBOCs is better. There is no doubt that continued – much less heightened – regulation of DSL services and RBOC networks serves the private interests of their competitors. But there is also no doubt about what would serve the public interest: the road to more and faster broadband access, enhanced facilities-based competition and increased investment in telecommunications infrastructure is paved with innovation and incentives – NOT with regulation.

6. Thus, in Section II, I will explain why the market for broadband access should be defined without reference to specific technology or the historical categorization of particular service providers. Though the geographic scope of the market for broadband access is local, national data provide a reasonable and reliable guide to competition in those local markets. Section III will show that the markets for broadband access are competitive and becoming more so. The RBOCs do not have market power in those markets, so there is neither a need to regulate nor public benefits from regulating their services in those markets, but there are enormous costs of doing so. Indeed, Section IV will demonstrate how asymmetric regulation of the RBOCs’ DSL services is contrary to promoting broadband investment and facilities-based competition and why further regulation will cause far greater harm. By reducing its regulation of DSL, this Commission could unleash the full potential of market incentives, technological innovation and facilities-based intermodal competition to accelerate the deployment of broadband access and the adoption of broadband services.

## II. BROADBAND ACCESS MARKET DEFINITION

7. In competitive analysis, it is well-established that one begins with product and geographic market definition. To be sure, though, the scope of that analysis depends entirely on the purpose at hand. In the case of a merger, for example, one would look with considerable granularity at product lines and geographic markets (e.g., two merging banks with moderate market shares in a region would nevertheless have very high shares in particular local markets). Likewise, in assessing a railroad merger, one looks carefully at various classes of service and assesses intermodal competition in specific traffic corridors (e.g., strong competition for barges on north-south routes along Mississippi River). In both cases, the underlying rationale for the granular analysis is the same: one would be wrong to assume uniformity across particular markets. As I will show, that is not the case with broadband access.

8. First, let us address geographic market definition. AT&T, WorldCom and others argue that broadband services are offered in local markets, so national or regional data of modal shares are meaningless in assessing competition to determine the level of regulation required.<sup>1</sup> Professor Willig argues that “the market power inquiry here is necessarily far more complex... nationwide determinations of market power are not possible, because... broadband offerings do vary widely across the relevant local...markets.”<sup>2</sup> I beg to differ. While broadband service offerings and the degree of intermodal competition are not homogeneous across all local markets, there is a sufficiently high degree of similarity to use national or regional data as a reasonable first order approximation of market shares. Unlike the banking industry or the surface freight transport industry, the degree of variation in actual and potential market presence

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<sup>1</sup> In the Matter of Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services, CC Docket No. 01-337, *See* Comments of AT&T Corp., pages 15-16 and Comments of WorldCom, Inc., page 10. (Hereinafter “Comments of ....”)

<sup>2</sup> Declaration of Robert Willig, In the Matter of Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services, CC Docket No. 01-337, page 5, para. 10. (Hereinafter “Willig Declaration.”)

is not high enough to require or even justify an inquiry into each and every local market (though such an inquiry would ensure AT&T's desired effect of delaying the competitive benefits of less regulation of RBOC's DSL services). Thus, the Commission is well advised to use national data regarding market shares and the growing availability of various modes of broadband access. In doing so, it will lend comfort and support for progressive steps to regulate less and rely more on market forces.

9. Second, regarding product market definition, Ad Hoc Telecommunications Users and others argue that small and medium enterprises (SMEs) and small office or home offices (SOHOs) should be considered a separate market because business customers have different requirements than residential customers.<sup>3</sup> Implicit in their argument (and, hence, the reason for defining a "separate" market) is that there is not sufficient competition to SMEs and SOHOs because cable networks don't pass all business locations. Whether one views SME/SOHO as an important segment of the mass market, or as a separate market, does not matter much, because given the rapid expansion of cable networks (see Section III below) and growth in competition from other modes targeting these customers, this market (segment) is – or will soon be – highly competitive. This demonstrates why it is essential, in defining relevant product markets, to take a forward-looking view of markets and technologies. The point is not whether cable modem or DSL or other means of broadband access are (or, more correctly, were, at last count) available to every type of customer in every geographic market. We know one thing for certain: the availability of different modes of broadband access is increasing rapidly; while not every mode will reach every corner of every market, the trend is clear – namely toward substantially increasing intermodal competition. That view of the future – not the modal shares of the past – and the product market definition it implies, should guide the Commission in assessing the

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<sup>3</sup> See Comments of the Ad Hoc Telecommunications Users Committee, pages 6-8; Comments of AT&T Corp., pages 40-44; Comments of Covad, pages 14-16.

opportunity for improving market performance by removing unnecessary regulations and reducing asymmetric regulation of one class of broadband access providers, the RBOCs.

### III. THE LACK OF MARKET POWER IN BROADBAND ACCESS

10. Using national market share data as a proxy for local geographic markets, it is evident that the RBOCs do not have market power in the market for broadband access. I concur fully with the analysis and empirical support of Dr. Carlton and Dr. Sider in their conclusion that “ILECs [incumbent local exchange carriers], individually or collectively, could not exercise market power in either the ‘mass’ market or ‘larger business’ market in the absence of regulations.”<sup>4</sup> Moreover, given rapid technological change, it is clear that intermodal competition in broadband access will increase, both because the number of competing modes will increase and because the availability and capabilities of those competing modes will increase.

11. Competitors argue that intermodal competition does not exist because broadband service over cable networks is not available everywhere.<sup>5</sup> That is a backward-looking view of competition.<sup>6</sup> Cable companies are rapidly upgrading their networks to provide broadband services to reach more of the mass market. Cable networks pass approximately 93 percent of households in the US.<sup>7</sup> The FCC reports that by the end of 2001, cable modem service was available to 70 percent of homes.<sup>8</sup> Industry analysts predict that by the end of 2004, 92 percent

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<sup>4</sup> Declaration of Dennis W. Carlton and Hal S. Sider, In the Matter of Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services, March 1, 2002, page 3, para. 8.

<sup>5</sup> Comments of AT&T Corp., pages 41-42; Comments of WorldCom, pages 11-12.

<sup>6</sup> The Commission should note a familiar pattern of argument by RBOC competitors: when arguing for lower TELRIC prices, they stress that costs should be “forward-looking”; when arguing about competition, they typically refer to “the way we were.”

<sup>7</sup> U.S. Census Bureau “Table DP-1. Profile of General Demographic Characteristics for the United States: 2000,” and NCTA Industry Statistics (downloaded at [www.ncta.com/industry\\_overview/indStat.cfm](http://www.ncta.com/industry_overview/indStat.cfm), 3/26/02).

<sup>8</sup> In the Matter of Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All

of homes will have cable modem service.<sup>9</sup>

12. Cable companies are actively marketing broadband access services to business customers today. AT&T Broadband, AOL Time Warner, Comcast and Cox all have broadband offerings for business customers that focus on the distinct communications needs of businesses.<sup>10</sup> Moreover, not surprisingly, cable operators are rapidly extending their networks to reach even more business customers. It is not difficult to extend cable networks to reach many business customers; cable networks are nearly ubiquitous in residential areas, and many business customers are located near residential areas. An example of the adjacency of residential and business areas is shown in the zoning map of Orange County, Florida in Attachment 2; as one can see, residential zones are interwoven with areas zoned for business, making it a simple matter to extend cable networks initially designed to serve residential customers into adjacent business locations. A recent interview with Chuck McElroy, Vice President and General Manager of Cox Business Systems explains the business case for extending its network to business customers.

As it turns out, the cable plant is not as hard to extend to business areas as commonly thought. Cox fiber already passes by many commercial zones, particularly as central businesses have in recent years migrated into suburban areas. And then there are a growing number of small and home-based businesses within Cox's residential network reach.

"In many cases we're already connected to commercial locations," McElroy says. "We pass by a lot of strip centers and a lot of industrial complexes. Then what we do is we

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Americans in a Reasonable And Timely Fashion, and Possible Steps To Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, Third Report, FCC 02-33, CC Docket 98-146, February 6, 2002, page 22.

<sup>9</sup> Remarks to NARUC Telecommunications Committee by Robert Sachs, President and CEO, National Cable & Telecommunications Association, "Putting Broadband to Work for Consumers," July 17, 2001, referencing projections by Morgan Stanley.

<sup>10</sup> See AT&T Broadband's web site (downloaded at [www.bbs.att.com/static/index\\_flash.shtml](http://www.bbs.att.com/static/index_flash.shtml), 3/19/02); the AOL Time Warner Roadrunner web site (downloaded at [rrcorp.central.rr.com/busclass](http://rrcorp.central.rr.com/busclass), 3/19/02); the Comcast web site (downloaded at [www.comcastbusiness.com](http://www.comcastbusiness.com), 4/15/02) and Cox Business Services web site (downloaded at [www.coxbusiness.com/systems/fl\\_pensacolaftw/internet.asp](http://www.coxbusiness.com/systems/fl_pensacolaftw/internet.asp), 3/19/02).

enhance that network by building fiber hubs out to industrial parks and to large buildings and large business locations as well. So it is kind of a combination of leveraging and enhancing the existing network that is out there today.”

The upshot is that “incrementally we can get into the commercial market without throwing a lot more investment into the network.” McElroy adds.<sup>11</sup>

13. Projections of business customer use of broadband cable services show continued strong growth. One analyst projects that in North America, cable modem services to businesses will grow by 69% per year to nearly 9.5 million connections in 2007.<sup>12</sup> As AT&T Broadband is the largest cable network operator, with large networks in major metropolitan areas around the country, it is well positioned to compete for many businesses over its cable networks.<sup>13</sup>

14. In addition to cable modem services, DSL will face increasing competition in the mass market for broadband access from satellite, mobile wireless (e.g., 2.5G-3G, WiFi) and stationary wireless (LMDS, MMDS) will become increasingly competitive in the near future. Several recent announcements indicate that wireless broadband access is already in the early stages of deployment in the US. In January 2002, Verizon announced plans to roll out 3G service, with data speeds up to 150 kpbs, to major markets throughout the US, and Sprint PCS showcased its 3G service and reiterated its commitment for a nationwide launch by mid-2002.<sup>14</sup> This is a major step in the progression toward mobile wireless broadband. In addition, satellite communications service providers now offer Internet access (e.g., DirecPC), and pending network upgrades will substantially improve the quality of broadband satellite access and

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<sup>11</sup> Brown, Karen, “Cox Unit Bucks Cable Image With Enterprise Offerings,” *Broadbandweek.com*, August 6, 2001 (downloaded at [www.broadbandweek.com/news/010806/010806\\_cable\\_cox.htm](http://www.broadbandweek.com/news/010806/010806_cable_cox.htm), 3/19/02).

<sup>12</sup> “Broadband Access, DSL vs. Cable Modems, 2002-2007,” *Insight Reports*, March 2002, page 87.

<sup>13</sup> National Cable & Telecommunications Association (downloaded at [www.ncta.com/industry\\_overview/top50mso.cfm](http://www.ncta.com/industry_overview/top50mso.cfm), 3/26/02).

<sup>14</sup> “Announces Relationship With Accenture; Introduces Kyocera 2235 and the Sierra Wireless Aircard 555” Verizon press release, January 28, 2002 (downloaded at [www.verizon.com](http://www.verizon.com), 4/18/02); “Sprint Showcases First Live Public Demonstration of its Wireless Third Generation Network,” Sprint PCS press release, January 8, 2002 (downloaded at [www.sprintpcs.com](http://www.sprintpcs.com), 4/18/02).

services. Hughes Network Services plans to provide services in North America with the launch of its SPACEWAY system in 2002, with global coverage available by 2003 or 2004, while Astrolink plans to launch four satellites in early 2003.<sup>15</sup> Both systems will operate in the Ka-band, which will deliver broadband services at substantially lower cost than the current Ku-band offerings.<sup>16</sup> Industry analysts believe that “Satellite offerings should become increasingly visible over the next 12-18 months, at first competing effectively in markets underserved by cable and xDSL and, over time, as part of a bundled video offer with strong appeal for certain customer segments....”<sup>17</sup>

15. AT&T, Time Warner Telecom, and WorldCom argue that ILECs have pervasive market power in the provision of broadband services to large businesses.<sup>18</sup> But AT&T’s market definition is limited to intraLATA services, which is a very small portion of the total market for high-speed data services. Most companies buy network services that span several, or many LATA’s. Even a company as small as LECG has an international frame relay network to provide interconnectivity across five countries. The comments by Covad in this proceeding correctly state that high-speed data services “are, to a large extent, provided on an interLATA basis.”<sup>19</sup> AT&T’s comments report shares only for the intraLATA segment of the data services market. As the “Broadband Fact Report” submitted by Verizon in this proceeding shows, market shares reported by AT&T are very misleading. Based on the same IDC report as AT&T, the “Broadband Fact Report” shows that the RBOCs have only 17 percent share of frame relay

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<sup>15</sup> Astrolink is owned by Liberty Media, Lockheed Martin Global Telecommunications, TELESPIAZIO and TRW Inc.; “Broadband from Outer Space – A New Generation of Satellites Aims to Attack the Local Loop Market,” Network Magazine, January 1, 2002; see also Spaceway web site (downloaded at [www.spaceway.com](http://www.spaceway.com), 4/18/02).

<sup>16</sup> “Residential Broadband: Cable Modems, DSL, and Fixed Wireless,” the Strategis group, 2002, pages 116-117.

<sup>17</sup> “Broadband 2001,” JPMorgan H&Q, McKinsey, April 2, 2001, page 7.

<sup>18</sup> Comments of AT&T Corp., pages 19-20; Comments of Time Warner Telecom, page 2; Comments of WorldCom, Inc., pages 22-25.

<sup>19</sup> Comments of Covad Communications Company, page 12.

services and 19 percent share of asynchronous transfer mode (ATM) services. AT&T is the largest provider of frame relay services (35 percent share), and the three largest interexchange carriers (AT&T, WorldCom and Sprint) have 70 percent share for each of these services.<sup>20</sup>

16. AT&T and WorldCom also argue that DSL price increases during the last year are “consistent with the exercise of market power.”<sup>21</sup> But only if price increases generate monopoly profits is there an exercise of market power. The straightforward explanation of those price increases is that RBOCs used “promotional pricing” of DSL services early in the life cycle of DSL broadband access. As the market began to develop, they raised prices to a level that provides an opportunity to earn a reasonable risk-adjusted rate of return on their investments, past and future. In fact, the business case analysis demonstrates that, without those price increases (which are built into the baseline case), the business case for continued investment in DSL-enabling infrastructure wouldn’t turn positive within 10 years. That result is consistent with the clear inference of market structure:<sup>22</sup> that RBOCs do not have market power in the market for broadband access.

#### **IV. REDUCING REGULATORY ASYMMETRY IN BROADBAND ACCESS**

17. Many RBOC competitors, including AT&T, Cbeyond and NuVox, Competitive Telecommunications Association, Covad, and Time Warner Telecom, are asking for the continuation of current regulation of ILEC broadband services and the extension of unbundling requirements.<sup>23</sup> Continuing existing regulation of RBOCs’ DSL services – much less expanding

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<sup>20</sup> Comments of Verizon, “Broadband Fact Report,” pages 27-29.

<sup>21</sup> Willig Declaration, page 23, para. 41. *See also* Comments of AT&T Corp, pages 45-46; Comments of WorldCom, Inc., page 20.

<sup>22</sup> I.e., the dominance of cable operators over RBOCs in terms of market shares in broadband access.

<sup>23</sup> Comments of AT&T Corp., pages 51-52; Joint Comments of Cbeyond and NuVox, pages 4-5; Comments of the Competitive Telecommunications Association, page 8; Comments of Covad, page 6; Comments of Time Warner Telecom, pages 10-11.

the unbundling requirements on RBOCs – would be directly contrary to the public interest in promoting broadband investment and facilities-based competition. The business case analysis shows that there is a high degree of inherent riskiness in DSL investments, and additional regulatory restrictions turn an otherwise positive DSL business case negative. For example, the business case analysis shows that if RBOCs are required to unbundle their DSL services and offer a combined-UNE DSL service (a UNE-P version of DSL) at prices substantially below current wholesale prices, cumulative cash flows would be driven downward by \$2.5 billion, which would seriously impair the abilities of the RBOCs to recover their DSL investments.

18. Moreover, even the uncertainty of additional regulation further dampens investment incentives. This is true for all industry participants. Two comments by Robert Sachs, President and CEO of the National Cable and Telecommunications Association, clearly articulate the problem. He stated that “FCC deliberation on cable modem service is creating a ‘regulatory cloud’ that’s bad for the industry”<sup>24</sup> and that regulatory uncertainty has “a negative impact on capital markets and [discourages] competitive investment.”<sup>25</sup> To remove that regulatory uncertainty, the Commission should act decisively to reduce regulation and send a clear message to markets and investors that its policy will consistently promote network investment and innovation.

19. The Commission should not draw false inferences from the RBOCs’ DSL investment to date. The financial returns on DSL investment change rather dramatically as DSL upgrades move from the “core” of the network to its “periphery.” When the fixed costs of network investment can be spread across many customers (i.e., dense urban areas), unit costs are considerably lower. When upgrading in low density towns and rural areas, those facilities can be

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<sup>24</sup> “Market is Overtaking Regulators in Debate Over Cable Modem ‘Open Access,’ Panelists Say,” Telecommunications Report Daily, February 6, 2002.

<sup>25</sup> Letter by Robert Sachs to The Honorable W.J. “Billy” Tauzin, April 25, 2001 (downloaded at [www.ncta.com/press/press.cfm](http://www.ncta.com/press/press.cfm), 2/13/02).

shared by many fewer users, causing the cost of providing DSL service to be much more costly than in urban areas. Unless the Commission acts to remove regulations that disincent network investment, extending the availability of DSL to the large majority of households will not be financially viable.

20. Moreover, continued investment in DSL infrastructure has occurred, in part, because the public comments of FCC Commissioners indicate recognition of the need to increase incentives for facilities-based competition and investment in advanced telecommunications infrastructure. FCC Chairman Michael Powell has repeatedly stated his commitment to facilities-based competition. In October 2001, he said that “Commission policy should provide incentives for competitors to ultimately offer more of their own facilities... [to] decrease reliance on incumbent networks.”<sup>26</sup> Commissioner Abernathy stated that to “restore the incentives for facilities-based investment... [there must be] a shift away from policies that actively encourage resale as a long-term business strategy and force the unbundling of virtually every network element at TELRIC [total element long run incremental cost] rates.”<sup>27</sup> Commissioner Martin also agreed that the Commission needs “to place a high priority on facilities-based competition...” in order to increase incentives “for the deployment of new facilities that could be used to provide broadband.”<sup>28</sup> If the Commission does not act now to carry out those steps, it should expect a further lessening in DSL investment and a slower rate of adoption of broadband services.

21. WorldCom argues that because cable companies are not required to provide open

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<sup>26</sup> Remarks of FCC Chairman Michael K. Powell, “Digital Broadband Migration” Part II, October 23, 2001.

<sup>27</sup> Remarks of Commissioner Kathleen Q. Abernathy, “Competition Policy Institute Forum: *Keeping Telecom Competition on Track*,” December 7, 2001.

<sup>28</sup> Separate Statement of Commissioner Kevin J. Martin, Re: Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, CC Docket No. 98-146, February 6, 2002.

access on a nondiscriminatory basis at regulated prices, the FCC needs to regulate ILECs to ensure an entry path for Internet Service Providers (ISPs).<sup>29</sup> But the issue is not whether ISPs have access to DSL service at wholesale prices, but what those prices are. The baseline case assumes that a significant share of DSL customers on RBOC networks will be served by ISPs or other resellers, at wholesale prices that reflect retailing cost savings. The risk to DSL investment is from requiring UNE-P pricing of DSL service, at rates that are lower than actual costs, which would destroy the economic rationale for the DSL investment. On this point, it is worth noting that when cable companies are required to provide open access, the wholesale price of access is not regulated. To gain regulatory approval for their merger, AOL and Time Warner agreed to allow multiple ISPs to offer service over Time Warner's cable network. Terms of the agreements with the FTC and FCC included technical specifications and the inclusion of a most favored nation clause in ISP contracts. Prices for access, however, are negotiated between the ISP and AOL Time Warner, and are not subject to regulatory oversight.<sup>30</sup> Publicly available information suggests that ISPs are paying approximately \$30 to \$35 per month for access to customers using cable modem service,<sup>31</sup> which is in line with DSL wholesale offerings by the RBOCs<sup>32</sup> but well above a UNE-P price for DSL.

22. Two other multiple system operators (MSOs) recently announced agreements with ISPs that allow the ISPs to offer high-speed cable Internet service over their networks – AT&T Broadband with EarthLink and Comcast with United Online. Comcast President Brian

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<sup>29</sup> Comments of WorldCom, Inc., pages 11-14.

<sup>30</sup> "FTC Approves AOL/Time Warner Merger with Conditions," Federal Trade Commission press release, December 14, 2000 (downloaded at [www.ftc.gov/opa/2000/12/aol.htm](http://www.ftc.gov/opa/2000/12/aol.htm), 3/15/02).

<sup>31</sup> "AT&T to Offer Earthlink On Cable Lines," Wall Street Journal, March 13, 2002; "Comcast, United Online Set Deal For Internet Service on Cable Lines," Wall Street Journal, February 27, 2002; "Time Warner, EarthLink Reach Deal," Washington Post, November 21, 2000; "Comcast to share network," Harrisburg Patriot, February 27, 2002.

<sup>32</sup> RBOC wholesale pricing for DSL service ranges from approximately \$33 to \$44 for speeds of 1.5Mbps downstream and 128Kbps upstream, depending on volume and length of term commitments. See BellSouth ([www.bellsouth.com](http://www.bellsouth.com)), Verizon ([www.verizon.com](http://www.verizon.com)), and SBC ([www.sbc.com](http://www.sbc.com)) web sites.

Roberts explains that cable companies have an incentive to enter into multiple ISP arrangements because they create more opportunities for growth in their broadband businesses: “This is a business opportunity as we want to get the maximum penetration of broadband...The real payoff is in expanding the market from 10 percent to much higher penetration in the years ahead.”<sup>33</sup> The FCC’s hands off approach to regulation is encouraging healthy competition – with wholesale prices determined by the market, not by regulators.

23. Earlier this year, the FCC decided to classify broadband access to the Internet over wireline facilities and cable facilities as an information service. In these rulings, the FCC clearly articulates its policy goals in assessing regulation of broadband services.

- First, consistent with the Telecommunications Act, the FCC seeks to “encourage ubiquitous availability of broadband to all Americans” through “regulatory forbearance, measures that promote competition... or other regulating methods that remove barriers to infrastructure investment;”
- Second, the FCC believes that “broadband services should exist in a minimal regulatory environment that promotes investment and innovation in a competitive market,” and it seeks to remove regulatory uncertainty.
- Third, the FCC attempts “to create a rational framework for the regulation of competing services that are provided via different technologies and network architectures.”<sup>34</sup>

24. While the FCC is focused on the correct policy goals, its declarations in these proceedings are fundamentally inconsistent with those goals. A telling example is the FCC’s

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<sup>33</sup> “Comcast Inks Access Deal With United Online, *Cable Datacom News*, March 1, 2002.

<sup>34</sup> In the Matter of Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities, Internet Over Cable Declaratory Ruling, Appropriate Regulatory Treatment for Broadband Access to the Internet over Cable Facilities, Declaratory Ruling and Notice of Proposed Rulemaking, FCC 02-77, GN Docket No. 00-185, CS Docket No. 02-52, March 15, 2002, pages 4-5.

approach to assessing regulation of cable modem and DSL services. For cable modem service, the FCC is correctly asking the question: should there be any regulation? For DSL, a service offered by carriers whose voice services have been highly regulated, the FCC is asking: should there be an easing of regulations? With all due respect, that is the wrong question to be asking if the Commission is truly intent on achieving its stated policy objectives. Given the actual and potential intermodal competition in broadband access, the right question is: why regulate DSL at all? The greatest danger now for broadband policy is that the Commission might be too timid in stripping away the vast array of regulation implemented over decades and designed in the context of narrowband voice service. Admittedly, there is a powerful inertial energy to the regulatory status quo, but that is precisely why the Commission should act boldly, now, to remove unnecessary regulations and level the playing field for intermodal competitors.

25. Given the potential rate of technological change and the dramatic increases in intermodal competition, regulation of broadband services would be especially harmful because of its long-term dynamic effects. The convergence of content with communications capability is stimulating intermodal competition. Removing regulatory obstacles on DSL will foster continued growth in broadband services, creating conditions for further investment in higher speed services and enabling the realization of video-on-demand and video streaming, and increasing competition in Internet-based competition with traditional cable video services. Unless the Commission takes steps to substantially reduce its regulation of DSL, the regulatory asymmetry between ILECs and MSOs will further distort facilities-based competition and bias the course of technological innovation and adoption.

26. Finally, I would urge the Commission to consider that the policies it adopts through this and related proceedings will affect far more than the deployment and adoption of current generation technologies for broadband access. Current broadband access technologies are just the first stage of technological development. In each mode of broadband access, bandwidth will increase substantially, by an order of magnitude over first-generation broadband.

Whereas access speeds in the analog access world were measured in tens of kilobits per second (i.e., 9.6-56 kbps), the current generation of broadband access is measured in hundreds of kilobits per second (i.e., 256-1,544 kbps). The next generation of broadband access will be measured in the thousands of kilobits, i.e., megabits. These speeds will be needed to support bandwidth intensive applications such as online gaming, video-on-demand and streaming video.<sup>35</sup>

27. However, until a substantial number of subscribers have adopted first-generation broadband, the development of broadband applications will not develop sufficiently to create the demand for even higher bandwidth access or applications. Given the substantial investment required to implement next-generation services, current adoption is critically important. For example, one analyst estimates that the cost to implement fiber-to-the-home, which will pave the way for next-generation applications offered by the ILECs, will be approximately \$5,000 per subscriber assuming a 50% penetration rate. This estimate increases to over \$9,000 if the penetration is 25%.<sup>36</sup> Thus, it is crucial to adopt and implement public policies that clear away the regulatory obstacles and disincentives that are inhibiting innovation and investment in the current generation of broadband access technologies, in order to promote continued rapid technological innovation and the deployment of next-generation technologies.

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<sup>35</sup> "Optical Access, Part II," CIBC World Markets, October 23, 2001, page 9.

<sup>36</sup> "Optical Access, Part II," CIBC World Markets, October 23, 2001, pages 23-24.

**DECLARATION OF PROFESSOR ROBERT G. HARRIS**

**ATTACHMENT 1**

**DSL BUSINESS CASE ANALYSIS**

**April 22, 2002**

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## 1. PURPOSE OF THE DSL BUSINESS CASE ANALYSIS

The continued development of the high-speed Internet market depends critically upon upgrades to existing networks and the creation of new networks. To accomplish this, private firms must be willing to make substantial high-risk investments in an environment of technological and competitive uncertainty.

Digital subscriber line (DSL) network investments are designed to provide services in a competitive market, and investments in competitive markets carry substantial amounts of risk. The inherent balance between risks and rewards fuels innovation and investment in our free market economy. The possibility of over-regulation adds an additional layer of risk to DSL investment decisions, while adding no offsetting layer of reward. This over-regulation will disrupt the market forces that we depend upon to achieve beneficial levels of innovation and investment.

Increasing the risks and uncertainties associated with making investments decreases incentives to invest. This maxim is especially true of large-scale investments in durable assets, such as investments to extend DSL capabilities into wireline networks. The purpose of our DSL business case analysis is to provide a quantitative assessment of the inherent riskiness of DSL investments and to show how regulatory restrictions can turn an otherwise positive DSL business case negative.

Private firms develop business case analyses to decide whether or not they should make an investment. If the business case does not show enough cash flow to cover the capital invested, plus a return equal to or exceeding the cost of capital, the firm will not, and should not, make the investment. Hence, regulatory risk that turns the DSL business case negative would have the effect of denying DSL service to the remaining households whose lines have not yet been upgraded, as the firms could not justify further buildout.

The business case model shows that DSL is a risky investment. The baseline view, assuming all goes according to plan, yields sufficient returns to justify the risky investment. Market risk, such as lower penetration of DSL resulting from technological challenges or heavier than expected competition, drives the business case down to just above breakeven. Regulatory risk, on the other hand, drives the business case negative, implying that the regional Bell operating companies (RBOCs) should not invest in upgrading their networks for DSL if they are going to be forced to unbundle the service at artificially-low unbundled network element platform (UNE-P) prices.

This asymmetric regulatory risk puts DSL at a big disadvantage relative to cable modems, satellite, wireless, and other broadband providers, who are not required to unbundle their services. If policy-makers want to encourage facilities-based broadband competition through faster and broader deployment of DSL, they need to focus on leveling the playing field for all broadband providers by removing the asymmetric regulatory risk that discourages investment in DSL.

## **2. OVERVIEW OF THE DSL BUSINESS CASE ANALYSIS**

Incumbent local exchange carriers (ILECs) have made and continue to make substantial investments to extend the DSL capabilities of their networks to end user customer locations. These investments are made with the expectation that they will generate sufficient cash flows over several years to recover the costs, including the cost of capital, associated with these substantial investments. There are, however, considerable risks to this expectation.

Our DSL business case analysis uses a simplified cash flow model designed to illustrate the risks associated with RBOC investments in DSL capabilities. It is an aggregate model based upon reasonable assumptions for the financial performance of RBOCs as a group, but it is not a projection of the actual cash flows that any individual RBOC might experience. Many of the input values for our analysis are projections made by Lehman Brothers in reports on the future of DSL.<sup>1</sup> We supplemented these data with information from multiple sources including RBOC public filings, other industry analyst reports, and discussions with BellSouth financial directors and BellSouth network engineers. Consistent with the financial expectations driving DSL investments, the baseline run of this model projects annual cash flows sufficient for the RBOCs to recover their DSL investments and expenses.

There are many forms of market risk inherent in providing DSL service that could have a major effect on the financial viability of the DSL business case. These include the rate of adoption of broadband services in general, DSL service in particular, and wireless technologies; increased churn and customer acquisition costs; and DSL deployment costs. In the first scenario, we assess one form of market risk—showing the effect of 25 percent fewer DSL subscribers than the baseline view. The analysis shows that lower market penetration would jeopardize an otherwise positive DSL business case.

In addition to normal market risks, the DSL business case is subject to risks resulting from regulation. While some of the normal market uncertainties have upside as well as downside, regulatory risk has only downside potential. In the second scenario, we assess the effect of requiring the RBOCs to unbundle DSL service and allow the resale of DSL service at UNE prices (a DSL version of UNE-P). We show that these regulatory requirements would seriously jeopardize the abilities of the RBOCs to recover their DSL investments, thereby discouraging investment.

## **3. BASELINE VIEW**

Baseline RBOC cash flows related to DSL services have been projected through year 2011. In the baseline, annual cash flows turn positive in year 2004, and by 2010 the cumulative discounted cash flows are positive. A positive value for the cumulative discounted cash flows

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<sup>1</sup> Lehman Brothers, "Wireline Services, Industry Update, Scaling DSL – RBOCs Poised to Mine Returns in '02/'03," June 7, 2001; Lehman Brothers Cable Communications Services, "Consumer Broadband – Cable vs. DSL Chapter 2," June 7, 2001.

reflects the expectation that DSL investments will create value for the RBOCs.

“Free cash flow” is a measure of the cash generated (revenues) by a business venture less the cash paid (investments and expenses) to undertake the venture. In a business case analysis, a firm projects the key drivers of annual cash flows and sums the discounted annual cash flows to determine if the business venture makes financial sense, i.e., creates value. A venture creates value for its owners to the extent that it generates cash sufficient to recover the investments and expenses and compensate the owners for the use of their money. When cash flows occur over a number of years, a proper evaluation must take into account the time value of money. This is done with a process called discounting. Discounted cash flows are annual flows that account for the time value of money.

For large network investments it is typical to experience relatively large negative cash flows for a number of years, with the expectation of positive cash flows in later years. This is the expectation in the baseline view.

For the years 2000-2005, many of the input values for the baseline view were extracted from the Lehman Brothers report on DSL. Other sources of information included RBOC public filings, other industry analyst reports and discussions with BellSouth financial directors and BellSouth network engineers. To illustrate RBOC risks associated with DSL investments, it is useful to extend the Lehman Brothers view through 2011. Figure 1 lists some of the key input values in the baseline view.

**Figure 1**  
**Key Input Values of Baseline View**

	2002	2004	2006	2008	2010
<b>Subscribers (M)</b>	6.7	12.4	16.5	20.1	24.0
<b>Revenues (\$B)</b>	3.1	6.6	9.4	11.6	13.9
<b>Non-Depr Expenses (\$B)</b>	2.9	4.0	4.7	5.4	6.1
<b>EBITDA (\$B)</b>	0.2	2.6	4.7	6.1	7.7
<b>Capital Spending (\$B)</b>	2.4	0.7	0.5	1.3	1.3
<b>Cum. Cap Spending (\$B)</b>	7.3	9.6	10.7	13.2	15.7

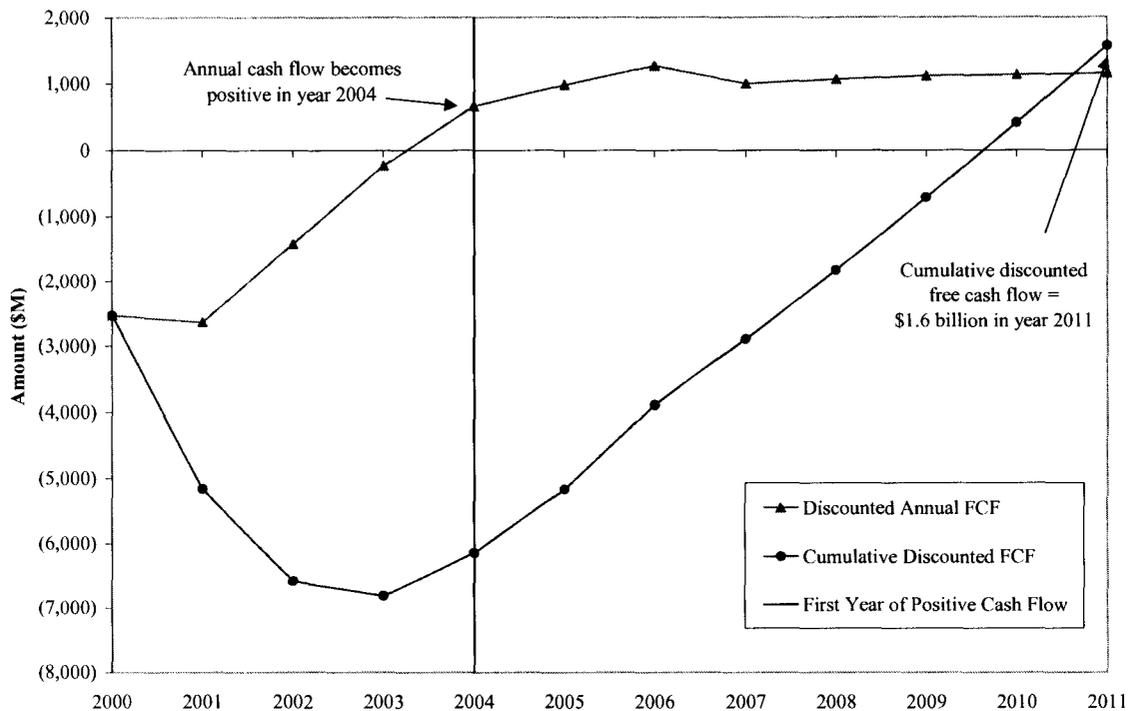
Subscriber growth is based on Lehman Brothers projections. In 2002, Lehman Brothers projects 6.7 million DSL subscribers for the RBOCs. This is 35 percent of the combined projected cable modem and RBOC DSL subscribers. DSL subscribers are projected to grow 16 percent per year to 25.5 million subscribers in 2011.

In the baseline, average revenue per line rises from approximately \$48 in 2002 to \$50 by year 2005 and remains constant thereafter. Average revenue per line is a composite of expected revenues per line from retail residential customers, retail business customers, and wholesale customers.

Baseline projections of annual discounted cash flows and cumulative discounted cash flows are

shown in Figure 2. As shown, annual cash flows turn positive in year 2004 of the baseline view, and by 2011 cumulative discounted cash flows equal \$1.6 billion.

**Figure 2**  
**Baseline View: Cash Flow Positive in 2004**  
**\$1.6 Billion Value in 2011**



Due to a total of almost \$9 billion of capital spending from years 2000 to 2003, free cash flow is negative in each of these years, and the RBOCs are in a \$7 billion financial hole. After 2004, DSL capital spending drops significantly and annual cash flows turn positive. After six years of positive cash flows, the investment is essentially recovered, and by year 2011, the cumulative discounted value of the DSL cash flows is \$1.6 billion.

**4. ADDITIONAL RISKS BEYOND THE BASELINE VIEW**

There are many market and regulatory risks to the baseline view. Our analysis examines two significant risks, one inherent in the competitive process and one stemming from the regulatory process. Potential impacts associated with our risk analyses are shown relative to the baseline view. These impacts are described by comparing the cumulative discounted free cash flows in 2011.

**Market Risk: Lower Penetration of DSL**

Inherent in the baseline view are many business risks and uncertainties. Key uncertainties that

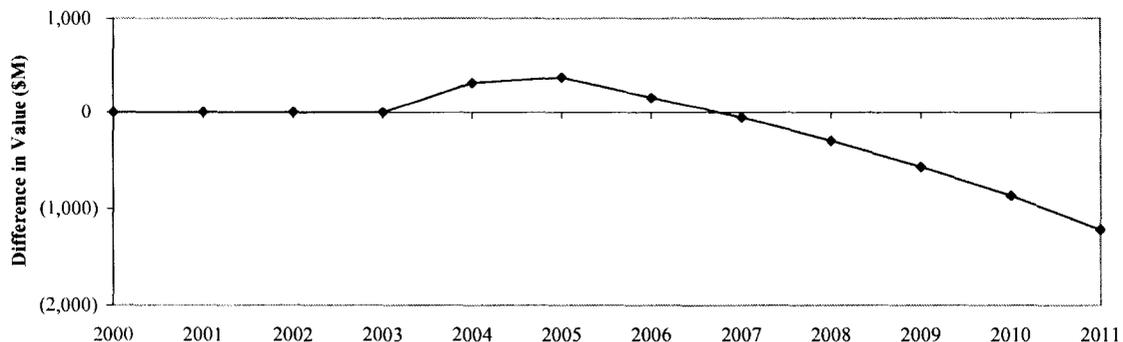
affect the financial viability of DSL service include:

- size of broadband service market,
- DSL market share,
- rate of deployment and adoption of alternative technologies such as mobile and fixed wireless and satellite services,
- rate of obsolescence of current DSL technologies,
- competitive price pressure,
- incremental capital costs,
- customer acquisition costs and customer churn, and
- customer service costs.

While many of these uncertainties have some upside potential, given the highly competitive nature of the broadband services market, the downside potential is enormous. In this scenario, we examine the effect of lower market penetration of DSL, which could be caused by a number of factors including lower than projected broadband adoption, higher than projected use of alternative technologies, or faster adoption of services that deliver broadband speeds higher than DSL capability.

The baseline view projects 25.5 million DSL subscribers in 2011. In this scenario, we reduce DSL subscribers by 25 percent. The impact of fewer subscribers on cumulative free cash flow is shown in Figure 3. The major difference from the baseline is that the cumulative discounted cash flows are approximately \$1.2 billion less than the baseline view by 2011.<sup>2</sup> That winning fewer subscribers presents a serious threat to the financial success of DSL investments demonstrates the high degree of inherent risk in the DSL business.

**Figure 3**  
**Lower DSL Market Penetration Reduces Value by \$1.2 Billion Relative to Baseline**



<sup>2</sup> For a short period, the cumulative cash flows are higher as less investment is required for incremental capital, due to the smaller number of subscribers.

### Regulatory Risk: UNE-P Pricing of DSL

As noted above, average revenue per DSL subscriber is a composite of expected revenues per line from retail residential and business customers and from wholesale customers. Average wholesale revenues per subscriber are \$12 lower than average retail residential revenues, which reflect costs not incurred by RBOCs, such as customer care and Internet Service Provider (ISP) costs, when another firm is the provider of service to the end user. The availability of wholesale services at prices that reflect RBOC actual costs allows competitive entry while compensating the RBOCs for the investments required to provide the DSL service.

Our risk analysis examines the impact of a regulatory requirement that would force the RBOCs to provide DSL service at steep discounts based upon estimates of total element long run incremental costs (TELRIC). This would create, in effect, a UNE-P for DSL service. This drop alone would have a significant negative impact on the financial viability of DSL investments, but this is not the only effect. Impacts from lower wholesale prices would increase the portion of subscribers served by providers that resell RBOC services and/or force significantly lower prices for RBOC retail customers. To illustrate these impacts, the portion of wholesale lines is increased from 25 to 50 percent.

Figure 4 shows the effect of the reduction in average revenue and increase in wholesale subscribers. Realization of the downside risk associated with a UNE-P DSL offering would drive cumulative cash flows downward by \$2.5 billion and seriously impair the abilities of the RBOCs to recover their DSL investments. This scenario is conservative in its assessment of cash flow loss, as it does not include any additional costs resulting from unbundling.

**Figure 4**  
**UNE-P Pricing of DSL Reduces Free Cash Flow by \$2.5 Billion Relative to Baseline**

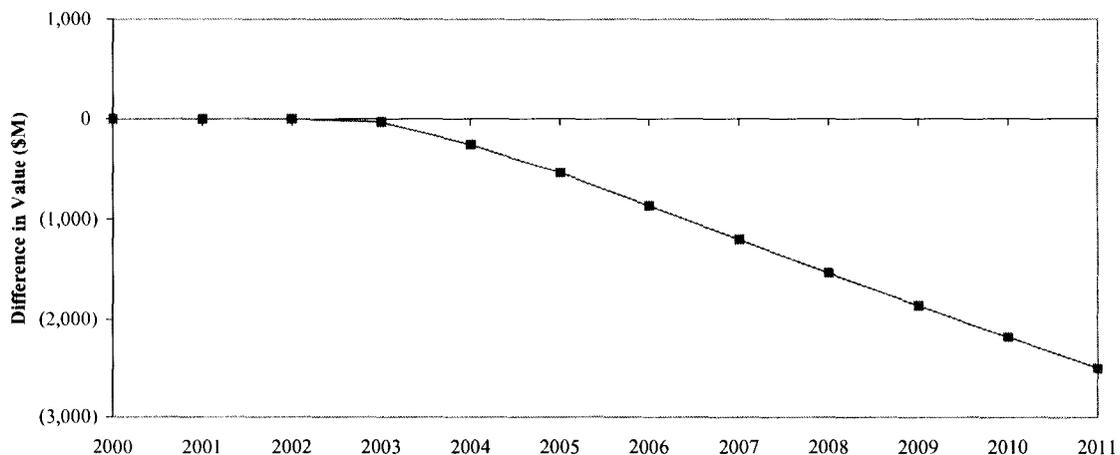


Figure 5 shows the shareholder value impact of this reduction in free cash flow. Stock market analysts commonly express the value of a firm (market capitalization or “market cap”) as a multiple of its annual free cash flow, because the value of a firm to its shareholders is strongly related to its current and future ability to generate cash. Lower cash flows lead to lower valuations. Note that this valuation approach uses a single year of undiscounted cash flow, times

a fixed cash flow multiple.<sup>3</sup> The cash flow multiple incorporates the anticipated growth rate of cash flow as well as the discount rate.<sup>4</sup>

Relative to the baseline view, the UNE-P scenario generates \$700 million less in cash flow in 2006, and \$1.3 billion less in 2011, resulting from the increased penetration of wholesale lines and substantially lower revenue per wholesale line. Using a standard cash flow multiple for the RBOCs, the free cash flow loss from UNE-P pricing would amount to a valuation loss of approximately \$9 billion of the total RBOC market cap by 2006, and \$15 billion of the total RBOC market cap by 2011. These figures correspond to 3% and 5%, respectively, of the current total RBOC market cap, which is a highly significant loss in valuation.

**Figure 5**  
**UNE-P Pricing of DSL Reduces Market Capitalization by 5% by 2011**

<i>Figures in \$M</i>	2006	2011
Baseline Scenario Annual FCF	2,812	4,493
UNE-P Scenario Annual FCF	2,080	3,240
Difference in FCF	732	1,254
12x Multiple (Market Cap Loss) [1]	8,782	15,043
Current Total RBOC Market Cap [2]	300,800	300,800
% Loss in Market Cap	2.9%	5.0%

Notes

[1] 12x FCF Multiple used by Dresdner Kleinwort Wasserstein report (3/8/02, Fig. 37) to analyze UNE impact on shareholder value.

[2] Total market capitalization of Bell South, SBC, Verizon, and Qwest, as reported by Yahoo! Finance, 4/12/02.

**Summary of Risk Scenarios**

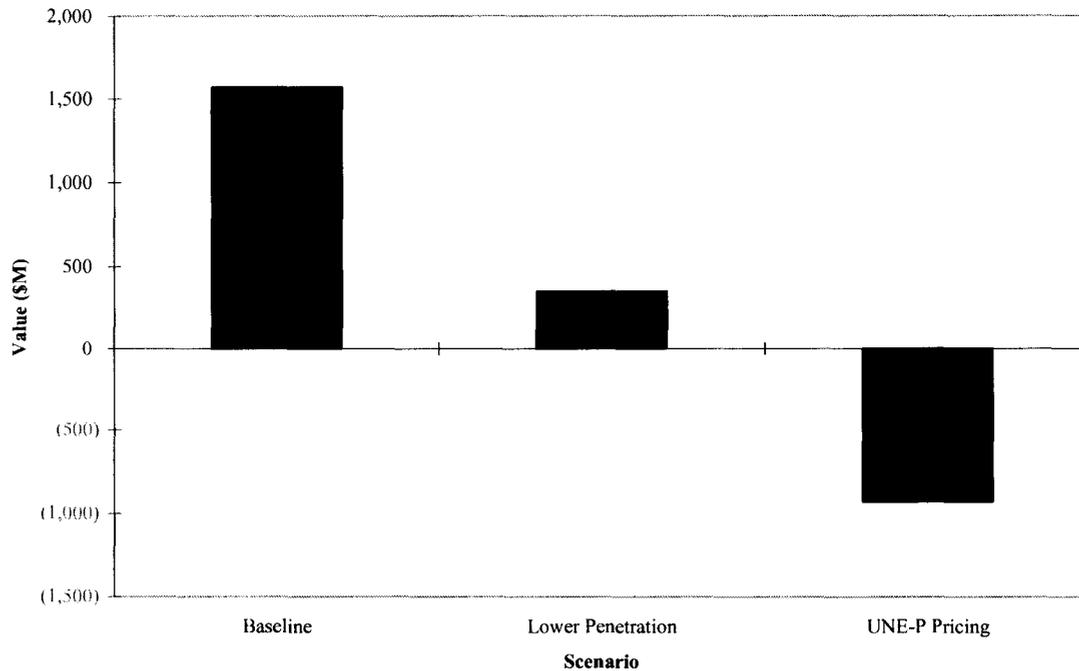
Figure 6 summarizes the value of the DSL business case in the baseline view and the two risk scenarios. The difference between the baseline view and the lower DSL market penetration scenario demonstrates the inherent risk in the DSL business. The UNE-P pricing regulatory scenario drives the business case value negative. In this scenario, it is highly unlikely that RBOC investment in DSL services would ever be recovered.

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<sup>3</sup> In comparing Figures 4 and 5, the \$2.5 billion in Figure 4 is the difference in cumulative discounted cash flows from 2000 to 2011, whereas the \$1.3 billion in Figure 5 is the difference in the undiscounted cash flow in 2011.

<sup>4</sup> The cash flow multiple used by analysts in valuation depends on many factors, including the anticipated growth rate of the cash flows. Figure 5 looks only at the first-order impact of cash flow losses on valuation, and does not account for any additional loss in valuation due to a lowering of the multiple.

**Figure 6**  
**Regulatory Requirements Drive DSL Business Case Negative**



## 5. SUMMARY AND CONCLUSION

There is no incumbent in the broadband Internet market for residential and small business customers, and DSL is not even the leading technology for providing this service. There is burgeoning competition in this market, with the promise of even greater competition from emerging technologies on the horizon. This is not a market in need of regulation, but it is a market in which that regulation can have devastating impacts.

Even in the baseline view, the RBOCs are undertaking large-scale investments that they cannot expect to recover for many years. This will require monthly payments from residential and small business customers who will have an increasing array of choices for their broadband Internet connections. These facts alone are enough to highlight the high-risk nature of these investments. As shown above, if competitors using other technologies win greater shares of the broadband Internet market, RBOCs may not recoup their investments until well after the close of the decade. If the RBOCs are forced to offer a UNE-P version of DSL with prices below cost, it is all but certain that they will not remain viable players in the broadband Internet market.



**CERTIFICATE OF SERVICE**

I do hereby certify that I have this 1<sup>st</sup> day of July 2002 served the parties of record to this action with a copy of the foregoing **BELLSOUTH'S REPLY COMMENTS** by Electronic Mail and U.S. Mail addressed to the parties listed on the attached service list.

  
**Lynn Barclay**

**Service List CC Docket No. 02-33**

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