

**ORIGINAL**

DOCKET FILE COPY ORIGINAL

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

**RECEIVED**

MAR 20 2000

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

In the Matter of )  
)  
Inquiry Concerning Deployment of )  
Advanced Telecommunications Capability )  
to All Americans in a Reasonable and )  
Timely Fashion, and Possible Steps to )  
Accelerate Such Deployment Pursuant to )  
Section 706 of the Telecommunications )  
Act of 1996 )

CC Docket No. 98-146

**COMMENTS OF MCI WORLDCOM, INC.**

Richard S. Whitt  
Alan Buzacott  
Kecia Boney Lewis  
MCI WorldCom, Inc.  
1801 Pennsylvania Ave., NW  
Washington DC 20006  
(202)887-3845

March 20, 2000

No. of Copies rec'd 013  
List ABCDE

## EXECUTIVE SUMMARY

MCI WorldCom applauds the Commission's decision once again to investigate the deployment of advanced telecommunications services to all Americans. We look forward to working with the FCC in this proceeding. The Commission should retain its current definition of "advanced telecommunications capability." The broadband offerings currently targeted to the residential market appear to confirm the Commission's earlier choice of the 200 Kpbs threshold.

Clearly, the pace of broadband deployment in the "last mile," particularly in the residential and small business market, significantly lags behind demand. Because of the continued dominance of the incumbent LECs and incumbent cable companies, the deployment of broadband facilities cannot be considered "reasonable and timely." Meanwhile, the trends identified in the First Report regarding the rapid deployment of broadband backbone facilities has continued. Many different types of companies, including IXCs, ILECs, ISPs, and utility companies continue to add fiber route miles and deploy new transmission technologies rapidly and efficiently. Therefore, there is no need for the Commission to take any action regarding backbone facilities.

However, there are concrete actions that the Commission can and must take to accelerate deployment of advanced technologies and services in the residential and small business markets, fostering more competitive markets. First, the Commission should encourage true xDSL competition by granting MCI WorldCom's pending petition for reconsideration of its decision not to require unbundling of packet switching and DSLAMs to serve residential consumers. As the Commission concluded, without unbundled packet switching, CLECs will be materially impaired from rapidly competing with ILECs in the provision of xDSL services.

Second, the Commission should also require the ILECs to allow CLEC-to-CLEC line sharing which furthers the two important goals of promoting competition to provide services over UNEs, and promoting competition to provide advanced services over CLEC facilities. Without CLEC line sharing, competition in the local market will be irreparably harmed because only the ILECs will be able to offer a bundled voice and data product.

Third, the Commission should consider adopting an open access policy for broadband services provided over the cable network. The Commission should initiate a proceeding to examine proper ways to impose open access requirements on AT&T and the cable industry, but in the interim, an open access condition should be imposed on the proposed AT&T and MediaOne merger.

Finally, the Commission should encourage the development of an MMDS-based "third pipe" for broadband services. Fixed wireless MMDS systems will allow for two-way transmission at speeds from 128 Kbps up to 10 Mbps, scaleable to customer requirements. Since August 1999, MCI WorldCom and Sprint has each spent more than \$1 billion to acquire several MMDS licensees. Combined, the companies will be able to provide broadband service in 108 of the 125 largest cities in the country, and to as many as 60% of the households in the U.S.

**Table of Contents**

Executive Summary ..... ii

I. INTRODUCTION ..... 1

II. DEFINITION OF ADVANCED TELECOMMUNICATIONS CAPABILITY ..... 2

III. IS DEPLOYMENT REASONABLE AND TIMELY ..... 3

    A. “Last Mile” Facilities ..... 3

    B. Backbone Facilities ..... 4

IV. ACTIONS THE COMMISSION CAN TAKE TO ACCELERATE DEPLOYMENT ... 6

    A. The Commission Should Encourage True xDSL Competition ..... 6

        1. The Commission Should Reconsider its Decision Not to Require  
           Unbundling of Packet Switching and DSLAMs to Serve Residential  
           Consumers ..... 6

        2. The Commission Should Require the ILECs to Allow CLEC-to-CLEC  
           Line Sharing ..... 7

    B. The Commission Should Consider Adopting an Open Access Policy for  
       Broadband Services Provided Over the Cable Network ..... 8

    C. The Commission Should Encourage the Development of an MMDS-based  
       “Third Pipe” For Broadband Services ..... 10

IV. CONCLUSION ..... 12

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

In the Matter of )  
 )  
Inquiry Concerning Deployment of )  
Advanced Telecommunications Capability ) CC Docket No. 98-146  
to All Americans in a Reasonable and )  
Timely Fashion, and Possible Steps to )  
Accelerate Such Deployment Pursuant to )  
Section 706 of the Telecommunications )  
Act of 1996 )

**COMMENTS OF MCI WORLDCOM, INC.**

**I. INTRODUCTION**

MCI WorldCom, Inc. ("MCI WorldCom") hereby submits its comments in response to the Notice of Inquiry (Notice) in the above-captioned proceeding.

Given that it has only been a year since the adoption of the First Report,<sup>1</sup> MCI WorldCom believes that the evidence gathered in this proceeding will largely confirm the Commission's findings in the First Report. Backbone facilities continue to be deployed in a reasonable and timely manner, as long distance carriers and Internet service providers (ISPs) continue to make enormous investments in expanding their networks and increasing the capacity of fiber that is already in the ground. In the "last mile," on the other hand, the overall level of broadband penetration in the residential market remains low, and the market is still in an early stage of development.

What has become clearer in the year since the adoption of the First Report is that the market

---

<sup>1</sup>Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, Report, 14 FCC Rcd 2398 (1999) (First Report).

for residential broadband services is dominated by the incumbent local exchange carriers (incumbent LECs or ILECs) and the incumbent cable companies. This pattern of deployment calls into question the Commission’s conclusion, in the First Report, that it “did not foresee the consumer market for broadband becoming a sustained monopoly or duopoly.”<sup>2</sup>

Consistent with its promise to “fight any attempt to make residential broadband [a monopoly or duopoly],”<sup>3</sup> the Commission should take steps to expand the range of competitive choices in the residential broadband market. The Commission should, in particular, require the incumbent LECs to comply fully with their unbundling, pricing, and resale obligations pursuant to section 251(c) of the Communications Act. Moreover, the Commission’s longstanding “open access” obligation, which has proven so successful at fomenting consumer choice in the dial-up telephone network, should be extended to cable broadband facilities as well. Finally, the Commission should make every effort to encourage the development of “fixed wireless” as a “third pipe” to the home, in addition to incumbent LEC and incumbent cable facilities.

## **II. DEFINITION OF ADVANCED TELECOMMUNICATIONS CAPABILITY**

In the First Report, the Commission defined “advanced telecommunications capability” as “two-way bandwidth in excess of 200 kilobits per second in the last mile.” The Commission asks in the Notice whether this definition remains valid.

Given that one of the purposes of this inquiry is to determine whether there have been significant changes in the broadband market since the adoption of the First Report, it is appropriate for the Commission to retain its current definition of “advanced telecommunications capability.”

---

<sup>2</sup>First Report at ¶ 52.

<sup>3</sup>Id.

There is, furthermore, no evidence that “evolution in technologies, retail offerings, and demand among consumers has raised the minimum speed for broadband . . . .”<sup>4</sup> Indeed, the broadband offerings currently targeted to the residential market appear to confirm the Commission’s choice of the 200 Kbps threshold. For example, GTE and U S West both offer a 256 Kbps ADSL service,<sup>5</sup> and Pacific Bell offers a 384 Kbps ADSL service.<sup>6</sup>

### III. IS DEPLOYMENT REASONABLE AND TIMELY?

#### A. “Last Mile” Facilities

It is clear that the pace of broadband deployment in the “last mile,” particularly in the residential and small business market, lags significantly behind demand. At the same time that the limitations of “dial-up” access to the Internet have created growing demand for broadband services, less than 2 million Internet users are using broadband services today – less than 3 percent of all Internet users in North America.<sup>7</sup> The Wall Street Journal has reported that “the demand already exists among many consumers who are still waiting for broadband offerings to come to their hometowns.”<sup>8</sup>

Moreover, even when consumers have access to broadband services, the only choices

---

<sup>4</sup>First Report at ¶ 25.

<sup>5</sup>GTE Telephone Operating Companies Tariff F.C.C. No. 1, Section 16.6(F)(1); U S West Tariff F.C.C. No. 5, Section 8.2.3(B)(1)(a).

<sup>6</sup>Pacific Bell Tariff F.C.C. No. 128, Section 17.5.3(A)(1).

<sup>7</sup>Remarks by Deborah A. Lathen, Chief, Cable Services Bureau, Federal Communications Commission before the National Governors’ Association at 1 (Feb. 27, 2000) (as prepared for delivery).

<sup>8</sup>Wall Street Journal, Stephanie N. Mehta & Kathy Chen, “U.S. Market for Broadband is Barely Tapped” at B8 (Jan. 12, 2000).

typically available are the offerings of the incumbent LEC or the incumbent cable company. The Commission has recently found, for example, that the incumbent LECs have gained more than a 17-to-1 advantage over competitive local exchange carriers (CLECs) in deploying ADSL services to the residential and small business market.<sup>9</sup>

Because of the continued dominance of the incumbent LECs and incumbent cable companies, the deployment of broadband facilities cannot be considered “reasonable and timely.” Only a competitive market can accelerate access to broadband by driving down prices and fostering innovation and consumer choice. As the Commission discussed in the First Report, “[e]ntry by many competitors is more likely to bring low prices, high quality, constant innovation and improved price-performance ratios, a variety of retail services, and as many ISPs and content providers as the market will support.”<sup>10</sup>

#### **B. Backbone Facilities**

Broadband backbone facilities are being deployed in a reasonable and timely manner. The trends identified in the First Report have continued, as many different types of companies, including interexchange carriers (IXCs), ILECs, ISPs, and utility companies, have added to the number of fiber route miles and have deployed new transmission technologies that expand the capacity of existing networks. Emerging telecommunications companies such as Qwest, Level 3, Williams, Cable & Wireless, Global Crossing, and NEXTLINK have deployed tens of thousands of fiber route miles. For example, Qwest announced last September that it had completed construction of an 18,500 route

---

<sup>9</sup>Deployment of Wireline Services Offering Advanced Telecommunications Capability, Third Report and Order, CC Docket No. 98-147, rel. December 9, 1999, at ¶ 32 (Line Sharing Order).

<sup>10</sup>First Report at ¶ 53.

mile fiber network that connects 150 cities in the United States.<sup>11</sup> Similarly, Level 3 is in the process of deploying a 15,000 mile IP network.<sup>12</sup> In addition to these firms, electric and gas utilities have been constructing networks alongside their own transmission and distribution lines for leasing to telecommunications carriers. Furthermore, new technologies such as wavelength division multiplexing (“WDM”) and dense WDM (“DWDM”) “will vastly increase the transmission capacity of existing and new fiber networks.”<sup>13</sup> This expansion in network capacity is accommodating the enormous growth in demand for Internet, Asynchronous Transfer Mode (ATM) switching, and other advanced services.

To the extent that these broadband backbone facilities encompass Internet backbone facilities, there is clear evidence that deployment has been “reasonable and timely.” The number of entities operating nodes, routers and transmission links that provide access to the Internet is increasing rapidly. In 1999, twelve newcomers were added to the pool of national Internet backbone providers, bringing the total to 46.<sup>14</sup> Competition among Internet backbone providers has fostered the dramatic growth in Internet traffic, fueled by increased demand and lower prices for Internet backbone services. Accordingly, there is no basis for the Commission to take action with regard to backbone facilities.

---

<sup>11</sup>Qwest Press Release, “Qwest Communications Completes 18,500 Mile Nationwide Network and Shifts Construction to 25 Local Fiber Networks” (Sept. 13, 1999).

<sup>12</sup>Application of WorldCom, Inc. and MCI Communications Corp. for Transfer of Control, Order, 13 FCC Rcd 18025, ¶ 49 (1998) (WorldCom/MCI Order).

<sup>13</sup>WorldCom/MCI Order at ¶ 64.

<sup>14</sup>Boardwatch Magazine's Directory of Internet Service Providers (11th ed., 1999)

#### IV. ACTIONS THE COMMISSION CAN TAKE TO ACCELERATE DEPLOYMENT

The Commission should take immediate steps to foster a more competitive market that will accelerate the deployment of “last mile” broadband facilities to residential consumers.

##### A. The Commission Should Encourage True xDSL Competition

##### 1. The Commission Should Reconsider its Decision Not to Require Unbundling of Packet Switching and DSLAMs to Serve Residential Consumers

In the UNE Remand Order, the Commission chose not to require incumbent LECs to unbundle packet switching (defined to include the DSLAM) – despite finding that CLECs are materially impaired in their ability to offer advanced services to residential consumers without access to ILEC packet switching facilities.<sup>15</sup> Relying on ILEC claims that it found to be unsupported on the record,<sup>16</sup> the Commission concluded that a policy of “regulatory restraint” outweighed the impairment of CLECs’ ability to provide advanced services. In reaching this decision, the Commission relied on nonstatutory factors it did not even discuss.

The Commission should grant MCI WorldCom’s pending petition for reconsideration of its decision not to require ILECs to unbundle packet switching.<sup>17</sup> This decision is in direct conflict with the Commission’s goal of accelerating the deployment of advanced telecommunications capabilities

---

<sup>15</sup> Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, Third Report and Order and Fourth Further Notice of Proposed Rulemaking, rel. November 5, 1999, at ¶ 309 (UNE Remand Order).

<sup>16</sup> Id. at n.618, but see ¶ 315, which states “events in the marketplace suggests that other factors may be driving incumbent LECs to invest in xDSL technologies, notwithstanding the economic theory.”

<sup>17</sup>Petition of MCI WorldCom, Inc. for Reconsideration, CC Docket No. 96-98, filed Feb. 17, 2000.

and services to residential customers and to rural areas. As the Commission itself found, the decision not to unbundle packet switching will materially impair the rapid development of competition from CLECs – by requiring them to incur the cost and delay of collocating in thousands of ILEC central offices and tens of thousands of remote terminals<sup>18</sup> – while doing nothing to increase ILEC investment.

Having concluded that CLEC competitiveness is impaired without access to packet switching and finding no evidence on the record suggesting that any other factor warranted denying such access, the Commission had no choice but to unbundle packet switching. Its refusal to do so is even more indefensible when, as here, the statutory requirement the Commission chose to undermine – that competitors not be "impaired" in their ability to offer competing services – is the only express requirement in the statute.

**2. The Commission Should Require the ILECs to Allow CLEC-to-CLEC Line Sharing**

The Commission could also clarify issues arising from the recent Line Sharing Order. In particular, clarification is necessary where a CLEC seeks to use the UNE platform, together with its own DSL facilities or those of a second CLEC, to provide service to a residential or small business customer. In the absence of explicit Commission direction, at least one ILEC has indicated (in industry discussions) that it might refuse to allow CLECs to share loops in this manner.

CLEC line sharing furthers two important Commission goals: promoting competition to provide voice services over UNEs, and promoting competition to provide advanced services over CLEC facilities. As the Commission is aware, MCI WorldCom has begun to compete in the local

---

<sup>18</sup>UNE Remand Order at ¶ 309.

residential marketplace in New York State via the UNE platform. Increasingly, residential customers are asking for high speed communications as part of their local service. Unfortunately, the Commission has decided, in the UNE Remand Order, to utilize network elements to create, in effect, a "UNE platform" for data services. Thus, only CLEC line sharing will permit MCI WorldCom and other CLECs competing in the voice market using the UNE platform to attempt to offer bundled xDSL service as well. Without CLEC line sharing, competition in the local market will be irreparably harmed because only the ILECs will be able to offer a bundled voice and data product. As MCI WorldCom discussed in its petition for clarification of the Line Sharing Order,<sup>19</sup> the Line Sharing Order can and should be read to permit CLEC line sharing. Consistent with this requirement, the ILECs should be required to carry out certain discrete functions, including making necessary cross-connections and performing troubleshooting functions between (1) the loop leased by the CLEC from the ILEC and (2) CLEC equipment located in the central office, to allow the actual operation of this configuration.

**B. The Commission Should Consider Adopting an Open Access Policy for Broadband Services Provided Over the Cable Network**

In order to further accelerate deployment of advanced technologies, the Commission should initiate a proceeding to examine whether and how to impose open access requirements on AT&T and the rest of the cable industry. In the interim, the Commission can impose an open access condition on the proposed AT&T and MediaOne merger. As a practical matter, if competing ISPs, CLECs, and IXCs cannot serve AT&T's broadband customers as efficiently as AT&T, these customers' ability to exercise competitive choice would be nullified. AT&T and other cable operators should

---

<sup>19</sup>Petition for Clarification of MCI WorldCom, CC Docket No. 98-147, February 9, 2000.

permit CLECs, ISPs, and IXC's to interconnect with their local broadband networks at any technically feasible point that facilitates the ability of consumers to maximize their competitive alternatives.

There no longer appears to be a dispute that open access is technically feasible and requires minimal incremental expenditure. AT&T and other cable operators can both provide open access and maintain full control over the features and quality of its broadband and Internet services. Ongoing work within the industry has demonstrated the availability of several methods of competitive access. One method, favored by the Canadian Association of Internet Providers (CAIP) and the Canadian Radiotelevision and Telecommunications Commission (CRTC), can be accomplished using existing headend routing equipment with relatively minor changes in the interface between the cable operator and ISPs and in the management and distribution of ISP-specific IP addressing. Alternative methods may involve more investment in a subscriber management system, but reduce the cable operator's subsequent operations costs. Each of these methods involves access to an interconnection point at the headend of cable systems, and none involves unbundled access to the physical coaxial broadband transmission media. With nondiscriminatory interconnection at the headend, ISPs can offer the same quality of service provided by AT&T's Excite@Home or Roadrunner (for example, by caching close to customers) and avoid the quality and delay issues created when traffic is sent to and received from Excite@Home or Roadrunner over the Internet. Given the continued regulation of incumbent LEC broadband service and the competitive pressures that a symmetric open access rule would impose on all broadband providers, there is no current need for detailed rules concerning terms and conditions for open access to the cable broadband network.

Failure to impose this condition would risk the creation of a duopoly for residential

consumers, with cable operators and the incumbent LECs dividing between themselves the market for facilities-based broadband services in those geographic markets where cable operators, AT&T or its partners provide cable service. AT&T and other cable operators should not be allowed to deny competing CLECs, ISPs, or interexchange carriers a fair opportunity to serve residential broadband customers who would choose a competitive alternative if they had the option to do so. The ability of Internet and long-distance companies to interconnect on efficient and nondiscriminatory terms with local telephone companies has served consumers extraordinarily well, producing a flowering of competition from hundreds of IXCs and thousands of ISPs. This competition would be impossible but for the Commission's "open access" policy in the dial-up ISP and IXC worlds. The Commission should continue its efforts to maintain a competitive Internet and telephony marketplace by conditioning approval of the acquisition on AT&T's commitment to provide reasonable and nondiscriminatory interconnection with its broadband network through open access.

**C. The Commission Should Encourage the Development of an MMDS-based "Third Pipe" For Broadband Services**

Multichannel Multipoint Distribution Service (MMDS) is a "fixed wireless" technology that has great potential to provide a "third pipe" into the home. MMDS systems will allow for two-way transmission at speeds from 128 Kbps up to 10 Mbps, scalable to customer requirements. MMDS will provide a platform for offering broadband data, high-speed Internet access and voice services.

Prior to their recently announced merger, MCI WorldCom and Sprint independently recognized the value of MMDS spectrum to provide a facilities-based alternative to wireline DSL and cable broadband access to the mass market. Since August 1999, each company has spent more than \$1 billion to acquire several MMDS licensees. The coverage areas of the companies are largely

complementary. Combined, the companies will be able to provide broadband service in 108 of the 125 largest cities in the country, and to as many as 60% of the households in the U.S.

Because there are economies associated with nationwide deployment, the merger will accelerate the deployment of broadband wireless services, especially in rural and under-served areas. Joint technology development, more rapid adoption of standards, larger equipment production runs, reduced tower placement costs, more efficient backhaul of traffic, and reduced operating costs will accelerate deployment and reduce costs.

MCI WorldCom is currently testing fixed wireless service in Jackson, Mississippi, Baton Rouge, Louisiana and Memphis, Tennessee. MCI WorldCom plans to launch further trials in Dallas, Texas and Boston, Massachusetts beginning this summer. Sprint is already providing first generation two-way fixed wireless Internet access in Phoenix, Arizona. Full deployment of two-way MMDS service cannot occur until the FCC opens its two-way filing window for such service. MCI WorldCom urges the FCC to move forward with its plans to open that window early this summer.

MMDS offers particular advantages to residential, small business and rural customers. MMDS operates in the 2.1 and 2.5-2.7 GHz bands, which are ideal for wireless broadband services because their propagation characteristics allow providers to serve large geographic areas with relatively modest incremental investment.<sup>20</sup> One supercell antenna can serve a radius of up to 35 miles. By contrast, xDSL services, for example, are limited to customers within 18,000 feet of the end office. MMDS can serve a large metropolitan area (and the surrounding suburban and rural areas) with 1 - 8 cell sites. MCI WorldCom has pledged to bring fixed wireless service to rural and

---

<sup>20</sup>Any WRC 200 or United States government action that would displace, or make more likely the displacement of, MMDS in the 2.5 to 2.7 GHz band would have a devastating impact on the roll-out of widely available, mass market wireless broadband service.

under-served areas of the U.S. within one year after the closing of the MCI WorldCom/Sprint merger, particularly in the states of the Southeast, the Southwest, the Pacific Northwest and the Great Plains.

**V. CONCLUSION**

The Commission should carefully review the information submitted in response to the Notice and take any appropriate measures to accelerate competition in the provision of advanced services, particularly in the residential and small business markets. Such measures should include: (1) reconsidering its decision not to require unbundling of packet switching and DSLAMs to serve residential customers; (2) requiring that the ILECs allow CLEC-to-CLEC line sharing; (3) adopting an open access policy for broadband services provided over the cable network; and (4) fomenting fixed wireless competition by opening the two-way filing window for MMDS service by early summer, and preserving existing spectrum from incursions. These concrete measures will help lead to a competitive environment, which will expand the range of competitive choices for consumers.

Respectfully submitted,

MCI WORLDCOM, INC.



---

Richard S. Whitt

Alan Buzacott

Kecia Boney Lewis

Its Attorneys

1801 Pennsylvania Ave., NW  
Washington DC 20006  
(202)887-3845

Dated: March 20, 2000

**CERTIFICATE OF SERVICE**

I, Lonzena Rogers, do hereby certify that on this 20<sup>th</sup> day of March, 2000, I have caused a true and correct copy of the foregoing Comments of MCI WorldCom, Inc. to be hand delivered, to the following:

Magalie Roman Salas  
Office of the Secretary  
Federal Communications Commission  
445 12th Street, S.W.  
Room TW-A325  
Washington, D.C. 20554

The Honorable William E. Kennard  
Chairman  
Federal Communications Commission  
445 12th Street, S.W.  
Washington, D.C. 20554

The Honorable Susan P. Ness  
Federal Communications Commission  
445 12th Street, S.W.  
Washington, D.C. 20554

The Honorable Harold W. Furchtgott-Roth  
Federal Communications Commission  
445 12th Street, S.W.  
Washington, D.C. 20554

The Honorable Michael K. Powell  
Federal Communications Commission  
445 12th Street, S.W.  
Washington, D.C. 20554

The Honorable Gloria Tristani  
Federal Communications Commission  
445 12th Street, S.W.  
Washington, D.C. 20554

Lawrence Strickling  
Chief, Common Carrier Bureau  
Federal Communications Commission  
445 12th Street, S.W.  
Washington, D.C. 20554

Michelle Carey  
Chief, Policy and Program Planning  
Division  
Common Carrier Bureau  
Federal Communications Commission  
445 12th Street, S.W.  
Washington, D.C. 20554

John W. Berresford  
Industry Analysis  
Common Carrier Bureau  
Federal Communications Commission  
445 12th Street, S.W.  
Room 6A-165  
Washington, D.C. 20554

Staci Pies  
Common Carrier Bureau  
Federal Communications Commission  
445 12th Street, S.W.  
Washington, D.C. 20554

International Transcription Service, Inc.  
CY-B40000  
445 12th Street, S.W.  
Washington, D.C. 20554

  
Lonzena Rogers