

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

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In the Matter of )  
 )  
Inquiry Concerning High-Speed ) GN Docket No. 00-185  
Access to the Internet Over )  
Cable and Other Facilities )

COMMENTS OF WORLDCOM, INC.

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Dated: December 1, 2000

No. of Copies rec'd 0+4  
List A B C D E

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## EXECUTIVE SUMMARY

WorldCom has long supported the Commission in its regulation of bottleneck communications facilities and its efforts to prevent the leveraging of monopoly control onto upstream markets dependent on the bottleneck for access to customers. The actions by major cable companies to exploit their bottleneck control over the leading broadband facility to the home are exactly the type of anticompetitive actions that the Commission is well equipped to regulate.

The Commission should mandate open access to cable modem services because true open access is unlikely to develop absent regulation, and because we have already seen clear evidence that cable operators will act to leverage their monopoly control of the cable onto upstream markets for ISPs. Cable broadband is the clear national leader in terms of deployment to homes, and even if DSL is also successful in residential markets, there will still be at best a duopoly of dominant providers of broadband access. Without meaningful open access, only ISPs that either already have major market share, or are affiliated with cable providers, will survive. Even though cable modem service is relatively new, we have nevertheless seen examples of anticompetitive or leveraging conduct by the cable companies. The current flourishing competitive market among ISPs, including backbone providers, is very much at risk if the Commission does not act now to require open access to cable systems.

The Commission has ample authority to mandate open access to cable systems. As a threshold point, the delivery of Internet access over cable systems is most appropriately viewed as a “telecommunications service.” Because cable modem transmission service is *not* one-way transmission of programming selected and delivered by the cable operator to all subscribers, cable modem service simply cannot fit into the statutory definition of “cable service.” It fits

precisely, however, into the statutory definition of “telecommunications service.” Most critically, cable modem service is the transmission between or among points specified by the user of information of the user’s choosing, without change in the form or content of the information. This is exactly what cable modem service does when it facilitates Internet access.

Cable operators who offer cable modem service should be viewed as both “common carriers” and “local exchange carriers,” and thus should be subject to the Commission’s Title II authority, specifically including 47 U.S.C. §§ 201-202, 251. At its most basic level, open access is little more than a restatement of the central command of section 202, that it is unlawful for an common carrier to make any unreasonable discrimination in the provision of its service.

Not only does the Commission have clear authority to mandate open access, but it is now no longer open to question that open access is technically feasible. There are a variety of possible approaches to open access. Certain cable companies are currently conducting tests or research on open access, and presumably those companies will provide details of exactly how they propose to implement open access.

Even without that detail, there are two points that are clear: First, because of the shared nature of the actual “last mile” wire, interconnection and resale from a point of interconnection immediately behind the “Cable Modem Termination System” (“CMTS”) is likely to be both an effective way to implement open access and a logical point at which to impose regulation. Second, because of the fact that cable companies have subcontracted out the management of the CMTS and cable modems (primarily to @Home and RoadRunner), the Commission will have to take specific steps to ensure that neither the cable companies nor their subcontractors favor the affiliated ISPs to the detriment of unaffiliated, competitive ISPs.

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WORLDCOM, Inc. (“WorldCom”) hereby respectfully submits its comments in response to the Federal Communications Commission’s Notice of Inquiry (“NOI”), *In re Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities*, GN Docket No. 00-185 (released Sept. 28, 2000).

**INTRODUCTION**

WorldCom has long advocated appropriate regulation of bottleneck communications facilities built out over time pursuant to exclusive monopoly franchises. Cable facilities used today to provide cable modem services are clear examples of such facilities. Although it arguably was appropriate for the Federal Communications Commission (“FCC” or “Commission”) initially to defer regulation of the transmission facilities underlying Internet access over cable systems, cable modem service is now well established as the leading means to deliver broadband Internet access to consumers. It is therefore now time for the Commission to act to prevent cable operators from leveraging their control over the cable network to harm the

competitive market for Internet Service Providers (“ISPs”) who provide access or backbone and so to ensure that the cable operators permit unaffiliated ISPs to compete with the in-house or favored ISP.

**I. THE COMMISSION SHOULD MANDATE OPEN ACCESS TO CABLE MODEM SERVICE.**

The Commission should mandate open access to cable modem service because open access will not likely develop absent regulation, and because without open access, cable modem operators will continue to act on their strong incentive to leverage their monopoly control of the cable onto the upstream markets for ISPs and content providers.

The Commission has first-hand experience with the fact that monopolists have no incentive to share bottleneck facilities, and every incentive both to charge monopoly prices for those facilities and to leverage their monopoly control onto upstream markets dependent upon the bottleneck for access to their customer base. That is, of course, the reason the Commission correctly determined to impose rigorous national rules requiring open access to local telephone networks after passage of the 1996 Telecommunications Act.<sup>1</sup>

Providers of cable modem service today have bottleneck control over facilities used to provide advanced and high-speed services. According to the Commission’s recent Second Report on the Availability of Advanced Telecommunications Capability in the United States,<sup>2</sup> at

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<sup>1/</sup> *In re Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket 96-98, First Report and Order, 11 F.C.C.R. 15499, ¶¶ 11, 55 (1996).

<sup>2/</sup> *In re Inquiry Concerning the Development of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Development Pursuant to Section 706 of the Telecommunications Act of 1996*, CC Docket No. 98-146, Second Report and Order, FCC 00-290 (rel. Aug. 21, 2000)

the end of 1999 there were 1.8 million residential customers who subscribed to high-speed services. Approximately 1.4 million of those customers subscribed to cable modem services, while only 300,000 customers used DSL-based wireline services. *Id.* ¶ 71. According to that same report, cable facilities pass approximately 94% of the nation's homes, and over half of those homes are passed by cable that has been upgraded to provide cable modem service. Within five years, it is estimated that 84% of all homes in the country will be passed by upgraded cable. *Id.* ¶ 187.

Regardless of whether the Commission concludes that cable modem service presents an effective monopoly on residential high-speed services, or instead is one of two bottleneck connections to the nation's homes, there is more than enough evidence to warrant regulation to require open access to the cable plant.

A vibrant competitive market among ISPs who provide Internet access on a retail basis, and among ISPs who provide backbone connections linking consumers and ISPs, developed when dial-up was the exclusive means of transmission to the Internet. This was the result both of pro-competitive regulation,<sup>3</sup> and of the fact that any ISP that could afford a telephone number

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<sup>3/</sup> The October 2000 report on *Consumer Choice in Internet Providers* from the General Accounting Office correctly observed that "telephone laws and regulations were fundamental in promoting the development and growth of the ISP industry. The regulatory distinction between transport and data processing functions, combined with FCC's close regulation of telephone companies' participation in the data processing layer, led to the creation of new independent companies to provide Internet services and also kept these ISPs largely free of regulation. Moreover, the common carrier status of telephone companies, which requires that they provide nondiscriminatory service at just and reasonable rates, worked to give ISPs easy access to consumers through the telephone network." United States General Accounting Office (GAO) Report to the Subcommittee on Antitrust, Business Rights and Competition Committee on the Judiciary, U.S. Senate, *Technological and Regulatory Factors Affecting Consumer Choice of Internet Providers*, 24 (Oct. 2000), available at <http://www.gao.gov/new.items/d0193.pdf>.

could offer its dial-up Internet access service to any end-user. But more and more, consumers are deciding that high-speed and advanced services are necessary to take advantage of the increasingly rich content resources of the Internet. In contrast to dial-up access, the cable and DSL technologies that provide these broadband services employ dedicated facilities that enable the transmission provider to bundle its services exclusively with a particular ISP and particular ISP backbone provider. Therefore, the need for nondiscriminatory access becomes ever more acute as consumers' preferences switch from dial-up technology in favor of broadband access. If broadband facility bottlenecks are not opened, the choice of cable provider will dictate the choice of a particular ISP, and since cable providers currently enjoy de facto geographic monopolies, this will mean that consumers seeking the advantages of broadband transmission capabilities will be forced to accept the ISP of the cable operator's choice, and not of their own.

Since ISPs – including both providers of Internet access and Internet backbone services – are entirely dependent upon the last-mile connection to the home for their viability, given the increasing demand for advanced services, without open access the few ISPs associated with a cable transmission provider will have clear marketing advantages. Plain and simple, unassociated ISPs will have no market for their services if they cannot connect to the consumer. Similarly, the content providers whose information attracts consumers to the Internet are also highly dependent on access to the home. Particularly at risk are content providers that are dependent on broadband access, because their content, including data-rich video and audio offerings, cannot be practically transmitted over narrowband facilities. In sum, unless the cable loop is opened, there is a substantial risk that consumers will lack choices, prices will rise, and the current explosion of innovative new services will subside.

This is not a problem that can be addressed without regulation. Owners of bottleneck facilities have both the incentive and the ability to leverage their control over those facilities onto upstream markets.<sup>4</sup> The current flourishing competitive market among ISPs, and among backbone providers, is very much at risk if the Commission continues to forbear from regulating the monopoly cable modem providers.

The broadband bottleneck concern is not theoretical, as demonstrated by the development to date of one of the dominant players within the cable industry. AT&T owns a major percentage of cable systems in the country, controls the nation's largest provider of cable modem services, operates one of the nation's largest ISPs, and is a major provider of both Internet backbone services and transmission facilities that support those services. While the threat of regulation has recently led AT&T and other cable operators to make much publicized promises about opening their network,<sup>5</sup> these actions prove only that they understand that open access is

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<sup>4/</sup> The concerns regarding the ability and incentive of internet broadband providers to leverage their control of bottleneck facilities formed the basis of the recent challenge by the U.S. Department of Justice of the acquisition by AT&T of MediaOne, which would have resulted in the AT&T's control of Excite@Home and Road Runner, the largest and second largest residential broadband services providers. In the Competitive Impact Statement filed in connection with the consent decree resolving this challenge, which requires the divestiture of Road Runner, the Department explained:

By exploiting its "gatekeeper" position in the residential broadband content market AT&T could make it less profitable for disfavored content providers to invest in the creation of attractive broadband content, and reduce competition and restrict output in that market.

Competitive Impact Statement of the U.S. Department of Justice, at 2 (May 25, 2000) *United States v. AT&T Corp.*, No. Civ. A. 1:00CV01176 RLC, 2000 WL 1752108 (D.D.C. Sept. 27, 2000), available at <http://www.usdoj.gov/atr/cases/f4800/4842.pdf>.

<sup>5/</sup> See, e.g., Memorandum of Understanding Between AT&T Corporation and the Massachusetts Coalition for Consumer Choice and Competition on the Internet (June 27, 2000)

technically feasible, and that they will go to great lengths to avoid being required to provide true open access to their networks. There are virtually no places in the country where true open access has been implemented, and there are very few executed agreements between ISPs and cable operators.<sup>6</sup> Indeed, in AT&T's only test of open access (in Colorado), AT&T is clearly *not* allowing ISPs to compete with AT&T's ISP services on an level playing field; AT&T's own executives admit that they refuse to permit an unaffiliated ISP to provide an environment without an AT&T presence.<sup>7</sup> Absent regulation, ISPs, and in particular small ISPs, will be effectively excluded from the broadband market.<sup>8</sup>

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("AT&T/Massachusetts Coalition MOU"), referenced in Press Release, *Massachusetts Coalition for Consumer Choice and Competition on the Internet and AT&T Agree on Plan for Consumer Choice of ISPs in Massachusetts* (June 27, 2000), available at <http://www.att.com/press/item/0,1354,3037,00.html>.

<sup>6/</sup> See, e.g., Press release, *Earthlink and Time Warner Cable Announce Definitive Agreement to Offer Earthlink Broadband Internet Service Over Time Warner Cable Systems* (Nov. 20, 2000), available at [http://cgi.timewarner.com/cgi-bin/corp/news/index.cgi?template=article&article\\_id=200642](http://cgi.timewarner.com/cgi-bin/corp/news/index.cgi?template=article&article_id=200642). While announcing an agreement, both Earthlink and Time Warner failed to disclose the particulars of their arrangement. Time Warner has a previous agreement (providing for exclusivity) with Road Runner. Thus in 2002, Time Warner customers will have the option of selecting between two ISPs, while they now have a "choice" of one.

<sup>7/</sup> See Peter Goodman, *AT&T Puts Open Access to a Test*, Wash. Post, Nov. 23, 2000, at E01 (according to a senior AT&T executive, "To get to the Internet, you have to do something with that [AT&T] globe. It puts the [AT&T] brand in the customer's mind . . . so that [AT&T has] the ability to drive some additional revenue."). AT&T's test in Colorado is a far cry from true open access.

<sup>8/</sup> The "commitment" offered in the form of the AOL-Time Warner Memorandum of Understanding, available at [http://cgi.timewarner.com/cgi-bin/corp/news/index.cgi?template=article&article\\_id=200020](http://cgi.timewarner.com/cgi-bin/corp/news/index.cgi?template=article&article_id=200020), and the AT&T-Massachusetts Coalition MOU fail to provide any degree of certainty for unaffiliated ISPs, especially smaller ISPs. The commitments are generally vague, replete with caveats, and delay the entry of other ISPs for several years. AT&T, for example, commits to providing test access in "at least one and up to three Massachusetts cities and/or towns, commencing operations no later than October 31, 2001." *Id.* Commitments like these are hardly indicative of a viable market entry opportunity for ISPs.

Nor has the competitive threat of DSL-based wireline services acted as a restraint on cable modem operators' behavior. At best, if the ILECs succeed in making DSL a robust competitive choice for advanced services, that would leave consumers with only two choices,<sup>9</sup> and a choice of only two providers still allows each bottleneck provider to abuse its market power.<sup>10</sup>

In sum, the cable systems were built out pursuant to monopoly franchises. The cable companies are now using these monopoly networks to provide high-speed Internet access, and to favor their own ISPs and backbone providers. Just as it has in the analogous context in regulating the copper loop that connects to the public switched telephone network, the Commission should mandate open access to this cable plant to bring competition to broadband.

The Commission also has inquired whether it should require open access to other possible broadband "last mile" facilities, including competitive cable overbuilders and other potential providers of advanced services. We believe it would be premature to require such access today. Regulation is warranted to provide open access to bottleneck facilities, especially those bottleneck facilities built out under the protection of state-sanctioned exclusive franchises. The

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<sup>9/</sup> While DSL-based services and facilities are subject to the resale and unbundling provisions of the 1996 Act, the vast majority of DSL-based services are provided by the monopoly Bell Operating Companies. *See, e.g., In re Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Docket No. 98-147, Third Report and Order in CC Docket No. 98-147 and Fourth Report and Order in CC Docket No. 96-98, 14 F.C.C.R. 20912, ¶ 34 n.65 (1999) (ILECs provide xDSL to residential customers at a 17:1 ratio over CLECs).

<sup>10/</sup> It is well-established that duopolies in markets where entry is difficult and improbable are anticompetitive. *See e.g. FTC v. Heinz, H.J. Co.*, No. 00-5362, 2000 WL 1741320 (D.C. Cir. Nov. 8, 2000) (enjoining pending appeal a merger to duopoly that would have resulted in a market with only two major manufacturers of baby food).

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cable plant of the incumbent cable operators plainly meet this criteria, as do the copper facilities of the ILECs. Whether or not there will come a time when it would become necessary to impose similar regulation on other last-mile providers depends upon a multiplicity of factors that cannot yet be determined. Certainly, at present no other broadband providers control bottleneck facilities or have gained even perceptible market share, let alone enough market power to call for regulatory intervention.

Similarly, the future market position of new ventures that seek to offer broadband services, including cable overbuilders and businesses developing other technologies such as wireless and satellite, is difficult to predict with any certainty. As to each of these technologies, among the factors the Commission should consider in choosing the appropriate form of regulation (if any) is the nature and extent of competition they face in providing “last mile” facilities, the ability and incentive of the provider to obtain and abuse market power, the technical feasibility and cost of providing open access or similar regulation, and the extent to which the provider has benefitted from exclusive franchise to construct its last-mile facilities. Currently these providers control no bottleneck facilities and exercise no market power. There is no need for their regulation at this point.

**II. THE COMMISSION HAS AMPLE AUTHORITY TO MANDATE OPEN ACCESS TO CABLE SYSTEMS.**

The Commission for these reasons should conclude that competitors are entitled to access to the incumbent cable operators’ cable facilities. As shown in the following section, the Commission has ample authority to impose such requirements. Specifically, the transmission service underlying Internet access offered over a cable system should be viewed as a

“telecommunications service,” and as such, the Commission can and should apply Title II regulations to bring competition to these services.

**A. The Delivery of Internet Service Over Cable Television Systems is Most Appropriately Viewed as a “Telecommunications Service.”**

A threshold question for the Commission to decide is the proper classification of the transmission providing high speed access to Internet services offered over cable systems.

Although some have asserted that such transmission capability offered by cable operators should be viewed as a “cable service” under Title VI of the Communications Act, it does not fall within the statutory definition of “cable service” and it *does* fall within the definition of “telecommunications service,” regulated under Title II of the Act.

The Communications Act defines “cable service” to be “(A) the one-way transmission to subscribers of (i) video programming, or (ii) other programming service, and (B) subscriber interaction, if any, which is required for the selection or use of such video programming or other programming service.” 47 U.S.C. § 522(6). “[V]ideo programming” is defined as “programming provided by, or generally considered comparable to programming provided by, a television broadcast station,” 47 U.S.C. § 522(20), and “other programming service” means “information that a cable operator makes available to all subscribers generally.” 47 U.S.C. § 522(14). “Transmission” of video programming “requir[es] active participation in the selection and distribution of video programming.” *National Cable Television Ass’n, Inc. v. FCC*, 33 F.3d 66, 71 (D.C. Cir. 1994) (internal citations omitted). As the Ninth Circuit concluded in *AT&T Corp. v. City of Portland*, 216 F.3d 871 (9th Cir. 2000), the “essence of cable service, therefore, is one-way transmission of programming to subscribers generally.” *Id.* at 876. Transmission

facilities that provide access to Internet service clearly fall outside of this definition, for at least four reasons: First, such transmission is decidedly *not* one-way transmission – the entire point of the World Wide Web, e-mail, and other Internet services is to allow end-users to interact with information available on the Internet. Second, transmission of Internet service is not television service.<sup>11</sup> Third, cable operators do *not* offer Internet transmission generally to all subscribers. And fourth, cable operators are not “actively participat[ing]” (or participating at all) in the selection of what is displayed to a user when they provide the transmission path.<sup>12</sup>

Instead of being a cable service regulated under Title VI of the Communications Act, a transmission path used for Internet access clearly fits within the statutory definition of “telecommunications service.” Thus cable operators are subject to regulation under Title II. A “telecommunications carrier” is “any provider of telecommunications services.” 47 U.S.C. § 153(44). The plain language of the statute makes clear that transmission between a cable modem on a customer’s premise and an Internet Service Provider constitutes “telecommunications.” “Telecommunication” involves the “transmission, between or among

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<sup>11/</sup> *In re Internet Ventures, Inc.*, File No. CSR-5407-L, Memorandum Opinion and Order, 15 F.C.C.R. 3247 (2000).

<sup>12/</sup> The legislative history of the 1984 Cable Act confirms the conclusion that Internet service does not meet the definition of “cable service.” According to a House Report, a service is not a “cable service” if, for example, (1) “information transmitted over a cable system is made available only to an individual subscriber or to a discrete group of subscribers,” (2) the service in question “allows customers to buy a product by sending a signal over cable facilities,” (3) a service enables customers to “store, transform, forward, manipulate, or otherwise process information or data,” or (4) a customer can “engage in the off-premises creation and retrieval of a category of information,” including conducting “unlimited keyword searches of information stored in data bases.” H. Rep. No. 98-934, at 42-43 (1984), *reprinted at* 1984 U.S.C.A.A.N. at 4678 (“H. Rep. No. 98-934”). Any one of these examples would exclude Internet service from being viewed as a cable service – all four factors together put the issue beyond question.

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points specified by the user, of information of the user's choosing, without change in the form or content of the information as sent and received." 47 U.S.C. § 153(43). That is exactly what happens when a cable modem system provides transmission facilities for Internet access. Cable operators are providing a "telecommunications service" between the end user and the ISP.

The Commission's actions in the analogous DSL context confirm the appropriateness of classifying Internet transmission service over cable systems as a "telecommunications service." The Commission has concluded that ILECs that use DSL "to provide members of the public with a transparent, unenhanced, transmission path" are offering a "telecommunications service." *In re Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Docket No. 98-147, Memorandum Opinion and Notice of Proposed Rulemaking, 13 F.C.C.R. 24012, ¶ 36 (1998) ("*Advanced Telecommunications Order*"). More specifically, the Commission has ruled that in the case of DSL, the underlying transmission constitutes a "telecommunications service" while connectivity to the Internet is "an information service." *Id.*

That certain cable operators are part owners of, or are closely allied with, the ISP that is providing the Internet service itself does not in any way change the analysis. To the extent that the cable company is transmitting data between two end-users, it should be understood as offering a telecommunications service. To the extent that the cable company is interacting with, or providing content to, the customer, it is offering an "information service," which is defined as "the offering of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications." 47 U.S.C. § 153(20). In other words, just as in the DSL context, a cable operator that is also an ISP is

offering both information services (through its ISP) *and* telecommunications services (through its cable transmission services).

**B. Cable Operators Offering Cable Modem Service Are “Common Carriers” and “Local Exchange Carriers,” and Thus Are Subject to 47 U.S.C. §§ 251(a) and 251(b) and the Commission’s General Title II Regulatory Authority.**

As carriers providing telecommunications services subject to Title II, cable operators should be regulated as “common carriers.” The fact that cable operators offer other, non-telecommunications services (like video programming) does not shield them from regulation as a common carrier under Title II with respect to the telecommunications services they offer. An entity may be “treated as a common carrier under this [Act] . . . *to the extent it is engaged in providing telecommunications services.*” 47 U.S.C. § 153(44) (emphasis added). Indeed, Congress plainly foresaw that cable companies might also provide telecommunications services and therefore be treated as common carriers. *See* 47 U.S.C. § 541(b)(3)(A) (“If a cable operator or affiliate thereof is engaged in the provision of telecommunications services -- (i) such cable operator or affiliate shall not be required to obtain a franchise under this subchapter for the provision of telecommunications services.”); *id.* § 541(d)(2) (discussing state regulation of cable companies’ provision of “any communication service other than cable service, whether offered on a common carrier or private contract basis”); *id.* § 522(7) (defining a “cable system” as “a facility . . . that is designed to provide cable service which includes video programming and which is provided to multiple subscribers within a community, but such term does *not* include . . . a facility of a common carrier which is subject, in whole or in part, to the provisions of [Title II of this Act], except that such facility shall be considered a cable system . . . to the extent

such facility is used in the transmission of video programming directly to subscribers”) (emphasis added).<sup>13</sup>

As telecommunications carriers, cable operators may provide a variety of local telecommunications services. Some provide voice telephony services – using cable facilities to connect end users to the public switched telephone network. Some provide transmission between end users and the cable operator’s affiliated ISP. As such, it is appropriate to classify cable operators as “local exchange carriers” subject to the requirements of 47 U.S.C. § 251, depending upon the services they are providing. A “local exchange carrier” is “any person that is engaged in the provision of telephone exchange service or exchange access.” 47 U.S.C. § 153(26). The Commission has already correctly concluded that the provision of DSL transmissions falls into one of these two categories, *see Advanced Telecommunications Order* ¶ 40, and the same reasoning should apply to transmission services offered by cable operators.<sup>14</sup>

Because cable modem operators are common carriers, the Commission has ample authority under sections 201 and 202 of the Act, 47 U.S.C. §§ 201-202, to mandate common

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<sup>13/</sup> See also H.R. Rep. No. 98-934, at 44, *reprinted at* 1984 U.S.C.A.A.N. 4655, at 4681 (noting that cable operators may offer a mixture of cable and non-cable services, including other “communications services”); *id.* at 60, *reprinted at* 1984 U.S.C.A.A.N. at 4697 (in passing the 1984 Cable Act, Congress did not mandate that all services offered by a cable company be deemed cable services).

<sup>14/</sup> Although cable operators are properly viewed as “local exchange carriers” subject to 47 U.S.C. §§ 251(a) and 251(b), they are not under the terms of the 1996 Act “incumbent local exchange carriers” because they did not provide local exchange services when the Act was passed, nor do they currently meet the criteria under 47 U.S.C. § 251(h)(2) to be designated as incumbents. They are therefore subject to the requirements of § 251(a) and (b), but not § 251(c), which applies only to incumbent LECs.

carrier open access.<sup>15</sup> Indeed, at its most basic level, “open access” is no more than a restatement of the central command of section 202, that it is “unlawful for any common carrier to make any unjust or unreasonable discrimination in charges, practices, classifications, regulations, facilities or services for or in connection with like communication service, . . . or to make or give any undue or unreasonable preference or advantage to any particular person, . . . or to subject any particular person . . . to any undue or unreasonable prejudice or disadvantage.” 47 U.S.C. § 202.

The Commission’s regulatory authority in this area was set out most clearly in the “Computer” proceedings. Specifically, in *In re Amendment of Section 64.702 of the Commission’s Rules and Regulations*, 77 F.C.C. 2d 384 (1980) (“*Computer II*”), the Commission adopted a new regulatory construct: “basic service” would be regulated under Title II, while “enhanced service,” would be within the Commission’s jurisdiction but would remain unregulated. *Id.* ¶¶ 7, 114. In forbearing from regulating enhanced services, the Commission recognized, however, that “[b]ecause enhanced services are dependent upon the common carrier offering of basic services,” *id.* ¶ 231, anticompetitive behavior by providers of basic services could distort the market for enhanced services. The FCC thus required “carriers that own common carrier transmission facilities and provide enhanced services . . . [to] acquire transmission capacity pursuant to the same prices, terms, and conditions reflected in their tariffs when their own facilities are utilized.” *Id.* See also *In re Amendment of Section 64.702 of the Commission’s Rules and Regulations*, CC Docket No. 85-229, Report and Order, 2 F.C.C.R. 3072

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<sup>15/</sup> Sections 4(i) and 706 of the Act also expressly give the FCC regulatory authority generally, and specifically concerning advanced services, more than sufficient to mandate open cable access.

(1987) (addressing application of nonstructural safeguards to local exchange carriers' provision of enhanced services). In other words, the monopolists that owned the local telephone lines had to deliver "enhanced services" -- including their own enhanced services -- over those lines on a nondiscriminatory basis. These same jurisdictional precedents apply in full force in the context of mandating cable open access.

### **III. OPEN ACCESS TO CABLE SYSTEMS IS TECHNICALLY FEASIBLE.**

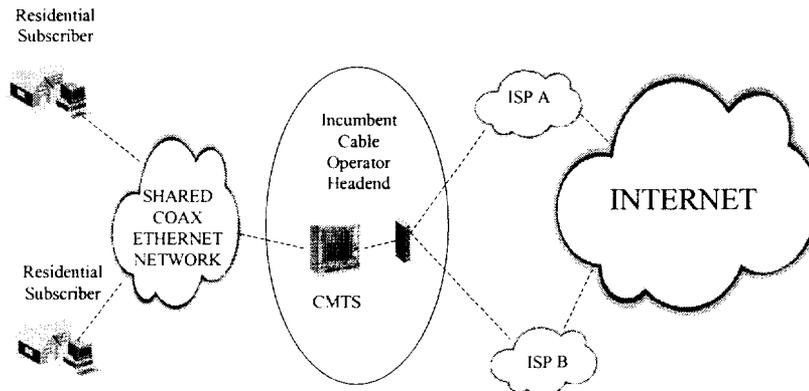
There is no longer any serious question as to the technical feasibility of open access to cable systems to permit multiple ISPs to offer broadband Internet services. To WorldCom's knowledge, no major cable company in the country continues to advance their prior claims that such open access is not feasible. The most significant technical question is not whether there can be open access, but how is open access best implemented.

Numerous ISPs and carriers -- including WorldCom -- have investigated a wide range of possible methods to provide open access. There are a range of *technically* feasible approaches, ranging from direct interconnections into switches in a cable headend all the way to the installation of separate Cable Modem Termination System ("CMTS") equipment that would utilize separate 6 MHz channels over the cable to the home. At this juncture, it would be most efficient to allow the cable companies themselves to explain how they would propose to implement open access. Certain cable operators are conducting or planning trials to allow more than one ISP to connect into a cable system. Those cable operators will presumably submit in this proceeding detailed information concerning exactly how they propose to allow ISPs to

interconnect into their cable networks. WorldCom and others can in reply comments provide the Commission with their reaction to these submissions.

Even without benefit of the cable company's initial proposals as to how to structure open access, we can offer preliminarily two points that warrant the Commission's attention. For the sake of clarity in making these observations, we provide a diagram of a typical cable modem network.

Possible Network Configuration for  
Multiple ISP Access to ICO CMTS



**A. Competitors Will Likely Gain Access to the Cable Plant Through Resale or Interconnection.**

First, open access will most likely involve interconnection and resale. Specifically, the Commission should require incumbent cable operators to allow competitors to interconnect to cable networks either at the CMTS or at the initial integrated or stand-alone packet switch, and to resell cable modem service providing the functionality of these components at nondiscriminatory rates.

The structure of a typical cable network leads directly to this focus on interconnection. In the cable plant, the “last mile” connection from the headend to end consumers is inherently a shared resource. In other words, there is no dedicated connection between any particular end user and the cable headend. Moreover, as typical cable systems are currently configured, all Internet cable modem users within a single neighborhood must all be connected to the same CMTS. In the typical cable system, two (or more) CMTSs *cannot* both be hooked to the same video channels on a single section of fiber and coax into a neighborhood. As a result, unlike with DSLAMs in a DSL-based network, there is far less opportunity or practical ability for a competing carrier to install and manage its own CMTS.

The cable plant into a single neighborhood could theoretically feed into more than one CMTS *if* more than one 6 MHz downstream channel (and more than one upstream channel) were set aside for transmission of data. Hypothetically, if two channels in each direction (one downstream and one upstream) were allocated for each CMTS serving a given neighborhood, two different carriers could install CMTS equipment in a head end, and the two carriers could offer cable modem service fairly independently of each other. This approach, however, is

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impractical for at least three reasons. First, even if the approach could work in theory for two carriers, it is unlikely to work for a greater number of carriers. Second, the upstream bandwidth is so limited that it would be difficult to allocate two (or three or four or more) separate upstream channels, even if there were sufficient downstream channels to allocate to multiple carriers. Finally, even the 6 MHz downstream channels are often already filled to capacity (by traditional video and pay-per-view channels), and we expect that cable operators would likely strenuously resist being forced to allocate multiple channels of bandwidth.<sup>16</sup>

In light of these practical difficulties, installing multiple CMTSs with overlapping services areas is not a realistic option at this time. The inability of a competing carrier to operate its own CMTS is directly parallel to the situation facing a data CLEC when there is inadequate space in a remote terminal or a small central office to install its own DSLAM. When faced with the inability to install multiple DSLAMs, the Commission has required the ILEC to support shared use of the DSLAM. This is precisely the approach the Commission should take in the cable context. Because multiple CMTSs are not currently a realistic possibility, the Commission should mandate that the cable operators support interconnection and resale so that competitors can make use of the CMTS to deliver Internet access services over the cable to the home. Whether through interconnection or resale, the competitor would gain use of the cable transmission facility, the necessary functionality of the CMTS, and the functionality of the packet

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<sup>16/</sup> The Commission may at some future point face scenarios where the Commission may consider mandating the allocation of multiple 6 MHz channels to Internet access. The Commission need not resolve that issue now.

switch incorporated into or associated with the CMTS, which is needed to segregate the competitor's broadband traffic from the other broadband traffic that moves through the CMTS.<sup>17</sup>

**B. The Affiliated ISP Performs at Least Two Distinct Functions in the Provision of Internet Service over Cable Systems.**

Today, the affiliated ISP (commonly @Home or RoadRunner) performs at least two distinct functions related to cable modem service. First, they often provide telecommunications functionality closely analogous to that provided by the ILECs which own and operate DSLAMs. Second, and largely independent of the first function, is their role as a ISP. The affiliated ISPs perform the telecommunications functions because many cable system operators did not themselves deploy the technical and networking resources to install and support the cable modem service. So, essentially, the cable operators subcontracted their telecommunications responsibility out to an ISP like @Home or RoadRunner.

It is important to be clear, therefore, that the regulatory treatment of cable operators as telecommunications carriers should apply to the @Home or RoadRunner companies *only* to the extent those companies are performing the telecommunications functions of the cable operator. Open access regulation would *not* apply to those companies' operations as ISPs. ISPs are information services providers, not telecommunications carriers, and properly have been unregulated. Regulation implementing cable open access need not and should not result in any change to that regulatory regime.

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<sup>17/</sup> As noted above, the precise implementation of this type of interconnection is a topic best discussed after the cable companies have had an opportunity to report on the details of their open access tests and research.

Because @Home and RoadRunner perform two distinct functions, however, there is great risk that the companies – in their role as telecommunication subcontractors – will discriminate in favor of their own ISPs. For example, today at least some of the ISP operating CMTS networks for the cable companies utilize caching servers<sup>18</sup> located close the CMTS and packet switch in the cable headend – and consequently very close to the consumer. If a competitive ISP is *not* allowed to collocate caching servers adjacent to those of the affiliated ISP, then the affiliated ISP would likely have a technical advantage in delivering broadband content to its consumer.

Collocating multiple caching servers within a headend may well not be practical given space constraints and the additional support that collocated servers may require.<sup>19</sup> In any event, for this example and others, the Commission must take steps to ensure that the affiliated ISP obtains service on the same basis and conditions as are offered to unaffiliated ISPs.

The risk that the affiliated ISP will favor itself or another affiliated ISP requires that the Commission consider specific rules to ensure equal treatment for all ISPs. The scope and details of these rules can be more clearly articulated once the cable operators provide information about their open access trials. Unless the Commission takes strong early action to differentiate and separate the different functions of the affiliated ISP, the Commission is likely to face disputes

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<sup>18/</sup> A caching server can significantly speed up Internet access by storing frequently requested web pages in a server close to the end user, thereby allowing those web pages to be delivered to the consumer quickly and without having to traverse the Internet to re-retrieve the web page.

<sup>19/</sup> Sharing a single caching server may also not be workable because of the possibility of intermingling the cached content of two or more ISPs. Hypothetically, if a customer of ISP A is the first to access a popular web site in a given time period, then ISP A will likely have to pay for access to the backbone to be able to retrieve the popular web site. If a customer of ISP B then requests the same site and the site is served to the customer out of a shared cache, then ISP B gets a “free ride” on the cost of obtaining the requested content.

similar to those that have arisen between ILECs and CLECs in the local telephone area. These possible disputes are *not* grounds to avoid taking action, but are instead grounds to ensure that the action taken clearly articulates the non-discrimination principles that must apply.

### CONCLUSION

WorldCom respectfully requests that the Commission declare that cable modem service used to provide Internet access over cable systems is a “telecommunications service” and is thus subject to 47 U.S.C. §§ 201-202. In addition, the Commission should issue a Notice of Proposed Rulemaking to set out in specific detail the interconnection and non-discrimination obligations of cable companies (and ISPs that perform telecommunications functions for the cable companies).

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## CERTIFICATE OF SERVICE

I, Elena N. Broder-Feldman, hereby certify that on this 1st day of December, 2000, I caused a true copy of Comments of WorldCom, Inc. to be served by hand delivery or U.S. mail on the parties listed below:

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