COVAD
COMMUNICATIONS COMPANY

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June 15, 1999

Ms. Magalie Roman Sales
Secretary
Federal Communications Commission
445 12th Street, SW
Room TW-A325
Washington, DC 20554

Re: In the Matter of Deployment of Wireline Services Offering Advanced Telecommunications Capability (CC Docket No. 98-147)

Dear Ms. Sales:

Enclosed for filing please find an original and four (4) copies on behalf of Covad Communications Company in the above-referenced docket. This letter is being hand delivered and we are requesting a date stamped return copy.

Very Truly Yours,

Thomas Koutsky /MKH
Thomas Koutsky

Enclosures

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Deployment of Wireline Services Offering	)	CC Docket No. 98-147
Advanced Telecommunications Capability	)	
	)	

COMMENTS OF COVAD COMMUNICATIONS COMPANY

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June 15, 1999

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SUMMARY

The Commission has the opportunity in this proceeding to ensure that small businesses and residential consumers receive competitive choices in the deployment of broadband, xDSL services. By ordering DSL line sharing and by establishing a proper spectrum management policy, the Commission can turbo-charge the availability of competitive choices for competitive, broadband services to residential consumers.

Covad demonstrates in the following comments that there are several technically feasible means of providing DSL line sharing to CLECs. In addition, Covad's comments prove that operational "impediments" to sharing lines between ILEC voice and CLEC DSL have already been addressed by incumbent LECs in their wholesale service offerings to third-party Internet Service Providers ("ISPs"). ILEC arguments that implementation of DSL line sharing will cause customer "confusion", will present OSS issues, or will hamper or complicate repair and maintenance services must be seen for what they are – "not-invented-here" reactions of entrenched bureaucracies.

Covad presents two legal bases for the Commission to order DSL line sharing: as an interstate access service and as an unbundled network element. Covad believes that the interstate access approach holds several benefits – perhaps the most important being that it can be implemented by the Commission in a swift and certain manner. The purpose of Commission regulation of interstate access services of ILECs is to ensure that there are just, reasonable and nondiscriminatory terms in which different service providers share the local facilities of the ILECs in order to provide different services.

DSL line sharing would enable the near-immediate availability of competitive, broadband services utilizing xDSL technologies to millions of small businesses and

residential consumers. Because of the manner in which ILECs have chosen to price their own ADSL services – by attributing absolutely *no* cost to the local loop – without line sharing, data CLECs that wish to provide high-speed data communications services to residential and small business consumers will be at a considerable competitive disadvantage. DSL line sharing solves this problem and presents several other public interest benefits, including maximizing utilization of ILEC outside plant.

The Commission also must implement a nondiscriminatory spectrum management policy. The final spectrum management policy should focus upon whether particular local loop technologies – examined on a macro scale – create undue spectral interference in the outside plant. The Commission's interim policy, while adequate for the short-term, could easily degenerate into a "loop-by-loop" examination process that will only delay the provision of services to consumers. Covad proposes a final policy that would permit limited commercial deployment of new loop technologies. This process will ensure that all parties – CLECs, ILECs, customers, and the Commission – will learn about the potential for interference caused by a new loop technology. The Commission would have final authority as to whether that new loop technology is suitable for deployment. ILECs must not keep the "veto power" they currently have over deployment of new and innovative types of DSL technology by CLECs like Covad.

Resolution of both of these issues in an expeditious manner will help achieve a considerable public interest goal – the competitive deployment of broadband services to residential consumers.

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COMMENTS OF COVAD COMMUNICATIONS COMPANY

In this docket, the Commission has consistently taken critical and necessary steps in order to promote innovation and competition for broadband services. In the *First Advanced Wireline Services Order and NPRM*,[1] the Commission ratified that the fundamental principles of the 1996 Act – the removal of barriers to entry through unbundling and interconnection with incumbent LEC networks – applied to advanced, broadband services. In that *First Advanced Wireline Services Order and NPRM*, the Commission clearly ruled – once again – that incumbent LECs ("ILECs") were to provide CLECs with access to unbundled local loops conditioned to support xDSL services.

This past March, the Commission issued the *Second Advanced Wireline Services Order and FRNRM* (referred to herein as the *Further Notice*)[2] in which it significantly modified its physical collocation rules and adopted an interim loop spectrum

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1 *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, Memorandum Opinion and Order and Notice of Proposed Rulemaking, 13 FCC Rcd 24011 (1998) ("*First Advanced Wireline Services Order and NPRM*").

2 *Deployment of Wireline Services Offering Advanced Telecommunications Capability,* Second Memorandum Opinion and Order and Further Notice of Proposed Rulemaking, FCC 99-48 (rel. March 31, 1999) ("*Second Advanced Wireline Services Order and FNPRM*" or "*Further Notice*").

management policy. That decision promises to accelerate further investment by CLECs like Covad in collocating advanced data communications equipment, including Digital Subscriber Line Access Multiplexers ("DSLAMs"), in central offices across the country. The Commission's adoption of cageless physical collocation, a much more efficient form of collocation, should begin a tidal wave of collocation in ILEC central offices in residential and increasingly rural areas.

But a few pieces of the puzzle are still missing.

Most importantly, the Commission must ensure that data CLECs like Covad receive truly *nondiscriminatory* access to incumbent LEC unbundled facilities. That means that CLECs must possess the same choices that the incumbent LECs possess with regard to deployment of advanced services in the network. The deep-rooted monopoly decision-making process of the ILECs must no longer govern consumer access to advanced telecommunications services like DSL.

The Commission's proposals in the *Further Notice* with regard to line sharing and spectrum management are two mechanisms through which the Commission can ensure that CLECs possess true "parity of opportunity" in the deployment of advanced services.

- Line sharing would allow CLECs to have access to loop DSL functionalities (the high-frequency portion of the local loop) on precisely the same terms that ILECs now share that loop with themselves and with Internet Service Providers ("ISPs"), who purchase ADSL as an interstate access service pursuant to federal tariff.

- A well-designed spectrum management policy would remove the ILEC's current "veto power" over deployment of new and innovative types of DSL technology by CLECs like Covad.

It is imperative that the Commission act swiftly on these matters. ILECs are attempting to lock up the market for DSL services by offering steep discounts and shared lines to their preferred ISP resellers at terms that CLECs cannot match because of the ILECs' refusal to provide line sharing.[3] ILECs are doing this pursuant to federal tariffs that do not attribute *any* loop cost to their DSL services – at a time when CLECs must pay upwards of $20-25 per month for an unbundled conditioned loop. And with regard to spectrum management, ILECs are employing technically impossible "binder group management" systems that build in a preference for ADSL services – a process that would segregate CLEC services that utilize other forms of DSL into spectrally-noisy, binder group ghettos.

Resolution of both of these issues in an expeditious manner would help achieve a considerable public interest goal – the competitive deployment of broadband services to residential consumers.

I. A LINE SHARING PRIMER: TECHNICAL, OPERATIONAL AND LEGAL ISSUES

When the Commission reviews and considers all the comments in this proceeding, it will come to the clear conclusion that line sharing is technically feasible, presents no substantial operational issues, and is legally justified and, indeed, warranted. This

[3] For example, Bell Atlantic has offered a $200 per-line bounty to certain ISPs when those ISPs sell Bell Atlantic's shared-line DSL services. *See* Bell Atlantic, "Internet Service Provider (ISP) Partnership Program for Infospeed DSL Services" http://www.bellatlantic.com/business/adsl/ isp_sp_packet.htm. Whether Bell Atlantic's offer violates its federal DSL tariff is a question for perhaps another day.

Section of Covad's comments, along with the attached Affidavit of Anjali Joshi, Covad's Director of Network Engineering, discusses in detail precisely what line sharing is and how it would work in engineering and operational facets. This Section closes with a discussion of two alternative bases on which the Commission should order line sharing – as an interstate access service or as an unbundled network element.[4]

A. There are Several Technically Feasible Means of Providing Line Sharing

The Commission correctly concluded that "there exists no *bona fide* issue of technical infeasibility" with regard to line sharing.[5] As the Commission pointed out, ILECs that provide their own DSL services over their existing voice lines are line-sharing with themselves and their ISP subsidiary, and could use the same technology to provide line sharing to CLECs.

In fact, there is essentially no dispute that line sharing *can* be provided to CLECs as a technical matter. Indeed, even U S WEST earlier admitted in this docket that this is the case.[6] Section II of the Joshi Affidavit describes two technically feasible means in which DSL line sharing can be provided.

Like other transmission facilities, the local loop can support transmissions on a number of different frequencies. Analog voice service is provided on the frequencies

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4 *See* Petition to Reject, or to Suspend and Investigate, of Covad Communications Company, *Bell Atlantic Tel. Cos., Access Service Tariff FCC Nos. 1 and 11, Transmittal No. 1138*, May 26, 1999 (Commission should exercise Title II authority and order line sharing as an access service); Reply Comments of Covad Communications Company, *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket No. 96-98, June 10, 1999, at 9-11 (Commission can declare line sharing to be an unbundled network element).

5 *Further Notice* at ¶ 103.

6 US West Comments, CC Docket No. 98-147, Sept. 1998 at 47 & Attach. D ¶ 12.

from 0 Hertz up to about 3,400 Hertz.[7] Some forms of DSL technology (usually ADSL) place their signal at higher frequencies that do not interfere with the voice band channel.[8] As a result, for DSL technologies that preserve the use of the analog voice channel, a considerable "buffer" is placed between the analog frequencies and the high-speed data frequencies.[9] The result is that a customer purchasing this DSL service may continue to receive analog, circuit-switched POTS from the incumbent LEC.[10]

When DSL is deployed in this fashion, at some point the analog voice signal (below 4 khz) must be "split" from the digital high-speed data signal. As Joshi describes, this "splitting" or "filtering" function is accomplished by "POTS splitter" devices that reside at both the customer premises and the central office.[11] Customer premises and central office POTS splitters are standardized products, manufactured pursuant to ANSI T1.413-1998, Annex E.1, Figure E.1.

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[7] 1 Hertz is 1 cycle per second. It is in this range where analog voice and modem transmissions (up to 56 kbps) are supported. *See* Paradyne Corp., *The DSL Source Book, 2nd Edition*, http://www.paradyne.com/sourcebook_offer/sb_html.html at Chap. 2.

[8] *Id.* at Chap. 3.

[9] Not every DSL technology preserves the below-4 khz spectrum for analog voice. ADSL technologies, including the emerging, Universal ADSL Working Group (UAWG) "G.lite" standard, do reserve spectrum for analog voice service, as does CAP RaDSL and MVL (multiple virtual lines) technology. The G.lite standard is open and interoperable and is intended to target the mass consumer retail market. *Id.* Covad only proposes that DSL line sharing be made available to CLECs if the CLEC utilizes a DSL technology that does not interfere with the analog voice frequencies. In establishing rules for line sharing, the Commission must be careful not to limit the availability of line sharing to any one particular DSL technology, but permit all forms of DSL technology that preserve and do not interfere with an analog voice channel below 4 khz.

[10] For examples of how several ILECs utilize the shared line functionality in their marketing campaigns, *see* Attachment 2.

[11] The POTS splitter at the customer premise handles a single line, while the POTS splitter at the central office handles multiple lines simultaneously.

As Joshi describes, when ILECs deploy POTS splitters to support their own ADSL service, the ILEC's POTS splitter takes the two signals coming in from the CO on a single pair, separates them and puts the voice signal and DSL signal on two separate pairs. In this way, the POTS splitter directs the analog signal to the ILEC's voice switch over one twisted copper pair in the central office and then sends the digital signal over to a DSLAM in the central office over a separate twisted copper pair. Line sharing can be accomplished by CLECs using the same process, with the exception that the voice and data equipment belong to different service providers. After the digital traffic has passed through the POTS splitter and is on its separate copper pair, there is no reason why the DSL traffic *must* go to the ILEC's DSLAM only; the traffic also could go to any compatible DSLAM collocated in the same central office.

Joshi describes how the connections between the central office POTS splitter and Covad's collocated DSLAM could be accomplished by utilizing cross-connections at the Main Distribution Frame (MDF). Her affidavit clearly describes that once the DSLAM and POTS splitter are deployed in the central office, there is essentially *no* technical difference between sending the digital traffic to a competitor's DSLAM and sending it to the ILEC's DSLAM.

The Joshi Affidavit ratifies the Commission's observation in the *Further Notice* that no *bona fide* technical issue is presented by line sharing. Indeed, ADSL was *invented* to preserve and not interfere with an underlying analog voice signal on the same copper loop. The only technical limitations that the Commission need consider are: (1) that the requesting CLEC has collocated a DSLAM at the relevant ILEC central office; and (2) that the DSL technology deployed by the CLEC over shared lines be designed not

to interfere with the below 4 khz analog voice signal.[12] Covad fully expects some incumbent LECs to engage in the usual excuse-laden hand-wringing, but in reality no serious technical feasibility issues surround this proposal.

B. Line Sharing Presents No Substantial Operational Issues

The operational issues presented by line sharing are not significant and can be overcome. Indeed, the likely issues – "who is responsible for fixing the line if it goes down?"; "what if the customer calls the wrong carrier in response to a technical or billing problem?"; "what if the customer wants to cancel or switch the DSL service but not the voice service?" – have already been answered by the incumbent LECs in their own DSL roll-out and in the simple fact that more complicated line sharing arrangements of different sorts have been supported by ILECs for years.

1. ILECs Face and Resolve the Same Issues in Providing ADSL to ISPs

ILECs must address these operational issues every time they sell ADSL service – whether it is through their ISP affiliate or through ISP resellers taking DSL over POTS pursuant to federal access tariffs. DSL is simply a transmission technology; deployment of the technology does not by itself provide traditional Internet access services, such as

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[12] Covad does not support the Commission's proposal in paragraph 104 of the *Further Notice* that a process be implemented to permit ILECs to "demonstrate to the state commission" that line sharing over a particular line would "interfere with the analog service of the line." To subject CLEC DSL deployment to such a process is discriminatory and wholly inconsistent with the Commission's pro-consumer choice framework. Such a system would give the ILECs a unilateral right to hold up *all* of a CLEC's line sharing orders for an indeterminate length of time while such a proceeding was held. In addition, the proposal ignores the fact that it is the *consumer* that orders DSL service from the CLEC, and it should be up to that consumer to choose whether his or her voice service may be degraded (if it even happens) because of his or her choice in DSL service. The ILECs would seek to deny this consumer choice by locking-in a preference that its voice service is somehow "more important" or "more worthy" of special treatment than the DSL service. ILECs would certainly not tolerate a system in which CLECs would be able to hold up ILEC deployment of all analog load coils or digital loop carrier systems because that equipment interferes with DSL services with a similar process.

web-hosting, e-mail servers, etc. Indeed, these information services constitute Internet access services, and RBOCs are prohibited by the Commission's *Computer II/Computer III* rules from offering bundles of these information services with the underlying, Title II telecommunications service.[13] As a result of these and similar rules, ILEC ADSL federal tariffs are structured so that the primary purchasers under the tariff will be ISPs – including ISPs both affiliated with the ILEC (*e.g.*, USWEST.net, BellAtlantic.net) and ISPs not affiliated with the ILEC.

Therefore, *each time* a customer purchases an ILEC's ADSL service, the line is shared between the ILEC's regulated POTS service on the below-4 khz frequencies and the de-regulated Internet access service provided on the higher frequencies. Each time, the customer receives two different services from two different entities – the ILEC and the ISP. As a result, the ISP and the ILEC must come to various arrangements with regard to billing, installation, maintenance, and customer support of the DSL service, and the two entities must address how those issues might impact the analog voice service.[14]

For example, Bell Atlantic provides its ISP resellers with a choice in how to manage these billing, installation, maintenance, and customer support issues. If the ISP chooses to pay the standard federal tariff rates, Bell Atlantic will install the service, answer customer support questions, and even do the billing for the DSL (not including

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[13] 47 C.F.R. § 64.702.

[14] This is true even if it is the ILEC's ISP, such as BellAtlantic.net or USWEST.net, that sells the ADSL service. The Commission has affiliate transaction rules that govern the relationship between the ILEC and its un-regulated, affiliated ISP. Therefore, a customer may be billed for BellAtlantic.net service on her phone bill, but BellAtlantic.net is *paying* for that privilege to the appropriate Bell Atlantic ILEC, pursuant to Commission rules. At least in theory, any other ISP can receive the same service.

Internet access) portion of the service for the ISP if the ISP desires.[15] In the alternative, the ISP's that sign up for Bell Atlantic's Volume and Term Discount program will have to take over *all* of these functions – even down to being the first point of customer contact for emergency repair service.[16]

Bell Atlantic trumpets these operational choices in its marketing literature to ISPs. An October, 1998 PowerPoint presentation (still on Bell Atlantic's web site) notes that Bell Atlantic will handle the end-user installation, or the ISP "may also choose to perform their own installation."[17]

For troubleshooting purposes, Bell Atlantic provides ISPs access to an "Infospeed Center" that eventually will be staffed on a 24x7 basis. Bell Atlantic describes the functions of the Infospeed Center:

> Bell Atlantic's Infospeed Center coordinates troubleshooting responsibilities for inside wire, ATU-R,[18] POTS splitter and Personal Computer setup and software. The Infospeed Center coordinates troubleshooting with the Bell Atlantic Broadband Service Center

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[15] Bell Atlantic Tel. Cos. Tariff FCC No. 1, Transmittal No. 1076 at §§ 16.8(D)(1) (Bell Atlantic "will provision and maintain" service for the ISP); 16.8(F) (Bell Atlantic will bill end-users directly); Bell Atlantic ADSL Information for the ISP," http://www.bellatlantic.com/business/adsl/isp_sp_packet.htm at 15 ("Bell Atlantic has two methods of billing customers. Customers may receive ADSL charges as a line item on their existing Bell Atlantic monthly statement. This would be a service charge above their normal POTS line. Also, a corporate client or [Internet] Service Provider may choose to be billed for the ADSL Service subscribers on a summary bill.").

[16] BA's volume and term discount plan requires that customer ISPs will "deal directly with its end users and will be solely liable with respect to all matters relating to the service, including marketing, ordering, installation, maintenance, repair, billing and collections." The ISP may not "direct its end users to contact the [Bell Atlantic] Company regarding any aspect of the service." Bell Atlantic Tel. Cos. Tariff FCC No. 1, Transmittal No. 1138, Tariff FCC No. 1, Section 16.8(F)(4)(a); Bell Atlantic Tel. Cos. Tariff FCC No. 11, Transmittal No. 1138, Section 17.4.7(A).

[17] Bell Atlantic, "Internet Service Provider (ISP) Partnership Program for Infospeed DSL Services", http://www.bellatlantic.com/business/adsl/isp_sp_packet.htm, at 14; *see also* Bell Atlantic, "ADSL Information for the ISP," http://www.bellatlantic.com/business/adsl/isp_sp_packet.htm at 8 ("The customer may also choose to perform their own installation.").

[18] ATU-R stands for "ADSL Terminal Unit-Remote", or the ADSL customer premises equipment.

> (BABSC). The BABSC will only be contacted if it is believed that there is a network problem. When the ISP cannot determine the area of a network problem a call to the BABSC will be initiated to help assist trouble isolation, sectionalization and repair.[19]

The cost of ISP phone calls to the Infospeed Center and calls to the BABSC[20] are ultimately recovered through the tariff prices Bell Atlantic charges ISPs.

In conclusion, Bell Atlantic (and, presumably, other ILECs that have deployed ADSL service) has *already* figured out how to divide the troubleshooting, maintenance and repair responsibilities when it shares lines with independent ISPs. To ensure that no improper cross-subsidization between regulated and non-regulated services exist, there should already be procedures to determine when contacts to the regulated network maintenance center (for Bell Atlantic, the BABSC) are appropriate, and there must be methods through which the regulated arm is compensated for those services. There is no legitimate reason that similar, nondiscriminatory operational arrangements could be adopted for DSL line sharing with CLECs.

2. Other Forms of Line Sharing have Existed for Years

Similar (and much more complicated) customer support and operational questions are present in the LEC/long-distance carrier relationship. Since the AT&T divestiture, multiple common carrier services provided by multiple providers (IXCs, 800- 900- and 976- service providers, and dial-around providers) have "shared" ILEC outside plant with analog local dialtone service. Compensation for this line sharing between IXCs and

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[19] *Id.* at 15.

[20] In regulatory parlance, the BABSC is an "above the line" entity and is part of Bell Atlantic's regulated, Title II services network.

ILECs is subject to a myriad of regulated state and federal access charge rules, because regulators are (justifiably) concerned about the potential for cross-subsidization and discriminatory conduct by the ILEC. Access charge rules and tariffs are designed to solve the issue of the rates, terms and conditions of access by different service providers to common, shared facilities, including the local loop.[21]

In many respects, Long Distance Line Sharing is more complicated than DSL Line Sharing. Signaling systems must be set up and deployed seamlessly. Detailed call records must be kept and per-call billing tapes regularly exchanged. Pre-subscribed interexchange carrier ("PIC") selections must be made and stored; desired PIC changes are communicated by the customer to the interexchange carrier, verified by a third party, and eventually communicated to and implemented by the incumbent LEC. The access tariff structure with regard to tandem switching is complicated and only now getting straightened out. Different kinds of interexchange access services exist and the determination of which is appropriate depends upon where the interexchange carrier exchanges traffic with the LEC. Significant changes in cost allocation must go through the Federal/State Joint Board process. Incumbent LECs must provide service to *any* IXC that seeks to terminate traffic on the network, even if that IXC does not originate any traffic on the ILEC's network. At any given moment, a customer could implement a new dial-around service for the first time, causing the ILEC to establish a new billing and collection relationship with that new service provider for that customer without any prior notice.

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[21] For this reason, Covad believes that DSL line sharing should be ordered by the Commission as an interstate access service. *See* Section I.C.1 below.

DSL Line Sharing, on the other hand, is relatively simple. As described by Joshi, the points of interconnection – pre-wired connections on the MDF – are fixed and well established. Unlike terminating access (which literally can come from anywhere), ILECs need only expect orders for DSL Line Sharing by competitors that have collocated DSLAMs in the relevant central office. Those collocated competitors will have already established billing and OSS relationships with the ILEC, so new billing and ordering systems need not be designed from scratch. To manage sales of their own shared-line DSL by independent ISPs, ILECs must already have developed OSS capabilities to ensure that the customer service record ("CSR") identifies that a third-party data service is sharing the customer's line.

In short, line sharing of the type addressed in this proceeding is capable of immediate implementation with no greater operating problems than are presently posed by ILEC provisioning of DSL to their ISP partners.

3. Operational Proposals and Conclusion

The Commission needs to keep a sense of perspective regarding the operational "difficulties" with DSL line sharing that ILECs will no doubt raise. As is evident from the endless series of technical conferences, collaborative sessions, and third-party OSS testing, significantly more difficult operational issues than those presented by DSL line sharing pervade the development of competition in the telecommunications industry. The Commission should not dismiss any technical form of interconnection or and access on the basis of "operational complexity," especially when other it has ordered other forms of interconnection and access that are much more complex.

Indeed, DSL line sharing to CLECs need not be any more operationally difficult than the relationship ILECs have with their ISP DSL resellers, and is certainly less complicated than Long Distance line sharing. ILECs would be responsible for maintaining the line, just as they do for their customer ISPs and for CLECs today when CLECs lease stand-alone unbundled loops. ILECs would bill the voice customer for the voice service and the CLEC for the digital portion of the line, just as ILECs now bill their voice customers for voice and their ISP customers for the ILECs' own DSL service (carried over the "digital" higher frequencies of the line).

With regard to maintenance, repair and troubleshooting issues, Covad proposes the following mutual system. The data CLEC would be first point of contact for problems with the data service and the ILEC would be the first point of contact for problems with the voice service. The data CLEC would be charged with making sure that each end user consumer knows about this division.[22] Mutual escalation and referral procedures, designed to be nondiscriminatory with the rates and terms ILECs offer their ISP DSL resellers, would govern issuance by either party of a "trouble ticket" on the other party's network.[23]

ILECs have been handling wholesale administrative back-office support for shared local facilities in the access and information service provider environment for several users – DSL line sharing is simply another application of these capabilities. The

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[22] It could be communicated by a sticker on the DSL modem, by "Help file" software installed on the computer, or by a paper brochure.

[23] Ultimately, it would be very interesting to compare CLEC responsiveness to trouble tickets placed on the CLEC network by the ILEC to ILEC responsiveness to trouble tickets placed on the ILEC network by the CLEC.

ILECs' operational objections to DSL line sharing should be seen for what they are. At best, they are the initial, "not-invented-here" reactions of lumbering bureaucracies. At worst, they are the anti-competitive maneuvering of companies with nearly seven decades of monopoly power attempting to game the regulatory process so as to raise and maintain barriers to entry for the competitive offering of broadband services.

C. The Commission has the Authority to Order Line Sharing

The Commission has two separate statutory bases for ordering line sharing. One source of legal authority is the Commission's general Title II authority to ensure that ILEC access services be provided on just, reasonable and nondiscriminatory terms. Under this Title II authority, the Commission can order ILECs to provide DSL line sharing as an interstate access service – just as the Commission has ordered ILECs to provide special access services to Competitive Access Providers ("CAPs") and interexchange access services IXCs. The Commission also has the authority to order line sharing as an unbundled network element pursuant to Section 251(c)(3) of the Act.

In this section, Covad discusses these two different legal bases and outlines the benefits of each approach.

1. The Commission Should Order Line Sharing as an Interstate Access Service

The ILECs have filed federal access tariffs for their ADSL services. ILEC failure to provide DSL line sharing in those tariffs is unjust, unreasonable, and discriminatory, in violation of Sections 201 and 202 of the Communications Act.[24] Covad believes that the

[24] 47 U.S.C. §§ 201(b), 202(a). *See* Letter from Assistant Secretary of Commerce Larry Irving to the Hon. William E. Kennard, Chairman, FCC, May 7, 1999 at 2 ("ILECs must comply with their basic common carrier obligations: to provide such DSL services upon reasonable request; on just, reasonable, and nondiscriminatory terms; and in accordance with all applicable tariffing requirements.").

Commission should order ILECs to provide line sharing as an interstate access service, and should order immediate revisions to ILEC interstate access tariffs to this effect.[25]

For decades before the 1996 Act, the Commission and the courts recognized that dominant local exchange carriers cannot impede competition by refusing to allow competing service providers to share the capacity of the local loop. This principle was first established in the 1970s. At that time, the pre-Divestiture Bell Operating Companies refused to allow non-affiliated long-distance carriers – such as the then-fledgling MCI or Sprint – to interconnect to their local facilities to originate and terminate long-distance traffic. The Commission and the courts rejected this approach, holding that the BOCs had a legal obligation to "share" the use of their local loops with non-affiliated long-distance carriers.[26] The result, of course, was the blossoming of the competitive long-distance market.

More recently, in the *Special Access Expanded Interconnection Order*, the Commission found that the Communications Act imposes an affirmative obligation on the incumbent LECs to allow competing providers of interstate special access service to receive traffic carried over the LECs' local loops, while deploying their own local transport facilities to carry to interexchange carriers' premises. The Commission

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[25] Most major ILECs have already submitted that their ADSL service is an interstate access service subject to the federal jurisdiction. As discussed below, the Commission can implement line sharing by ordering that those ILECs add, to their existing ADSL tariffs, an additional point of interconnection – in the end office after the main distribution frame.

[26] *See, e.g., MCI Communications Corp. v. AT&T, 708 F.2d 1081 (7th Cir. 1983); MCI Telecommunications Corp. v. FCC,* 561 F.2d 365 (D.C. Cir 1977); Establishment *of Policies and Procedures for Consideration of Applications to Provide Specialized Common Carrier Services*, 29 F.C.C.2d 870 (1971).

explained that the incumbent LECs' then-current special access tariffs – which required a customer to purchase both the local loop and the local transport component – made it:

> impossible for customers to combine their own or CAP [i.e. Competitive Access Provider] facilities with portions of the LEC network to satisfy their special access needs. As a result, the current access tariff structure represents a barrier to the further development of special access competition.[27]

The Commission went on to find that requiring Tier I LECs to allow CAPs to obtain interconnection only for the local loop would produce substantial public interest benefits by promoting competitive alternatives to the incumbents' services. The Commission therefore "conclude[d] that continuation of the current special access rate structure by the Tier 1 LECs would be unjust and unreasonable in violation of Section 201(b) of the Act."[28]

As the Commission has recognized, DSL is an interstate special access service.[29] Like the LECs' old special access tariffs, ILEC DSL tariffs bundle the loop and interoffice transport portions of the offering. And, like the LECs' old special access tariffs, this harms the public interest by limiting the ability of new entrants to provide competitive offerings. Just as it did in the *Special Access Expanded Interconnection*

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[27] *Expanded Interconnection with Local Telephone* Company *Facilities,* First Report and Order, 7 FCC Rcd 7369, 7473-74 (1992).

[28] *Id.*

[29] GTE Tel. Operating Cos. GTOC Transmittal No. 1148, CC Docket No. 98-79, FCC 98-292, Memorandum Opinion and Order (rel. Oct. 30, 1998) ("*GTE DSL Order*"); *see also* Bell Atlantic Tel. Cos. Bell Atlantic Transmittal No. 1076, BellSouth Telecommunications, Inc., BellSouth Transmittal No. 476, GTE System Tel. Cos., GSTC Transmittal No. 260, Pacific Bell Tel. Co., Pacific Bell Transmittal No. 1986, CC Docket Nos. 98-168, 98-161, 98-167, 98-103, Memorandum Opinion and Order (rel. Nov. 30, 1998) ("*Bell Atlantic DSL Order*").

Order, the Commission must now find that the rate structure proposed by the ILECs "would be unjust and unreasonable in violation of Section 201(b) of the Act."

The Commission also should find that the refusal to provide line sharing unlawfully discriminates against a significant – and growing – segment of ILEC customers. At the present time, incumbent LECs retain a virtual monopoly in the provision of residential voice service.[30] By allocating absolutely *zero* cost of the loop to their ADSL service that runs over that loop, the ILECs are essentially using the proceeds of that virtual POTS monopoly to subsidize their entry into the advanced data services market. This ILEC use of market power forecloses competitive DSL entry by imposing unreasonable and discriminatory costs on their voice customers that choose to have their data transported by a competing DSL provider.[31]

As discussed above, certain forms of DSL technology make it possible for ILEC loops to carry two "streams" of user information: analog traffic on the lower frequencies and high-speed digital data traffic on higher frequencies. Consumers who want to use ILEC voice local and access service (POTS) and the ILEC's DSL data service can have both streams of traffic carried over the same loop, thereby realizing significant savings. However, an ILEC voice customer who wants to use the DSL service provided by another carrier may *not* obtain both services over a single loop. Rather, the customer must obtain competitive DSL service over a second, separate loop – incurring significant

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[30] A recent FCC Staff Report found that CLECs possess approximately 3.2% of local service market revenues. FCC Common Carrier Bureau, Industry Analysis Division, *Local Competition* (Dec. 1998) at Table 2.1 ("FCC Local Competition Report").

[31] *See* Attachment 2 (summarizing ILEC marketing pitches about shared voice and data service on the same line).

additional costs.[32] There is no technical justification for this discriminatory treatment of ILEC POTS customers that seek to obtain competitively provided DSL service. Rather, this practice represents an unlawful effort to impede competition from DSL providers seeking to enter the market.

Requiring DSL line sharing would end this unlawful discrimination. An ILEC POTS customer could use the same loop for data traffic, regardless of whether she chooses to obtain DSL service from the ILEC or from a competitive carrier.

2. Line Sharing Squarely Meets the Unbundling Standards of Section 251 of the Act

An alternative legal base for ordering DSL line sharing is for the Commission to find it to be a "feature, function, or capability" of the ILEC network that must be offered to requesting carriers on an unbundled basis. As discussed in subsection (a) below, line sharing meets the definition of a "network element." Subsections (b) and (c) demonstrate that line sharing also satisfies the requirements of Sections 251(d)(2) and (c)(3) for unbundled access.

a. Definition of Network Element

Under section 153(45), a "network element" is a "facility or equipment used in the provision of a telecommunications service," and specifically "includes *features, functions, and capabilities* that are provided by means of such facility or equipment." Similarly, Section 51.5 of the Commission's Rules includes the

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[32] ILECs continually tout this competitive and cost advantage in their DSL marketing materials. *See* Attachment 2, US WEST No. 3 ("You do not need to purchase another phone line."); BellSouth No. 3 ("Remember – you'll still be able to use it as a phone line while you're on the Internet!"); Pacific Bell No. 1 ("you don't need additional phone lines"); SWBT No. 2 ("There is no need to choose between voice and data."); GTE No. 1 ("DSL end-users can still use their existing phone line for voice communications while using DSL service for Internet access simultaneously.").

"*features, functions, and capabilities* that are provided by means of [loop] facilities" in the definition of "network element."[33] Consequently, the *functionality or capability* of sharing a voice loop for the provision of DSL data services is plainly a network element subject to unbundling by incumbent LECs.[34]

b. DSL Line Sharing meets Section 251(d)(2)

Line sharing squarely meets the "necessary" and "impair" standards of the Act because the inability to provide DSL service over the loop used for local exchange services makes competitive DSL services to small businesses and mass market residential consumers not just hypothetically or marginally more expensive, but simply impossible on a sustained, economic basis, given current and foreseeable prices for unbundled loops.[35]

As discussed above, the interstate ADSL tariffs of GTE, SBC, Bell Atlantic and BellSouth justify ADSL prices on the basis of a *zero* loop cost, reasoning that because loop costs are already fully recovered from voice services, there is no incremental cost

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[33] 47 C.F.R. § 51.5.

[34] The Commission addresses CLECs rights to loop access in Sections 51.307(d) and 51.30(c) of the rules, which provide respectively that an incumbent LEC must provide competitors with "access to the facility or functionality of a requested network element separate from access to the facility or functionality of other network elements," and that a competitive carrier "is entitled to exclusive use" of "an unbundled network facility." 47 C.F.R. §§ 51.307(d), 51.30(c). Thus, CLECs are permitted unbundled access to only some functionalities of the loop (high frequencies for DSL) separate from other loop functions, but are "entitled," if they choose, to exclusive use of the entire unbundled facility.

[35] Several parties, including Covad, made similar arguments in the *UNE Remand* proceeding. *See* Covad Comments, *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket No. 96-86, May 26, 1999, Attachment 1 at § 51.319(a)(6)(a); NorthPoint Comments, *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket No. 96-86, May 26, 1999 at 14-15; MCI Comments, *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket No. 96-86, May 26, 1999, at 45-50 (giving CLECs the option to identify a loop by the transmission bandwidth needed by the CLEC); NAS Comments, *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket No. 96-86, May 26, 1999, at 23-31.