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

In the Matter of	
Computer III Further Remand Proceedings: Bell Operating Company Provision of Enhanced Services	CC Docket No. 95-20
1998 Biennial Regulatory Review — Review of *Computer III* and ONA Safeguards and Requirements	CC Docket No. 98-10

JOINT COMMENTS OF: APK NET, LTD., CLARITY CONNECT, INC., CYBERCOM, CYBER WARRIOR, INC., DOUBLE D NETWORK SERVICES, INC., ERINET, GREATLAND INTERNET SERVICES, INC., HELICON ON-LINE, L.P., INFINET, INFOHOUSE, INFORAMP, INTERNET CONNECT COMPANY, MTP LLC DBA JAVANET, PROAXIS COMMUNICATIONS, INC., ROCKBRIDGE GLOBAL VILLAGE, SHREVENET, INC., WITHIN TECHNOLOGY, INC., AND ZOOMNET, RETAIL INTERNET SERVICE PROVIDERS

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JOINT COMMENTS OF
RETAIL INTERNET SERVICE PROVIDERS

1. Introduction and Summary.

These comments are being filed on behalf of a group of retail Internet Service Providers in response to the Commission's *Further NPRM* in this matter.[1] Together, the retail ISPs sponsoring these comments provide retail Internet access service to more than 100,000 customers in various communities across the country.

As described below, retail ISPs have a critical interest in the Commission's decision whether to (in the Commission's words) "extend section 251-type unbundling to pure ISPs."[2]

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[1] In the Matter of *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, *Further Notice of Proposed Rulemaking*, CC Docket Nos. 95-20, 98-10, FCC 98-8 (rel. January 30, 1998) ("*Further NPRM*"). The retail ISPs joining in these comments are listed on the cover page and in Attachment A. In these comments, the term "ISP" will be used exclusively to refer to ***Internet*** Service Providers, *i.e.*, firms such as the retail ISPs making this filing.

[2] *Further NPRM* at ¶ 96. *See also id.* at ¶¶ 92-95.

Retail ISPs must be permitted to obtain a service from ILECs that permits ISPs to efficiently attach xDSL equipment to unswitched copper connections to end users.[3] Without such a service, retail ISPs will be frozen out of the market for high-bandwidth Internet access. This anticompetitive outcome would occur as a result of the technical limitations of xDSL equipment, which only works on unswitched copper circuits, and which works less and less well — and eventually stops working entirely — as the length of the circuit increases.[4]

In these circumstances, what retail ISPs need is not "section 251-type unbundling." To the contrary, what retail ISPs need is a very simple, very basic telecommunications service — call it "unswitched clean copper service" — at non-discriminatory, cost-based rates. Retail ISPs and their customers would attach xDSL customer premises equipment ("CPE") to each end of the circuit; the retail ISPs would then use this combination of CPE and basic communications service to offer high-bandwidth Internet access. From a regulatory perspective, this is exactly parallel to the situation today, where retail ISPs use analog modems and "plain old telephone service" ("POTS") to offer low-bandwidth Internet access.

Because the issue is the availability of a basic communications service, if requiring ILECs to offer such a service is "unbundling" at all, it is traditional "ONA-type" unbundling, not "section 251-type" unbundling. The fact that unswitched clean copper service ***looks like*** it might involve "section 251-type unbundling" is an artifact of the limitations of xDSL technology. As noted above, the performance of xDSL

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[3] There are several different types of digital subscriber line ("DSL") technology, including Asymmetric DSL, High-Speed DSL, and Rate-Adaptive DSL. While the differences among these technologies are significant in some contexts, here they are lumped together under the rubric "xDSL."

[4] The Commission is no doubt aware of the technical characteristics of xDSL equipment. Recent information from vendors (including some discussion of Internet access issues) can be obtained at, *e.g.*, http://www.pairgain.com and http://www.westell.com.

equipment degrades as the length of the circuit carrying the signal increases. This makes it critical that the ISP's end of the circuit be as close to the customer as possible. Current ILEC network design — in which customer loops are concentrated at switching centers — creates a situation in which the logical place for retail ISPs (or anyone else) to attach xDSL equipment, as a technical matter, is at (or near) the ILEC central office.

These technical considerations lead to the confused notion that retail ISPs ***as such*** might want "unbundled loops" and "collocation rights." In fact, however, retail ISPs would be delighted if xDSL-like data rates could be transmitted over POTS lines, or if traditional "alarm circuits" (unswitched local point-to-point copper connections) could be configured between customers and existing ISP locations at a reasonable cost and with a short enough end-to-end circuit length for use with xDSL equipment. If either of these alternatives were technically viable and generally available, retail ISPs would likely have no interest in anything that looked like "unbundled loops" or "collocation."

For this reason, the fact that retail ISPs may form CLEC affiliates, and that those CLEC affiliates will have Section 251 interconnection rights, is irrelevant. As described above, what retail ISPs need from ILECs is a simple, basic communications offering — a clean, unswitched copper transmission path of suitable length for xDSL equipment to work. It makes no sense to say that retail ISPs may ***not*** demand such a basic service from the ILEC, but ***may*** form a CLEC affiliate to (in effect) provide it to themselves. As long as Section 201 remains on the books, carriers have an affirmative duty to provide communications services in response to "reasonable requests." The advent of xDSL technology makes it not only reasonable, but essential, that ILECs offer retail ISPs and their customers unswitched, clean copper circuits.

In light of Section 201, the Commission may not lawfully adopt a policy that requires end users — including ISPs — to become carriers solely to obtain basic

services. In practical terms, such a policy would amount to saying that an ILEC does not need to offer PBX trunks to large business customers, since those customers can form CLEC affiliates and provide Centrex service to themselves. In legal terms, such a policy would require a finding that Section 253 (barring state restrictions on new entry) and Section 251 (giving new entrants various rights against ILECs) impliedly ***repealed*** Section 201 (requiring interstate carriers, including ILECs, to provide service upon "reasonable request"). There is obviously no basis for such a conclusion.

Again, it is only an artifact of xDSL technology and ILEC network design that creates a situation where it appears that retail ISPs must connect their equipment to pre-existing "loops" at a location that might be "collocated" with the ILEC's own network equipment. As to collocation in particular, in many applications it probably does not matter if the retail ISP's xDSL equipment is literally "collocated" in the ILEC switch room or if it is in a separate building next door. What matters is that the overall length and interference level of the copper circuits are not materially increased by attaching the xDSL equipment somewhere other than in the central office. In Section 251 terms, retail ISPs as such do not want "collocated" access to "unbundled loops." They want convenient and reasonably priced access, on technically and economically non-discriminatory terms, to a communications path to end users comprised of unswitched, short, clean copper circuits. Whether that requires something that "looks like" traditional collocation will depend on individual conditions.

In light of the advent of xDSL technology, the public interest would plainly be served by requiring that ILECs offer unswitched clean copper circuits as a federally-mandated, federally-tariffed end user service at non-discriminatory, cost-based rates. In the more limited context of this proceeding, however, the discussion above shows that the legally relevant "unbundling" model is ***not*** "section 251-type unbundling," but, instead, "ONA-type" unbundling.

In this context, an unswitched clean copper circuit is a basic (indeed, ***very*** basic) telecommunications service that retail ISPs need in order to offer their customers high-bandwidth access to the Internet. As a result, ILECs should be obliged to offer this service to retail ISPs, irrespective of whether the ILEC offers an xDSL-based service of its own. Of course, under standard non-discrimination principles embodied in the Commission's ONA rules, if the ILEC ***does*** offer an xDSL-based data service, then it would be profoundly and unfairly discriminatory if the ILEC could refuse to offer the underlying basic service — a clean, short, unswitched copper circuit — to retail ISPs. An ILECs' ability to offer any form of xDSL service, therefore — including any xDSL-based Internet access service — should be expressly conditioned on the ILEC providing unswitched clean copper circuits to retail ISPs, with interference levels and circuit lengths no greater than for the circuits the ILEC itself would use to serve the affected customers.

2. The Growth Of Market Demand For High-Bandwidth Internet Access Service.

The current market need for high-bandwidth access to the Internet is the result of many years of evolution of the personal computer and related technologies.

In the early 1980s, the capabilities of then-newly-invented personal computers were quite limited by today's standards. RAM was measured in kilobytes. A 10-megabyte hard drive was "large." A processor speed of 12 MHz was "fast." A portable diskette could hold less than 500 kilobytes of data.

The quality of consumer information services are unavoidably constrained by the capabilities of available consumer technology. One cannot play *Myst*, or even *Reader Rabbit,* using a machine with an Intel 8086 or similar chip as its CPU. In part

for this reason, in the early 1980s, modern consumer computer graphics applications such as those embodied in today's standard CD-ROM-based games did not exist.[5]

In this early personal computing environment, a typical "high speed" modem delivered data at a rate of less than 10,000 bits per second. Due to the limitations on processor power and memory, however, this relatively low data rate usually did not constrain the quality of the consumer's experience in using telecommunications to access various remote applications.

Much has changed since the early 1980s. Personal computers bought today have processor speeds of 200-300 MHz; 32 or more ***mega***bytes of RAM; hard drives capable of storing several ***giga***bytes of software and data; and portable CD-ROMs capable of storing hundreds of megabytes of data. These developments, similar developments in server and router technology, and the development of suitable software (such as browsers) have fueled and continue to fuel the explosive growth of consumer access to the Internet, and particularly the World Wide Web.[6]

Entrepreneurial retail ISPs have responded to this consumer demand. Operating in fiercely competitive markets, retail ISPs have invested in successive generations of routers, servers, software, and telecommunications equipment, and purchased ever-increasing quantities of basic telephone services (such as POTS lines and T1 connections) in order to provide their customers with good service. Some retail ISPs

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[5] This was the golden age of "ASCII Art" — pictures drawn using only the standard ASCII character set, designed to fit on a standard computer screen. Until recently, *Wired* magazine included regular examples of this vanishing art form. *See, e.g., Wired* 5.07 at 167 (July 1997) ("Mr. ASCII does the Macarena").

[6] The Internet is much more than the Web, and includes email, newsgroups, remote access to data via File Transfer Protocol, or "FTP," and remote access to computing power via Telnet. Even so, so much consumer interest has focused on the Web that in the eyes of many, the "Web" and the "Internet" are synonymous.

have flourished; some have perished; some have been absorbed by other ISPs or by firms in the telecommunications industry; others have remained independent. The individual fates of different retail ISPs simply reflect the intense competitive pressures that operate in this market. These are competitive risks that every retail ISP accepts: meet customer demand or — sooner or later — go out of business.

What customers are demanding now is more bandwidth.

This is a natural and inevitable outgrowth of the technological developments described above. Over the last fifteen years, PC processor speeds have increased by a factor of roughly 50, typical available RAM by nearly a hundredfold, and typical hard drive storage by a factor of a thousand. Yet the typical consumer modem now delivers roughly 30,000 bits per second — an increase of a factor of only about three times over the "state of the art" ten years ago. As a result, there is now an enormous and growing mismatch between the capabilities of the computers attached to the Internet and the meager communications bandwidth available to most consumers. Again, the only solution is more bandwidth.

There are various stopgap measures that can be used to work around this problem in the short run. Analog modem technology has now improved so that peak throughputs of up to 50,000 bits per second can be achieved where the ISP uses a digital, as opposed to analog, service to connect ***its*** facilities to the public switched telephone network. In addition, data compression uses processing power at the originating end to stuff more data into less bandwidth, and then uses the processing power at the receiving end to re-create the original data. Another stopgap measure is end-user caching, in which files that may repeatedly be requested from the Internet are stored on the end user's hard drive and relayed directly from the hard drive to the browser software without any transmission either over the Internet or even from the ISP to the end user.

These efforts to substitute processing power and/or memory for scarce bandwidth, however, can only go so far. At some point, bandwidth simply must be increased if consumers are to receive the information services they need and desire.

3. xDSL Technology Permits High-Bandwidth Internet Access To Be Offered Over Suitably Short Unswitched Copper Circuits.

It was long assumed that the way to increase the bandwidth available to consumers was to re-wire the nation with optical fiber. The advent of xDSL technology, however, has shown that much of the embedded base of "plain old" twisted pair copper can be used to deliver data at rates that are dozens of times higher than those achievable by even the fastest analog modems. And, while xDSL performance improves with shorter and "cleaner" circuits, significant increases in bandwidth are possible even on relatively long and relatively "noisy" copper circuits.[7] For these reasons, twisted pair is no longer an obsolete technology waiting to be replaced by "superior" fiber optic facilities. To the contrary, twisted pair — including existing, embedded copper loop plant — is now a key strategic asset in providing high-bandwidth services to consumers.

The ILECs control essentially all of it.

It follows that if retail ISPs are going to be able to offer xDSL-based Internet access, they will have to be allowed to use that ILEC copper. In particular, it is critical that ISPs be permitted to connect their xDSL modems to unswitched copper circuits at or near the central office to which existing customer copper loops are

[7] A "noisy" circuit is one which experiences interference or static due, for example, to corroded insulation, water damage, or a large number of physical splices in the path of the circuit.

connected.[8] The reason is that the bandwidth achievable with xDSL technology decreases as the length of the copper circuit increases. If some favored competitors (including the ILECs themselves) can connect their xDSL modems at the central office, but retail ISPs can only connect by means of (for example) a circuit extension to the ISPs' existing location, the ISP's service will be inferior. This will occur because the additional copper between the customer and the retail ISP's xDSL modem would translate directly into less deliverable bandwidth to the consumer.

For these technical reasons, retail ISPs must be permitted to connect their xDSL modems at or near the central office end of a copper circuit serving an end user customer. Otherwise, their high-bandwidth Internet service will be inferior or non-existent. In the hotly competitive market for retail Internet access, this inferior service will drive retail ISPs as we know them today out of the market, leaving only those privileged few who have access to short, clean unswitched copper circuits — *i.e.*, those with access to ILEC central offices.

4. ISPs Should Not Be Forced To Form CLEC Affiliates Or Rely Upon Independent CLECs To Obtain Access To Unswitched Copper Circuits.

The *Further NPRM* requests comment on whether the fact that CLECs have access to unbundled loops, and the fact that ISPs can obtain CLEC status themselves, obviates the need to allow ISPs as such to directly connect to unswitched copper circuits at or near an ILEC end office.[9] For the reasons described below, these alternatives are inadequate as a practical business matter and misguided as a legal and policy matter.

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[8] xDSL CPE is not really a "modem." Analog "modems" ***MO***dulate and ***DEM***odulate analog signals to transmit digital data. With xDSL CPE, the signal is digital end-to-end, and no "modulation" or "demodulation" occurs. Nonetheless, it seems inevitable that these devices will be known as modems.

[9] *Further NPRM* at ¶¶ 29-31.

First, the Commission should be aware that creating a CLEC is often a complicated, lengthy process. Many states require the filing of lengthy applications and responses to information requests. Some states impose "public notice" requirements (such as running an advertisement in papers of "general circulation") that can be quite expensive in larger urban areas. Some states require that the applicant prepare and file proposed tariffs with the application for CLEC status, a task that is totally foreign to the experience of the vast majority of retail ISPs. Some states impose tests of "financial fitness" that may be rational when applied to a firm that wants to provide basic dial tone line service to consumers, but that a small, young, entrepreneurial retail ISP may not be able to meet. Some states even require an applicant for CLEC status to be represented by counsel, making it impossible for the ISP to avoid paying attorneys to fill out and file the relevant papers.[10] In part as a result of these various requirements, in many states it takes up to six months or more to obtain CLEC status if, indeed, such status is available to a particular ISP (or affiliate) at all.

But creating an "official" CLEC is only the first step. Before an ISP's CLEC affiliate can obtain unbundled elements and interconnection under Section 251, the newly-minted CLEC will need to obtain an interconnection agreement with the ILEC. This is never a simple process. At a minimum, the CLEC will need to review existing interconnection agreements that the ILEC has already signed to see if any of them is suitable for "opting in" under Section 252(i). The ILECs' common practice, however, is not to make copies of these already-approved agreements available to requesting CLECs. Instead, the ILECs routinely proffer their current "standard" contract and direct the CLEC to the state PSC's files to obtain copies of approved agreements. Simply getting copies of the existing, executed agreements (which often contain terms

[10] In addition, some state laws contain provisions conferring special rights, such as the right of eminent domain, on firms that properly dot their legal i's and cross their legal t's when the CLEC entity is formed. ISPs interested in forming CLEC affiliates will, of course, incur legal costs in determining whether such rights exist in the states in which they seek to operate.

much more favorable than the ILECs' "standard" contracts) can take several weeks and — at government copying rates of $0.75 per page or more — cost hundreds of dollars. Review of these complex contracts by suitably trained legal and/or technical personnel will cost even more.

Moreover, the ISP/CLEC would not fall comfortably into any of the three "standard" versions of interconnection agreements usually proffered by ILECs today.[11] As a result, there is a good chance that no existing contract will meet the ISP's needs. It follows that some negotiation with the ILEC will often be required. This, too, can be a cumbersome, complex and costly process.

Finally, even if an agreement with the ILEC is reached relatively promptly, an ILEC may choose not to begin performing its obligations until the agreement has been formally approved by the state PSC. This imposes additional delay on an ISP seeking to offer xDSL-based Internet access. Delay can be deadly in the highly competitive market for retail ISP services.

None of this is to say that independent reasons may not lead a particular ISP to form a CLEC affiliate. But it would be contrary to the strong ***deregulatory*** thrust of the 1996 Telecommunications Act to conclude that the only way that retail ISPs can obtain an essential, basic telecommunications service is to proliferate the number of ***regulated*** entities that fit into a traditional ***regulatory*** pigeon-hole.

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[11] ILECs often distinguish between (a) agreements with a CLEC that wants to act as a "pure" reseller (which will not include provisions relating to reciprocal compensation or unbundled elements); (b) agreements with a CMRS provider (which will not include provisions relating to resale of ILEC services or access to unbundled elements) and (c) agreements with a CLEC that plans to offer a full range of services (which will include provisions relating to reciprocal compensation, unbundled elements, and resale). An ISP/CLEC simply seeking to obtain access to unbundled copper loops to offer an xDSL-based Internet access service would not fit any of these molds.

Different but perhaps even more serious practical problems apply to the idea that an ISP should be denied access to a basic service from an ILEC because the ISP may be able to get access to a similar service from an unaffiliated CLEC. First, many existing CLECs — including some CLECs that have negotiated for the most extensive interconnection rights — already have competitive ISP operations. Retail ISPs will understandably be concerned about obtaining this critical service from these firms, who are fierce competitors in the Internet arena and at the same time only lightly regulated (compared to the ILECs) with regard to their business as telecommunications carriers.

Second, relying on an independent CLEC would put another "middleman" between the ISP and the ISP's customer: the ILEC providing the underlying copper circuit (which is unavoidable in light of the ILEC's essentially 100% share of copper loops to residence and small business customers) and the CLEC buying the unbundled loop from the ILEC. The opportunities for miscommunication and finger-pointing in the event of a service problem are overwhelming.

Third, while there may eventually be enough collocated CLECs to create a competitive market for local exchange services that depend directly on the use of an ILEC's embedded copper, for the foreseeable future there will be many central offices — particularly central offices that serve primarily residence customers — where there will be no CLECs at all. Moreover, if there are only one or a few CLECs in a central office, they may each reasonably and independently conclude that taking the steps required to meet the needs of retail ISPs is not a critical part of their often large-business-oriented business plans. In these or similar circumstances, the monopoly control that the ILEC exercises over local exchange services and facilities in a particular central office may not be effectively dissipated merely because a small number of CLECs have a presence there.

These factors illustrate that in the fast-evolving, competitive world of retail Internet access, it would be an irretrievable error for the Commission to establish policies that will apply ***today*** on the basis of ***long-run*** expectations of what a competitive local exchange market will eventually look like. It is a commonplace that "Internet time" proceeds many times faster than normal "business" time. From the retail ISP perspective, "Internet time" proceeds faster still than what may be called "regulatory time." Putting the matter bluntly, if retail ISPs cannot obtain short, clean, unswitched copper circuits until the day (if ever) that the local exchange market is competitive enough to eliminate the problems noted above, the retail ISPs will be gone — utterly replaced by whichever favored entities ***did*** have access to such circuits in the interim. There is no possible justification for a Commission policy that would at a stroke hand the future of the currently ***unregulated*** retail Internet access market to whatever set of entities is lucky enough at the time of the decision to have the right ***regulatory*** status to get access to unbundled loops and collocation under Section 251.[12]

5. The Commission Should Affirmatively Require The ILECs To Provide Retail ISPs With Unswitched Clean Copper Circuits Suitable For Use With xDSL Equipment.

Even if the Commission were to conclude that retail ISPs had a timely and realistic "option" to form or work with a CLEC, there is no sound legal basis for placing

[12] From a legal perspective, it makes no sense to require retail ISPs to form, or to do business with, CLECs in order to obtain access to unswitched clean copper circuits from the ILEC. An unswitched copper transmission path is probably ***the*** prototypical "basic" telecommunications service. There is no statutory basis upon which the Commission could conclude that an ILEC's obligation to provide service "upon reasonable request" under Section 201 is in any way diluted or abrogated because there may be one or more CLECs in the market, or because the customers who need such services could become CLECs themselves. Indeed, such a legal conclusion would amount to saying that the passage of Section 253 (which eliminates barriers to entry) and Section 251 (which gives new entrants interconnection and related rights) somehow impliedly repealed Section 201's obligation on all interstate carriers to provide service.

the obstacles noted above between retail ISPs and the provision of high-bandwidth Internet access service. Instead, both the general public interest under Section 201 of the Act and the non-discrimination requirements of Section 202 of the Act compel the conclusion that ILECs should be required to offer unswitched clean copper circuits directly to retail ISPs and their subscribers.

Section 201(a) states that "it shall be the ***duty*** of every common carrier engaged in interstate or foreign communication ... to furnish such communication service upon reasonable request therefor." The ILECs are clearly "common carriers engaged in interstate ... communication." The only two questions, therefore, are whether the communications service the retail ISPs need is jurisdictionally interstate and whether it is "reasonable" to require the ILECs to provide it to retail ISPs.[13]

The ILECs themselves are firmly committed to the idea that communications to and from the Internet are jurisdictionally interstate.[14] Moreover, the service in question here would be a dedicated point-to-point service, not a switched service. Under long-standing and well-settled separations rules upon which the industry has come to rely, as long as 10% or more of the traffic on such a facility is jurisdictionally interstate, the entire service is treated as jurisdictionally interstate.[15] An

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[13] There can be no question that the Commission has the authority under Section 201(a) to direct carriers under its jurisdiction to provide services it finds to be in the public interest. *See, e.g.,* In the Matter of Implementation of the Non-Accounting Safeguards of Sections 271 and 272 of the Communications Act of 1934, as amended, CC Docket No. 96-149, *Notice of Proposed Rulemaking*, FCC 96-308, 11 FCC Rcd 18877 (1996) at ¶ 88 & n.160.

[14] *See, e.g.,* CCB/CPD No. 97-30, Request by ALTS for Clarification of the Commission's Rules Regarding Reciprocal Compensation for Information Service Provider Traffic, *Ameritech Comments* at 4-8 (filed July 17, 1997); *Reply Comments of Southwestern Bell Telephone Company, Pacific Bell and Nevada Bell* at 1, 5 (filed July 31, 1997); *Reply Comments [of BellSouth]* at 2-10 (filed July 31, 1997).

[15] *See* 47 C.F.R. § 36.154, subcategory 1.2. As a result, even though a large and growing
(continued...)

unswitched clean copper service between an end user customer and an ISP's xDSL modem, used primarily for access to the Internet, would therefore be an interstate service under this Commission's jurisdiction.[16]

The only question, then, is whether it is "reasonable," in the public interest, to require ILECs to provide suitably short unswitched clean copper circuits to retail ISPs and their customers for use in providing xDSL-based high-bandwidth Internet access. Here again, the ILECs would be hard-pressed to deny that the public interest would be served by such a requirement. Bell Atlantic, US West and Ameritech have all filed petitions with this Commission under Section 706 of the Telecommunications Act of 1996, seeking various forms of special regulatory treatment ***precisely because*** high-bandwidth Internet access is so important to the public.[17] While reserving judgment on

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[15](...continued)
percentage of consumer requests for data from the Internet are actually handled entirely locally (because ISPs are increasingly relying on data caching to avoid retrieval delays and to minimize their upstream bandwidth costs), the unswitched service discussed here would be jurisdictionally interstate as long as the 10% criterion of 47 C.F.R. § 36.154 is met. Of course, a somewhat different jurisdictional analysis may apply to dial-up access to the Internet which — among other differences — uses switched facilities, to which 47 C.F.R. § 36.154 does not apply.

[16] In the event of any ILEC disagreement with this jurisdictional conclusion, the Commission should inquire of the ILECs as to whether they have dropped any and all opposition to the payment of reciprocal compensation for Internet traffic, which they have opposed almost entirely on jurisdictional grounds. *See* note 14, *supra.* Also, the ILECs have historically offered an intrastate version of unswitched clean copper circuits, often under the rubric of "alarm circuits" or "local area data" circuits. The ILECs can hardly deny, therefore, that providing an unswitched copper transmission path is a "service."

[17] *See* In the Matter of Petition of Bell Atlantic for Relief from Barriers to Deployment of Advanced Telecommunications Services; Petition of U S West for Relief from Barriers to Deployment of Advanced Telecommunications Services; Petition of Ameritech for Relief from Barriers to Deployment of Advanced Telecommunications Services, CC Docket Nos. 98-11, 98-26, and 98-32. In light of the ILECs' clear recognition of the value of "plain vanilla" copper circuits in delivering high-bandwidth Internet access, it is interesting (to say the least) that some ILECs are taking steps to ***eliminate*** such circuits as a generally available end user offering.

the merits of the particular types of regulatory relief that the ILECs seek in those petitions, the retail ISPs filing these comments absolutely agree with the ILECs that providing as many consumers as possible with reasonably-priced high-bandwidth Internet access would profoundly and directly advance the public interest.[18]

For these reasons, the Commission would be fully justified in exercising its authority under Section 201 to require all ILECs to offer a federally-tariffed unswitched clean copper circuit service everywhere that end users want to have high-bandwidth Internet access — which is to say, effectively, everywhere.

6. Non-Discrimination Principles Require That Retail ISPs Be Provided With Unswitched Clean Copper Circuits As A Precondition To Any ILEC Offering Of xDSL-Based High Bandwidth Internet Access.

While the broad public interest would be served by widespread availability of unswitched clean copper circuits, the focus of this proceeding is somewhat more narrow. As posed in the *Further NPRM,* the question at hand is whether "pure ISPs" — such as the retail ISPs filing these comments — should be entitled to "section 251-type unbundling" or whether, instead, more traditional "ONA-type" unbundling is adequate.[19]

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[18] An added benefit of requiring the ILECs to provide unswitched clean copper circuits between end users and ISPs is that the availability of such a service, at reasonable prices, would rapidly encourage the siphoning off of Internet data traffic from the ILEC's circuit-switched network. Indeed, with reasonably priced clean copper circuits available to retail ISPs and their end users, in all likelihood the most intensive users of Internet access would be among the "early adopters" of xDSL-based service. This would rapidly alleviate any network congestion problems that the ILECs are experiencing as a result of the use of their circuit-switched networks to access the Internet.

[19] *Further NPRM* at ¶¶ 92-96. The retail ISPs filing these comments take no position at this time regarding the broader questions of harmonizing the pre-1996 Act ONA regime with the provisions of Section 251(c). We note, however, that it would appear to be contrary to the provisions of the Act that promote and encourage competition and the development of advanced information services to conclude that Section 251(c) — which is primarily focused
(continued...)

The discussion above shows that "section 251-type unbundling" is not really at issue here. Retail ISPs are not seeking to somehow unfairly get rights that Section 251 expressly gives to "telecommunications carriers." Retail ISPs want the ILECs to provide a basic telecommunications service — unswitched clean copper transmission paths — in a reasonable and non-discriminatory manner so that retail ISPs can use xDSL equipment to provide high-bandwidth Internet access to end users.

The ***technical*** limitations of xDSL equipment, however, require that the copper transmission paths at issue be as short as they can reasonably be. This technical fact about xDSL equipment — not some secret desire of retail ISPs to sneak into the "society of CLECs" through the back door — leads to the conclusion that the "ISP end" of an xDSL-equipped circuit to an end user should be near where the copper facility from the end user terminates. The ILECs will presumably take advantage of this feature of xDSL technology and place ***their own*** xDSL equipment in or near their central offices, in order to maximize the bandwidth available to the end user. Once they do so, the non-discrimination obligation of Section 202 — embodied in the Commission's ONA policies, but existing independently of those policies — requires that retail ISPs be permitted to connect ***their*** xDSL equipment to the same copper circuits at effectively the same place.

For this reason, the relevant "unbundling" analogy is not Section 251(c)(3), but, instead, old-style "ONA-type" unbundling, which is based on Sections 201 and 202. Any ILEC xDSL-based service will necessarily make use of an unswitched copper transmission path. That ***use*** constitutes a basic service embedded in the enhanced (or "information") service of high-bandwidth Internet access. Standard non-discrimination

[19](...continued)
on carrier-to-carrier relationships — somehow limits or abrogates the pre-existing rights of all information service providers and other end users to reasonable service on fair and non-discriminatory terms and conditions, embodied in Sections 201 and 202 of the Act.

principles compel the conclusion that ILECs must not be permitted to offer xDSL-based high-bandwidth Internet access unless the embedded basic service is made available to competing providers of Internet access — such as the retail ISPs.

From this perspective, "collocation" as such is not an issue. What matters is not that the retail ISPs be permitted to place their xDSL modems and routers in the inner sanctum of an ILEC switch room. What matters is that there be ***some place*** where the retail ISPs can place their modems and routers that gives them access to copper circuits that are (a) short enough not to impair the functioning of the xDSL equipment in objective terms and (b) no ***longer*** than the copper circuits that the ILEC itself will have access to in offering its own xDSL services.

In practical terms, the only way to meet these requirements will probably be for the ILEC to establish one or more locations where retail ISPs can locate their xDSL modems and similar equipment — call it the "xDSL room" — in or near the building that houses a particular switch. When a retail ISP or an end user customer within that switch's wire center area wants xDSL-based Internet access service from the ISP, the copper circuit would be established by extending or reterminating loop facilities used to serve that customer to the "xDSL room." The retail ISPs would then be responsible for arranging to transport the customer data either to its own main location, or directly to the Internet.[20] But as long as the extension/retermination of the copper circuit did not degrade the quality of the circuit or materially extend its length, the basic non-discrimination requirement would be met.

For these reasons, retail ISPs do not literally seek "collocation" pursuant to the terms of Section 251(c)(6). Retail ISPs are entitled, however, to non-discriminatory access to unswitched clean copper circuits under the terms of Section

[20] Of course, if the ILEC provides its own ISP operation with transport of packet data on favorable terms, those same terms must be offered to the retail ISPs.

202. One can imagine technical configurations of ILEC xDSL service, or other factors, that would create a situation in which the only way to give retail ISPs technically adequate non-discriminatory access to the underlying basic service is to place equipment dedicated to a particular retail ISP within an ILEC central office. Whether this will be true will depend upon individual circumstances. But any "collocation" arrangement needed to allow retail ISPs to have technically and economically non-discriminatory access to unswitched clean copper circuits — whether characterized as "physical" or "virtual" — would be established pursuant to "reasonable service" requirements of Section 201 and the non-discrimination requirements of Section 202, not pursuant to Section 251(c)(6). Again, however, the relevant criteria are the length of, and efficient access to aggregations of, copper circuits on technically and economically non-discriminatory terms, not whether any particular retail ISP equipment is literally "collocated" with any particular ILEC facilities.

7. Conclusion.

Retail ISPs must be permitted to obtain unswitched clean copper circuits to end users, of suitable length to offer unimpaired high-bandwidth xDSL-based Internet access. Without such a service from the ILEC, retail ISPs will be frozen out of the market for high-bandwidth Internet access — and that market handed to ILECs, and possibly some CLECs, by regulatory fiat — just as retail demand for high-bandwidth access is beginning to take off. There is no possible justification for the Commission to adopt any policy that would permit, much less encourage, such a result.

In terms of the specific questions posed in this proceeding, retail ISPs do not need, and do not seek, "section 251-type unbundling" or "section 251-type collocation." What retail ISPs need is a simple, basic telecommunications service: unswitched clean copper circuits. This service has long been offered in various forms in the intrastate jurisdiction, and the Commission can and should require that ILECs

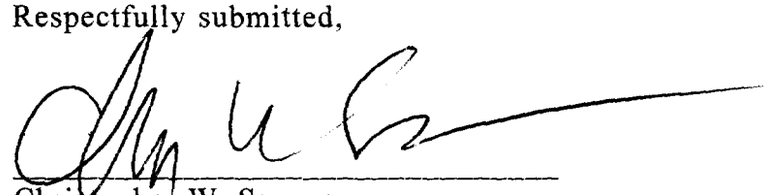
offer it in the interstate jurisdiction. This would permit retail ISPs to offer high-bandwidth Internet access to a broad spectrum of business and residence customers.

The technical requirements of xDSL equipment require that the "ISP end" of the unswitched copper circuit be as close to the customer as possible, and non-discrimination requirements require that the "ISP end" be no further from the customer than the central office in which ILECs and CLECs will attach ***their*** xDSL modems to unswitched copper circuits to end users. As a result, collocation-like arrangements will need to be established to ensure that retail ISPs have fair and non-discriminatory access to short, unswitched clean copper circuits.

To properly implement the policies outlined in these comments, the Commission should make any modifications to its current rules necessary to ensure that ILECs would meet the following requirements. First, ILECs must offer a federally tariffed unswitched copper circuit service that permits an ISP to attach its own equipment, including specifically xDSL equipment, to the "central office" end of the circuit. The service must be priced at non-discriminatory, cost-based rates. Second, irrespective of whether the retail ISP's xDSL equipment (and associated routers, multiplexers, etc.) is literally "collocated" with the ILEC's network equipment, the unswitched copper circuits available to a retail ISP must be subject to no greater

interference than, and be of no greater length than, the copper circuits that the ILEC would itself use to provide xDSL-based service to the affected customers.

Respectfully submitted,



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Dated: March 27, 1998

Attachment A
Commenting Retail ISPs

1. **APK Net, Ltd.**

APK Net, Ltd. is Ohio's oldest commercial Internet service provider, founded in 1991. APK Net serves 5,500 customers in 10 counties in Northern Ohio, and provide services to a mix of residential, small business and institutional clients..

2. **Clarity Connect, Inc.**

Clarity Connect, Inc. provides Internet access service in upstate New York and Northern Pennsylvania. The company has been in business for approximately 2½ years. The company has about 12 full-time-equivalent employees. Clarity Connect serves about 5,400 customers, including both dial-up accounts and dedicated lines,.

3. **Cybercom**

Cybercom has been in business for 3 years and currently serves the Central Texas area. Cybercom has 7 employees and provides Internet access, as well as Web Page hosting and development, to approximately 5,000 retail customers. These customers include both individual dial-up accounts and business accounts who access the Internet using dedicated facilities.

4. **Cyber Warrior, Inc.**

Cyber Warrior has been in business since 1994. The company currently serves approximately 1,000 customers, including more than 100 dedicated lines, by providing services such as Internet access, Web hosting and design, and local bulletin board service. Cyber Warrior currently employs about 35 people.

5. **Double D Network Services, Inc.**

Double D Network Services, Inc. was formed in July 1995 as a Web hosting firm. In February 1996, Double D began offering Internet access to the public, and has sustained 100% growth per quarter since that time. Double D serves nearly 1,500 customers in the Washington, D.C., metropolitan area. Double D is currently in the process of establishing its second POP.

6. **EriNet**

EriNet has been in the Internet business for almost 5 years. EriNet currently serves Southwestern Ohio. The firm has 18 employees, and provides Internet access and other services such as Web hosting, etc. to a total of approximately 15,000 retail customers. These include individual residence dial-up accounts, business accounts, and access via dedicated lines.

7. **Greatland Internet Services, Inc.**

Greatland Internet Services, Inc. has been in business for almost one year. Greatland serves Anchorage, AK and vicinity, with plans to expand to cover most of Alaska in the near future. At present, Greatland is a very small ISP, with only 2 employees and approximately 150 retail customers. Greatland provides a full range of Internet services, from dial-up and dedicated access to web/domain hosting.

8. **Helicon On-Line, L.P.**

Helicon Online, L.P. was formed in march of 1996 and supplies Internet access to over 17,000 customers, primarily in rural Western Pennsylvania, rural Northeastern Vermont. The company provides dial up access via 33.6 analog modems and — wherever digital circuits are available — x2 56 and ISDN service. In many communities the company is the only local access number to the Internet.

9. **InfiNet**

InfiNet (a service of Infinite Systems, Ltd.) has been in business since Nov. 1st, 1993. InfiNet provides Internet access and services for over 10,000 residential and business customers throughout the state of Ohio. InfiNet currently employs approximately 20 people.

10. **InfoHouse**

InfoHouse has been in business for approximately 3 years. InfoHouse services New York City. The firm currently has 10 employees, and provide Internet access, web hosting, web development, network and internet consulting to a total of approximately 1,700 retail customers. A large portion of these customers are businesses requiring specialized and high bandwidth applications.

11. **InfoRamp**