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

In the Matter of	)	
Deployment of Wireline Services Offering Advanced Telecommunications Capability	)	**CC Docket No. 98-147**
and	)	
Implementation of the Local Competition Provisions of the Telecommunications Act of 1996	)	**CC Docket No. 96-98**

REPLY COMMENTS OF SPRINT CORPORATION

SPRINT CORPORATION
Leon Kestenbaum
Jay Keithley
Richard Juhnke
401 9th Street, N.W., #400
Washington, D.C. 20004
202-585-1912

March 13, 2001

CONTENTS

SUMMARY …….. ii

I. INTRODUCTION 1

II. THERE IS NO ECONOMICAL AND GENERALLY AVAILABLE ALTERNATIVE TO THE UNBUNDLING SOUGHT BY SPRINT AND OTHER CLECS 4

III. MAKING THE REQUESTED ELEMENTS AVAILABLE WON'T INDUCE SBC OR THE OTHER RBOCS TO "PICK UP THEIR MARBLES AND GO HOME." RATHER, IT WILL PROMOTE HEALTHY BROADBAND COMPETITION. 9

SUMMARY

It is clear from the record that making the high frequency portion of the loop available as a UNE via Next Generation DLCs is the only economical alternative available to CLECs on a widespread basis. Too few remote terminals can accommodate collocated equipment, and adjacent collocation is too expensive, to expect CLECs to make widespread use of these alternatives.

It may be that the Commission could satisfy the CLECs' needs merely by removing the parenthetical exception of advanced services electronics from the existing definition of "local loop" in the Rules. However, if the Commission views the requested functionality as involving packet switching as well, it can easily amend its packet-switching UNE rules. Although Sprint urges the Commission to revisit its previous restrictions on packet switching, the rationale behind those restrictions has no relevance to the line-sharing context: here, CLECs simply cannot obtain the functionality of line-shared loops without having the ILECs route the traffic carried over those loops to them.

CLECs should also be allowed to virtually collocate line cards that are technically compatible with the ILECs' NGDLCs. Otherwise, CLECs will be limited to offering only the same DSL "flavors" and functionalities that ILECs themselves offer, thereby stifling innovation. The constraints that this collocation be virtual and limited to line cards that are recognized by the ILEC's equipment vendor as compatible moot the RBOCs' major objections to line card collocation. SBC's concerns about under-utilization of NGDLC "slots" can be addressed by a cost-based pricing structure that gives CLECs the incentive to utilize efficiently the facilities they are purchasing.

Finally, the requested unbundling will promote broadband deployment and competition, not deter it as some RBOCs argue. SBC's threat to pick up its marbles and go home is either an idle bluff on its part or is the product of unsound management. Although SBC claims that it has stopped DSL deployment in Illinois because the Illinois Commerce Commission required unbundling of Project Pronto, SBC is telling its investors that it is delaying DSL deployment in the Ameritech region in order to improve service quality. No ILEC should want to turn its back on DSL deployment and cede the broadband market to the cable industry. Indeed, another RBOC — Qwest — shares Sprint's view that CLEC demand for DSL-capable loops enhances the ILECs' ability to compete with the cable companies' broadband services. Likewise, allowing CLECs to have broadband access to customers served by ILEC NGDLCs enlarges the addressable market for CLECs and thus increases the likelihood that CLECs can economically justify investment in their own packet switches and broadband services.

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

In the Matter of	)	
Deployment of Wireline Services Offering Advanced Telecommunications Capability	)	**CC Docket No. 98-147**
and	)	
Implementation of the Local Competition Provisions of the Telecommunications Act of 1996	)	**CC Docket No. 96-98**

REPLY COMMENTS OF SPRINT CORPORATION

Sprint Corporation, on behalf of its operating subsidiaries, hereby replies to the comments of other parties on the *Line Sharing Further Notice* released January 19, 2001 in the above-captioned dockets.[1]

I. INTRODUCTION

The parties' comments fall into more or less predictable patterns, but with some interesting and significant exceptions. All the other competitive LECs that, like Sprint, are interested in fostering a vigorous competitive environment for broadband services to residential and small business customers fully share Sprint's view that economical and

[1] 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 Rulemaking in CC Docket No. 98-147, and Sixth Further Notice of Proposed Rulemaking in CC Docket No. 96-98, FCC 01-26.

efficient line-shared access to incumbent LEC customers served via fiber/copper loops is critical to their business needs. These other competitive LECs are in agreement with Sprint that collocation of DSLAMs in remote terminals and use of dark fiber, or re-routing the end-user's service over all-copper facilities ("home-run" copper), while options that should be available to competitive LECs, are not an adequate substitute for obtaining the line-shared loop as a UNE.

At the other extreme, the two megaBOCs — SBC and Verizon — resist any economical form of access to line-shared loops, arguing instead that the Commission should focus on creating total facility-based competition between the RBOCs and other broadband providers (cable, fixed wireless, and satellite). SBC, in particular, argues that CLEC needs are adequately addressed by remote terminal (RT) or adjacent collocation of DSLAMs, dark fiber, and "home-run" copper. Forcing any further unbundling would, according to the megaBOCs, simply discourage them from investing in broadband offerings themselves.

Perhaps the two most interesting comments are those of the other two RBOCs — Qwest and BellSouth. Qwest, though silent on the detailed issues raised in the *Line Sharing Further Notice*, recognizes (at 3) that:

> … CLECs still need access to ILEC loops in order to provide DSL services. It would be a serious mistake, in today's marketplace, to allow a situation to develop whereby CLECs were unable to make efficient and cost-effective use of ILEC loops.

Qwest also takes a polar opposite position from the megaBOCs' claim that CLEC use of ILEC facilities would impede ILEC investment in broadband technologies (*id.*):

> … ILECs and CLECs alike have an economic incentive to work together to maximize the competitiveness of DSL offerings. … If an ILEC, in a competitive broadband marketplace, were to try to behave in a manner which discouraged other providers of DSL services from optimizing their own services over the ILEC's loops, customers could simply purchase broadband services from cable providers.

BellSouth, while opposing the relief the competitive LECs are proposing, nonetheless corroborates several key facts that underscore the need for that relief:

- Space available for collocation in remote terminals "is limited" (BellSouth at 8);

- CLEC reliance on dark fiber between the RT and the ILEC central office (CO) "would not be very effective" in the BellSouth region (*id.*) and would require collocation space in the RT for the necessary electronics, as well as a source of adequate electrical power (*id.* at 8-9);

- BellSouth has "very few" all-copper loops available from the CO to the customer's premises (*id.* at 9), and even where such loops do exist, they may not be usable for DSL service because of their length (*id.*).

On another key issue, BellSouth does not dispute the feasibility of virtual collocation of line cards in DSL-capable DLCs.[2]

[2] BellSouth's Comments, as filed, stated (at 4) that it is "willing to negotiate a virtual collocation arrangement [for line cards] with the CLEC." Last week, by letter dated March 7, it retracted that offer, urged the Commission not to <u>require</u> collocation of line cards, but stated that if collocation is required it should be virtual collocation. *See ex parte* letter from Stephen L. Earnest to Magalie Roman Salas. By arguing that any required collocation of line cards be virtual, BellSouth is still conceding implicitly the feasibility of such collocation.

II. THERE IS NO ECONOMICAL AND GENERALLY AVAILABLE ALTERNATIVE TO THE UNBUNDLING SOUGHT BY SPRINT AND OTHER CLECS.

Sprint submits that there can be no room for reasonable doubt that the physical collocation of a DSLAM in a remote terminal is unlikely to be a usable alternative for CLECs in the vast majority of cases. As Sprint pointed out in its Comments (at 5), nearly two-thirds of its ILECs' remote terminals have no space available for collocation. and those that do could only accommodate a very limited amount of CLEC equipment. BellSouth, as noted above, concedes that collocation space in its remote terminals is also limited.

SBC seems to suggest (at 21-22) that adjacent collocation is a viable solution for CLECs, pointing to one instance in Kansas where a CLEC has utilized DS3 subloops between its space near the remote terminal and the ILEC central office. Sprint is the CLEC SBC referred to, and Sprint has a far different take on the feasibility of this approach. Indeed, this expensive lesson is the basis for Sprint's estimate (at p. 6 of its Comments) that carriers can expect to incur costs in the neighborhood of $110,000 and construction periods of 6-8 months for adjacent collocation, as well as its analysis (at 6-7) that the unit costs of adjacent collocation are uneconomically high even with quite favorable assumptions about the market share an individual CLEC could be expected to attain.

Sprint is not arguing — and doesn't construe other CLEC comments as arguing — that ILECs must make line-shared high-speed data capabilities available when they themselves lack the capability of offering line-shared DSL services themselves (as is the case with many remote terminals now in place). Stated differently, Sprint does not seek a requirement that ILECs prematurely retire existing DLCs and replace them with DSL-capable NGDLCs. However, when such equipment does exist and, through the use of such equipment, the ILEC is providing DSL services, then CLECs should have access to this same functionality on an unbundled basis.

To be sure, there is lack of unanimity among the CLEC comments on precisely how to define the elements that should be made available and, indeed, even some disagreement about the functions performed by certain equipment.[3] But the Commission should not be thrown off by these differing approaches, nor by the RBOCs' sophistic arguments that the functionalities the CLECs need are inconsistent with past Commission determinations, simply because they may not fit squarely within existing UNE definitions.[4] Obviously, some refinements to existing rules need to be made; that is the very purpose of these further rulemaking proceedings. The CLECs' differing approaches

[3] For example, AT&T (at 13) argues that the optical concentration device (OCD) that Sprint (n.15 at 8) characterized as a form of ATM switch, in fact performs functions that are more akin to multiplexing than switching.

[4] A classic example is the RBOC argument (see, *e.g.*, BellSouth at 12 and SBC at 43-44) that the transmission of intermingled CLEC/ILEC traffic in the fiber between the remote terminal and central office is not akin to shared transport because transport, by definition, is between end office switches, and the remote terminal isn't really an end office switch.

are perhaps largely due to the blurring of once-rigid lines as technology evolves.[5] Flexibility is the hallmark of the administrative process, and the Commission must stand ready to adapt its rules as technology evolves.

Regardless of what labels are used, the fact remains that in order to obtain access to line-shared loops on an economic basis, the CLEC needs to be able to receive the high-frequency portion of the signals emanating from the end user's premises at some point in the ILEC's network (either in the central office where the voice signals terminate, or in another ILEC office where a full-fledged packet switch is located, if the ILEC has no capability in the voice service central office to provide the data stream to the proper CLEC). Perhaps an easy way of satisfying this need would be to remove, as others have suggested, the parenthetical exception for advanced services electronics from the existing definition of "local loop" in §51.319(a)(1) of the Rules. If, on the other hand, this functionality is viewed as encompassing packet switching, then so be it. The Commission, having already found that line sharing satisfies the impairment test, will merely have to adjust its rules to allow line sharing in the NGDLC context to become a reality. Although, as Sprint pointed out (at 16), the assumptions that formed the underpinning of the Commission's restrictions on the availability of the packet switching

[5] For example, AT&T and Sprint are both right in their differing characterizations of the OCD. The OCD is like a switch in the sense that it takes a packetized bit stream coming from the NGDLC in the remote terminal and separates that bit stream into carrier-specific segments. This involves the function of "switching" the packets to the proper carrier. At the same time, AT&T is correct in analogizing the OCD to the function a multiplexer performs in an ordinary loop environment, since the OCD is, like a multiplexer, a device that separates traffic moving over a common stream into discrete channels.

UNE have been undercut by subsequent events, the Commission need not revisit that broader determination (although we urge it to do so) in order to make the packet switching component of line sharing available to CLECs.[6] Here, CLECs simply cannot obtain the functionality of line-shared loops without also having ILECs switch the traffic to them.

In addition, in instances where the ILEC does not employ the variety of DSL features that CLECs seek, but line cards meeting those needs (and compatible with the ILEC's NGDLC) are available, the CLECs should have the right to virtually collocate these line cards in the NGDLC and obtain a "subloop" from the NGDLC to a point in the ILEC's central office network where it can deliver the data stream to the CLEC. Sprint's constraints on this request — that the collocation be virtual instead of physical, and that the line card must be compatible with the ILEC's DLC equipment — moot most of the objections raised by the RBOCs to line card collocation. Moreover, one RBOC (BellSouth), as noted above, tacitly concedes the feasibility of virtual collocation of line cards; in addition, the Illinois Commerce Commission (ICC) has determined that line card collocation is feasible and should be required.[7] Only two objections remain: (1) the

---

[6] *See* Sprint's Comments at 14 for a proposed amendment to the packet switching UNE rules.

[7] *See, Covad Communications Company and Rhythms Links, Inc., Petition for Arbitration Pursuant to Section 252(b) of the Telecommunications Act of 1996 to Establish an Amendment for Line Sharing to the Interconnection Agreement with Illinois Bell Telephone Company d/b/a Ameritech Illinois, and for an Expedited Arbitration Award on Certain Core Issues*, Dockets 00-0312 and 00-0313, Arbitration Decision on Rehearing, February 15, 2001, at 36-38. This decision also requires unbundling the same functionalities that the CLECs are seeking in this proceeding. The ICC's extensive findings and analysis of the impairment issue may be helpful to the Commission if it harbors any concerns on these matters.

claim that a line card is not eligible for collocation because it is not "equipment"[8] and (2) SBC's argument (at 15-17) that allowing CLECs to collocate line cards could seriously impair the utilitization of the NGDLC.

Neither argument requires an extensive response. Sprint and others already responded to the "it is not equipment" argument in November 14, 2000 reply comments in these dockets.[9]

SBC's under-utilization argument deserves similar short shrift. SBC observes that each NGDLC "slot" into which a line card is inserted is capable of serving typically four customers. If the CLEC only has one customer served by the remote terminal (or, more precisely, by a particular serving area interface (SAI) subtending the RT), 75% of the slot's capacity would be rendered useless. Alternatively, SBC fears that CLECs might choose a "flavor" of DSL that consumes more slot capacity than others, pointing out that HDSL2, a symmetrical 1.5 Mbs service, requires an entire slot for a single customer even though the slot itself has been designed to accommodate service to four end users. Both of these utilization concerns can be addressed through properly structured cost-based prices for the virtual collocation of the line card and the associated use of the NGDLC. With a sound rate structure, the ILEC will be fairly compensated for the facilities provided to the CLEC, and the CLEC will have the proper economic incentives to utilize efficiently the facilities it is purchasing.

---

[8] *See*, SBC at 12-14 and Verizon at 7.

[9] *See, e.g.*, Sprint's Reply Comments at 3; and Rhythms NetConnection's Reply Comments at 20-22.

III. MAKING THE REQUESTED ELEMENTS AVAILABLE WON'T INDUCE SBC OR THE OTHER RBOCS TO "PICK UP THEIR MARBLES AND GO HOME." RATHER, IT WILL PROMOTE HEALTHY BROADBAND COMPETITION.

Finally, we turn to SBC's "if you don't play the game my way, I'm gonna pick up my marbles and go home" argument. According to SBC (at 6-11), the Commission should be content to let pure facilities-based providers of broadband services — cable companies, ILECs, fixed wireless and satellite service providers — slug it out in the marketplace without encumbering one type of provider — ILECs — with unfair, asymmetric regulation. Furthermore, SBC claims (at 34-37), requiring ILECs to make line-sharing available through DLCs would be a counterproductive disincentive for ILECs to invest in NGDLCs and would also discourage CLEC investment in their own facilities. As proof that this disincentive for ILEC investment is real, SBC states (at 17-18 and 37) that in response to decisions of the Illinois Commerce Commission requiring unbundling of its Project Pronto, SBC has suspended deployment of Project Pronto facilities in that state.

The Commission should not give SBC's arguments, or the similar arguments of Verizon,[10] any credence. The fatal flaw in SBC's vision of relying on pure facilities-

[10] Verizon argues (at 3-4 and 13) that the Commission cannot require ILECs to provide broadband transmission for CLECs, either as transport or dark fiber, because that would create investment disincentives for ILECs and because there are sufficient alternative transmission options available that CLECs are not impaired. The disincentive argument will be addressed in the text; as to the alleged plethora of subloop and transport alternatives available to CLECs, Verizon's argument runs counter to the extensive findings in the *UNE Remand Order* in CC Docket No. 96-98 (15 FCC Rcd 3696 (1999)) that the ILECs' ubiquity for both loop and transport plant was unmatched by any other available alternative, and that both loop and transport facilities — broadband as well as narrowband — must be offered as UNEs. Verizon offers not a whit of evidence to show a change of circumstances that would warrant a reexamination of the Commission's conclusions.

based competition is that it is contrary to the Act. The Act contemplates not only facilities-based competition, but also reliance on ILEC network elements and resale of ILEC services to allow competitors a full range of opportunities for entry into the local telecommunications market. The asymmetric regulation that exists today is simply a function of the law of the land.[11]

Moreover, the jury is still out on whether there will be the effective intermodal competition that forms the basis of SBC's argument. Cable modem service has a head start over ILEC-provided DSL service (in large part because ILECs were reluctant to deploy a longstanding technology that threatened revenues from other pre-existing ILEC services such as T-1 lines), but ILEC DSL services are quickly gaining ground on the cable companies.[12] Although Sprint is encouraged by the rollout of its own broadband Internet access service through its fixed wireless MMDS, the fact remains that this service is in a nascent stage, and Sprint's footprint is limited to just under 30% of the U.S. population. Satellite-provided broadband services are still in their infancy as well. The Commission would be making a grave error to rely exclusively on the intermodal competition among pure facilities-based players, as SBC champions, because it very well might wind up with a cozy duopoly between the RBOCs and cable companies that (as

---

[11] The Commission is considering the desirability and lawfulness of changing its regulation of other providers of broadbased service. *See Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities*, 15 FCC Rcd 19287 (2000).

[12] *See, e.g.*, "Cable Maintains Data Lead That Bells Are Making Strong Gains," *Communications Daily*, February 6, 2001 ("*Comm. Daily*"), p.1, quoting Cynthia Brumfield, President of Broadband Intelligence, as saying that "DSL is closing in because it's growing at a much more rapid clip…" and noting that the RBOCs are making particularly strong inroads in the small business market where cable operators are weakest.

was the case in the cellular market before the entry of Sprint PCS and others) would keep prices high and innovation low.

Nor should the Commission take seriously the specter that having to make line-sharing UNEs available for fiber/copper loop combinations is going to drive the ILECs away from the broadband market. The last time we checked, the availability for UNEs for analog voice services had not driven the RBOCs from that market, and providing the UNEs here at issue is unlikely to have a similar effect in the broadband market. In that regard, SBC is talking out of both sides of its mouth when it claims here that the Illinois Commerce Commission's decisions on the unbundling of Project Pronto prompted it to suspend rollout of Project Pronto in Illinois. In a December 19, 2000 newsletter to its investors, SBC stated that its commitment to "service upgrades for customers in the Ameritech region" has "contributed to SBC's decision to adopt a measured approach to DSL deployment in the Ameritech region over the next several months."[13] The ICC's decisions are not mentioned at all.

SBC's threat is not only unsupported by its actions in Illinois, it is illogical as well. In addition to the fact that the Commission's pricing standards for unbundled network elements allow the ILECs to recover all legitimate costs (including a risk-adjusted return on investment) of providing UNEs, it is inconceivable that a soundly managed ILEC would turn its back on broadband service deployment altogether merely

---

[13] *See* SBC, "Investor Briefing," No. 222 (December 19, 2000) at 1, found at www.sbc.com/Investor/Financial/Earning_Info/docs/2001_Update_1B.pdf visited March 13, 2001. *See also*, *Comm. Daily*, *supra*, at 1-2, which states that two analysts "see SBC cutting back its DSL installment rate in the first half of this year to reduce drain on its stock dividends."

because it has to share elements of its network with others. Conceding this market to cable companies would leave an ILEC with the prospect of decreasing revenues from traditional voice services as customers dropped second lines in favor of cable modem services. And as cable companies expand their service offerings to include voice telephony as well, the RBOCs would face the prospect of losing their customer base altogether. At least one RBOC recognizes that is the case. As noted at the outset, Qwest views the added demand for broadband facilities from CLECs as a plus in its competition with cable companies, rather than as a liability.

Finally, it is not true that making line-shared, copper-fiber loop combinations available to CLECs as UNEs will discourage CLEC investment. With a substantial and growing proportion of customers served via remote terminals (*see* Sprint's Comments at 2), CLECs will be discouraged from making investment in their own packet switches and transport if they are foreclosed from reaching as much of the addressable market as possible. If a substantial percentage of customers served by an ILEC central office is served through remote terminals, a CLEC may not be able to build a positive business case for collocation at that central office and provide service to any of the end users subtending that office unless it has an efficient and economical means of providing its service to customers whose loops are provided via DLCs.[14] By maximizing the potential number of customers a CLEC can reach, through fiber/copper loop line sharing, the

[14] Indeed, the substantial retrenchment that prominent DSL-oriented CLECs are undergoing right now (*see* Sprint Comments at 16) may well be due in part to their inability to cover the fixed costs of central office collocation because the addressable market at present is simply too small.

Commission will promote CLEC investment in packet switching and broadband technologies and will thereby encourage competition and innovation in the marketplace. The Commission should ignore SBC's threats and stand firm in the face of SBC's attempt to bully the Commission into disregarding the sound, pro-competitive policy embodied in the Communications Act.

Respectfully submitted,

SPRINT CORPORATION

/s/ Richard Juhnke

Leon Kestenbaum
Jay Keithley
Richard Juhnke
401 9th Street, N.W., #400
Washington, D.C. 20004
202-585-1912

March 13, 2001

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing **REPLY** of Sprint Corporation was sent by hand or by United States first-class mail, postage prepaid, on this the 13th day of March, 2001 to the below-listed parties:

/s/ Sharon Kirby

Sharon Kirby

BY HAND

ITS
445 12th St., SW, CY-B400
Washington, DC 20554

Janice Myles, Policy &
Program Planning Division
Federal Communications
Commission
445 12th Street, SW, Room
5-C327
Washington, DC 20554

Jessica Rosenworcel, Policy
& Program Planning Division
Federal Communications
Commission
445 12th Street, SW, Room
5-C221
Washington, DC 20554

Kathy Farroba, Deputy Chief
Policy and Program Planning
Division, CCB
Federal Communications
Commission
445 12th Street, SW, Room
5B-125
Washington, DC 20554

Johanna Mikes
Policy and Program Planning
Division, CCB
Federal Communications
Commission
445 12th Street, SW, Room
5C-163
Washington, DC 20554

Aaron Goldberger
Common Carrier Bureau
Federal Communications
Commission
445 12th Street, SW
Washington, DC 20554

Dennis Johnson
Common Carrier Bureau
Federal Communications
Commission
445 12th Street, SW
Washington, DC 20554

Rodney McDonald
Common Carrier Bureau
Federal Communications
Commission
445 12th Street, SW
Washington, DC 20554

Staci Pies
Common Carrier Bureau
FCC
445 12th Street, SW
Washington, DC 20554

David Ward
Common Carrier Bureau
FCC
445 12th Street, SW
Washington, DC 20554

Elizabeth Yockus
Common Carrier Bureau
FCC
445 12th Street, SW
Washington, DC 20554

BY FIRST CLASS MAIL

Stephen L. Earnest
Richard M. Sbaratta
BellSouth Corporation
Suite 4300
675 West Peachtree Street,
NE
Atlanta, Georgia 30375-0001

Michael K. Kellogg
Sean A. Lev
Colin S. Stretch
Kellogg, Huber, Hansen,
Todd & Evans, PLLC
1615 M St., NW, Suite 400
Washington, DC 20036
Counsel for SBC
Communications, Inc.

Paul K. Mancini
Roger K. Toppins
Gary L. Phillips
SBC Communications, Inc.
1401 I St., NW, Suite 1100
Washington, DC 20005

Sharon J. Devine
Robert B. McKenna
Qwest Communications
International, Inc.
1020 19th St., NW, Suite 700
Washington, DC 20036

Russ Zuckerman
Senior Vice President &
General Counsel
Francis D.R. Coleman
V.P., Regulatory Affairs
Richard E. Heatter
Vice President, Legal Affairs
Mpower Communications
Corp.
175 Sully's Trail, Suite 300
Pittsford, NY 14534

Mark C. Rosenblum
Stephen C. Garavito
Richard H. Rubin
AT&T Corp.
295 North Maple Avenue
Basking Ridge, NJ 07920

James J. Valentino
Jonathan P. Code
Mintz, Levin, Cohn, Ferris,
Glovsky and Popeo, PC
701 Pennsylvania Avenue,
NW
Washington, DC 20004-
2608
Counsel for AT&T Corp.

Howard Siegel
Vice President of Regulatory
Policy
IP Communications
Corporation
17300 Preston Road, Suite
300
Dallas, Texas 75252

Stephen L. Goodman
Halprin, Temple, Goodman
& Maher
555 12th Street, NW, Suite
950 North
Washington, DC 20005
Counsel for Catena
Networks, Inc.

Gary Bolton
Vice President of Product
Marketing
Catena Networks, Inc.
6004 Atkins Farm Court
Raleigh, NC 27606

Doug Cooper
Director, Regulatory and
Market Development
Catena Networks
7831 Woodmont Ave., #295
Bethesda, MD 20814

Eric J. Branfman
Patrick J. Donovan
Swidler Berline Shereff
Friedman LLP
3000 K Street, NW
Washington, DC 20007
Counsel for InfoHighway
Communications Corp.

Jeffrey Blumenfeld
Frank Paganelli
Rhythms NetConnections
9100 E. Mineral Circle
Englewood, CO 80112

Jason Oxman, Sr. Counsel
Covad Communications Co.
600 14th St., NW, Suite 750
Washington, DC 20005

Christy C. Kunin
Kristin L. Smith
Blumenfeld & Cohen-
Technology Law Group
1625 Massachusetts Avenue,
Suite 300
Washington, DC 20036
Counsel for Rhythms
NetConnections Inc.

Richard S. Whitt
Cristin L. Flynn
WorldCom, Inc.
1133 19th Street, NW
Washington, DC 20036

Lawrence G. Malone,
General Counsel
Brian Ossias, Assistant
Counsel
Public Service Commission
of the State of New York
Three Empire State Plaza
Albany, New York 12223-
1350

Lawrence E. Sarjeant
Linda L. Kent
Keith Townsend
John W. Hunter
Julie E. Rones
U.S. Telecom Association
1401 H Street, NW, Suite
600
Washington, DC 20005

John M. Goodman
Attorney for Verizon
1300 I Street, NW
Suite 400 West
Washington, DC 20005