1 data switches deployed across the U.S. There's no way to put 200 DMS 500s in our
2 network, but with [voice-over-IP], we can provide voice to all of our customers in every
3 market."[11]

4 As noted above, CLECs have already deployed more than 25 data switches in
5 Virginia and already are using many of those switches to provide voice services. As the
6 technology is further refined and becomes even more affordable, data switches and voice-
7 over-IP will pose a formidable competitive challenge to Verizon VA's circuit-switched
8 networks.

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data network over which we can carry both voice and data traffic for our existing East Coast customers.").

[11] Lindstrom, *supra* note 5, at 14 (quoting Intermedia spokesperson).

IV. COMPETITION FROM OTHER SOURCES

Q. What other alternative technologies compete with Verizon VA?

A. Verizon VA also faces competition for local voice and data service from a number of cable providers, who provide service by bypassing Verizon VA's network. In addition, although the Commission has found that wireless services are not yet a substitute for wireline, it nonetheless has recognized that wireless providers are increasingly competitive in the local market.

Q. Please discuss competition from cable providers.

A. Several providers have made significant inroads into the Virginia telecommunications market, particularly with high-speed Internet offerings.

For example, Cox Communications provides cable service to over 700,000 customers in Virginia. Cox began aggressively advertising Cox@Home, a high-speed Internet service, to its 58,000 cable customers in Roanoke, Roanoke County, and Vinton, last year. Cox spent $13 million to upgrade its network there, and laid 550 miles of fiber-optic and coaxial cable to offer new broadband service, including cable modem and digital TV. Cox has been offering cable modem service in Newport News since 1997, in Hampton Roads since 1999, and in northern Virginia since 2000. Cox also offers its Digital Telephone service in Hampton Roads and parts of Newport News, Williamsburg, and Virginia Beach.

Cox also provides voice service to business and residential customers over its cable network using circuit-switched technology. Cox serves **[COX PROPRIETARY BEGINS]** XXX **[COX PROPRIETARY ENDS]** lines in Virginia over facilities it has deployed itself; facilities-based directory listings indicate that currently Cox serves **[COX**

1 **PROPRIETARY BEGINS]** XXX **[COX PROPRIETARY ENDS]** lines to residential
2 customers. Cox Digital Telephone service currently offers residential voice service to
3 Cox cable customers in Hampton Roads and parts of Newport News, Williamsburg, and
4 Virginia Beach. As of the end of June 2001, Cox also provided service to **[COX**
5 **PROPRIETARY BEGINS]** XXX **[COX PROPRIETARY ENDS]** business customers
6 on a resale basis. Cox has ported **[COX PROPRIETARY BEGINS]** XXX **[COX**
7 **PROPRIETARY ENDS]** numbers, and is using **[COX PROPRIETARY BEGINS]**
8 XXX **[COX PROPRIETARY ENDS]** unbundled stand-alone loops.
9 In addition, AT&T Broadband, "the nation's largest broadband service provider"
10 and one of the largest cable operators in Virginia, has been providing cable modem
11 service in Richmond since June 1999 and now also offers its Road Runner cable modem
12 service in other areas in Virginia. AT&T also is competing for local phone customers in
13 the Richmond area through its cable company, MediaOne, and has made significant
14 upgrades to its network in central Virginia in preparation for its digital cable, telephone,
15 and high-speed Internet access service offering.
16 Adelphia is another notable example, providing cable modem services extensively
17 throughout Virginia, including its Powerlink service in Waynesboro, Winchester,
18 Staunton, Fredericksburg, Charlottesville, and Blacksburg. Comcast Cablevision offers
19 its @Home service in several areas, including Alexandria, Woodbridge and Chesterfield
20 County, as well as Expressnet service in Arlington. Other competitors are discussed in
21 Attachment A to this testimony.
22 Like the data providers discussed above, cable providers will be able to use data
23 switches to provide voice telephony.

1

2 **Q. Please discuss competition from wireless providers.**

3 A. Verizon also faces stiff competition from wireless carriers. For example, four mobile
4 wireless companies that provide full coverage of the U.S. — AT&T, Sprint PCS,
5 VoiceStream, and Cingular Wireless — operate wireless networks in Virginia. Verizon
6 has entered into more than 20 approved agreements with mobile wireless providers in
7 Virginia. WorldCom is also investing in its own fixed wireless technology to bypass the
8 LEC network and currently holds wireless licenses that cover 91 of Verizon VA's wire
9 centers.

10 Wireless service is already a viable alternative to traditional telephone service for
11 many residential and business customers in Virginia and is expected to grow in
12 popularity. In fact, the number of wireless telephone subscribers in Virginia increased by
13 32% in 2000, ahead of the national average of 27%.[12] The FCC has cited statistics on
14 increasing minutes of use as a reflection of "decreasing prices and the general wider
15 acceptance of and reliance upon wireless service,"[13] and has noted that this trend "may
16 also indicate that mobile telephony is moving away from just complementing existing
17 wireline voice service and towards competing directly with it."[14]

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[12] Sixth Report, *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993*, FCC 01-192, App. C at Table 2 (rel. July 17, 2001) ("*Sixth CMRS Report*"); *id.* at e. Wireless/Wireline Competition ("For some, wireless service is no longer a complement to wireline service but has become the preferred method of communication.").

[13] Fifth Report, *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993*, 15 FCC Rcd 17660, 17682 (2000) (citing Paul Kagan Associates).

[14] *Id. See also Sixth CMRS Report* at e. Wireless/Wireline Competition ("For some, wireless service is no longer a complement to wireline service but has become the preferred method of communication.")

1 **V. CONCLUSION**

2 **Q. [Added 8/8/01] Please summarize the data, in the aggregate, for the CLECs**
3 **discussed in Attachment A, without revealing proprietary information specific to**
4 **any particular CLEC.**

5 A. The CLECs discussed in Attachment A, in the aggregate, serve approximately 409,000
6 lines using facilities they have deployed themselves, including approximately 106,000
7 residential lines. They provide approximately 43,500 lines to business customers on a
8 resale basis. These CLECs have ported a total of approximately 275,700 numbers and
9 obtained approximately 1300 NXX codes. They use a total of approximately 85,600
10 unbundled standalone loops. In addition, the data CLECs and DSL providers discussed
11 in Attachment A have approximately 175 physical collocation arrangements, in the
12 aggregate, as well as 11 virtual collocation arrangements. They also have 7 additional
13 physical or virtual collocation arrangements in progress.[15]

14

15 **Q. Please summarize your conclusions regarding the level of competition in Virginia.**

16 A. Attachment A demonstrates unequivocally that the Virginia local service market is
17 thriving. A number of competitors are currently serving a large number of customers
18 using their own facilities as well as UNEs, UNE-P, and resale.

19 Even more important, the evidence shows that competition in Virginia is
20 expanding rapidly, particularly with respect to facilities-based competitors. Indeed,

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[15] Attachment A discusses a number of major competitors, but does not provide specific data for all CLECs operating in Virginia. These figures represent aggregated data only for the CLECs discussed in Attachment A.

Verizon VA's competitors are investing heavily in facilities that will completely bypass Verizon's network.

Q. Does this conclude your testimony?

A. Yes.

A

ATTACHMENT A

LOCAL COMPETITION IN VIRGINIA

1. Competitors in Virginia[1] are providing service to both residential and business customers across the state using each of the three paths of competitive entry contemplated by the 1996 Act: facilities-based service, unbundled elements, and resale.

a. *CLECs are using all three modes of competitive entry.* Competitors are serving approximately 555,000 lines in Virginia: more than 440,000 lines over their own facilities as of June 2001, more than 7,600 through unbundled element platforms, and approximately 107,000 through resale.[2]

b. *CLECs are serving both residential and business customers.* Competitors in Virginia are providing service to approximately 164,000 residential customers. These competitors have more than 127,000 facilities-based and UNE-platform residential directory listings. Given that competitors in Virginia are providing service to more than 6,100 residential customers using UNE platforms, this means that CLECs are serving at least 121,000 residential customers using facilities they have deployed themselves. CLECs in Virginia also are reselling another 36,000 residential lines. Virginia competitors are providing service to more than 391,000 business customers. Based on the number of E911 listings competitors have obtained,[3] it is clear that competitors are serving at least 319,000 business lines using facilities they have deployed themselves. Competitors are serving more than 1,500 additional business lines using UNE platforms and are reselling more than 70,000 business lines. *See* Exhibit 1.

c. *CLECs are serving different geographic regions throughout Virginia.* Verizon's territory covers only about half of the state, based on area, but these regions include the most concentrated, urban areas in the state. Verizon serves all of the ten most populous cities in Virginia. *See* Exhibit 2. In each area of the state, competitors are using all three modes of competitive entry to serve both business and residential customers. *See* Table 1 & Exhibit 3.

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[1] References to "Virginia" mean "Verizon's territory in Virginia formerly served by Bell Atlantic." References to "Verizon" mean "the former Bell Atlantic."

[2] The data throughout this report are as of the end of May 2001 unless otherwise indicated. Totals do not always equal the sum of the parts due to rounding. Resale data include **[ONEPOINT PROPRIETARY BEGINS]** **[ONEPOINT PROPRIETARY ENDS]** business and **[ONEPOINT PROPRIETARY BEGINS]** **[ONEPOINT PROPRIETARY ENDS]** residential lines resold to OnePoint.

[3] The calculation of facilities-based lines is highly conservative since it is based on the number of E911 subscriber listings for competitors. In most cases, where a competitor has obtained an E911 listing for a customer, it serves that customer entirely over its own facilities. In all cases, however, the competitor is using at least its own switch to serve that customer. Each E911 subscriber listing necessarily represents one customer access line, but may represent more than a single line. In the case of business customers, for example, a single E911 listing may represent many individual lines. The total number of E911 listings that competitors have obtained therefore understates the number of facilities-based lines that competitors serve.

Table 1. Competitor Access Lines by Area Code					
	703/571 (overlay)	**757**	**804/434***	**540**	**Total**
Facilities-Based					
E911 Listings	226,000	105,000	102,000	6,800	440,000
Business Directory Listings	7,300	9,700	9,800	3,200	30,000
Residential Directory Listings	15,000	49,000	61,000	2,100	127,000
Resale					
Business Resale Lines	23,000	18,000	15,000	14,000	70,000
Residential Resale Lines	9,100	14,000	8,200	5,200	36,000
UNE					
Business Platforms	730	270	310	200	1,500
Residential Platforms	350	3,200	1,800	800	6,100
Unbundled Loops**					116,000
Total*	259,000	141,000	128,000	27,000	555,000

Data are as of the end of May 2001, with the exception of E911 listings, which are as of the end of June 2001.

*The 434 area code went into effect June 1, 2001.[4]

**Loop data are not available by area code.

***Excludes directory listings and unbundled loops to avoid potential double counting.

AUTHORIZED LOCAL EXCHANGE COMPETITORS

2. More than 170 CLECs have been licensed to provide facilities-based or resale service in Virginia.[5] Since 1996, Verizon has entered into, and the Virginia State Corporation Commission (Virginia SCC) has approved, more than 75 interconnection agreements with CLECs. *See* Exhibit 4. Verizon also has entered into more than 20 approved agreements with mobile wireless providers in Virginia.

FACILITIES-BASED LOCAL EXCHANGE COMPETITION

3. While the information available to Verizon necessarily is incomplete, competitors in Virginia have deployed, or are in the process of deploying, more than 40 local voice switches and at least 2,000 route miles of fiber in Verizon's service territory in Virginia.[6] *See* Exhibits 5-

[4] *Another New Area Code Coming to Virginia*, Associated Press State & Local Wire (May 23, 2001).

[5] Virginia State Corporation Commission, Division of Communications, *Virginia CLEC Certificate Application Status Report* (revised July 3, 2001), http://www.state.va.us/scc/division/puc/lecap0702.pdf.

[6] Telcordia, *Local Exchange Routing Guide (LERG)* (May 2001) ("*May 2001 LERG*"); New Paradigm Resources Group, Inc., *CLEC Report 2001*, Ch. 13 (14th ed. 2001) ("*CLEC Report 2001*"); New Paradigm Resources Group, *CLEC Report 2000*, Ch. 9 (12th ed. 2000) ("*CLEC Report 2000*"); New Paradigm Resources Group, Inc. & Connecticut Research, *1997 Annual Report on Local Telecommunications Competition* at 450 (8th ed. 1996) ("*CLEC Report 1997*").

10. Local voice switches installed in Washington, D.C. and Maryland may also be used to provide service in Virginia. More than half of the local voice switches installed by CLECs in Washington, D.C., and local voice switches installed by CLECs in Rockville and Laurel, Md. currently serve rate centers in northern Virginia. *See* Exhibits 5 & 6.

4. Adelphia operates three fiber networks with three local voice switches in Virginia.[7] WorldCom, with networks in Reston and in Richmond, has deployed at least 71 route miles of fiber and one local voice switch.[8] Cox has deployed at least 1,800 route miles of fiber and two local voice switches.[9] Cavalier and KMC Telecom have each deployed at least 150 route miles of fiber, with three local voice switches, and two local voice switches, respectively.[10] NTELOS and US LEC each have three local voice switches in Virginia, while ALLTEL, BTI, and Level 3 each have two local voice switches.[11] Comcast operates one local voice switch, as do Net2000, Intermedia, PaeTec, Sprint, and PICUS.[12]

5. Competitors are also deploying data switches very rapidly, and are using them to provide voice services.[13] In 1999, AT&T and Sprint announced they would no longer buy circuit switches for their long-distance networks, turning instead to ATM switches and IP technology.[14] WorldCom's strategy is to use soft switches or IP switches to handle Internet and voice services on an IP backbone.[15] CLECs in Virginia have deployed at least 25 data switches in addition to the local voice switches.[16]

6. Analysts have attributed the decline in the market for traditional circuit switching equipment to the convergence of voice-onto-data networks.[17] "The economics of an IP packet-

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[7] *CLEC Report 2001*, Ch. 13 – Adelphia Business Solutions at 16-17; *May 2001 LERG.*

[8] *CLEC Report 2001*, Ch. 13 – WorldCom at 23; *CLEC Report 1997*, Ch. 10 – MFS Communications at 450; *May 2001 LERG.*

[9] *CLEC Report 2000*, Ch. 9 – Cox Communications at 7; *May 2001 LERG.*

[10] *CLEC Report 2000*, Ch. 9 – Cavalier Telephone at 5; KMC Telecom at 11; *May 2001 LERG.*

[11] *May 2001 LERG.*

[12] *May 2001 LERG.*

[13] *See, e.g.*, T. Greene, *CLECs Exploit Innovation in Race Against RBOCs*, Network World at 32 (Mar. 27, 2000) ("Rather than spend the millions it takes to buy a traditional local telephone switch . . . CLECs buy switches that handle data and voice at a tenth of the cost.").

[14] *See* T.K. Horan, CIBC Oppenheimer, Investext Rpt. No. 2749262, Telecom Services: Daily Teletimes – Industry Report at *1 (Mar. 1, 1999). "These announcements are consistent with our thesis that telephone networks are gradually migrating from circuit-switched to packet-switched. ATM switches are essentially a hybrid switch with many of the same features and functionality of both a circuit and packet switch." *Id.*

[15] *Telephony*, Communications Daily (Apr. 14, 2000) (quoting WorldCom chief technology officer Fred Briggs). *See also* A. Lindstrom, *Talkin' 'Bout Next-Generation Telcos*, Business Communications Review at 14 (May 1, 2001) ("earlier this year, both AT&T and WorldCom rolled out standards-based VOIP service to their customers.").

[16] *CLEC Report 2001*, Ch. 9 at 180-184; Ch. 13 – Intermedia at 24-28; Rhythms at 6-7; US LEC Press Release, *US LEC Enhances Data Network* (May 17, 2001).

[17] *See, e.g.*, C. Armacost, SG Cowen Securities Corp., Investext Rpt. No. 2460122, Lucent Technologies – Company Report (Feb. 1, 2001).

based platform are compelling. While a circuit switch network's price performance doubles every 80 months, that of an IP network doubles in about a quarter of that time, or every 20 months. Providing voice and data services over a single network is an economically attractive proposition. Carrying voice traffic on a packet platform saves up to 70% in operating costs, by [Banc of America] estimates."[18] As James Cicconi, AT&T general counsel and executive vice president, recently observed: "[W]ith the growth of services like IP telephony, there is no longer a clear distinction between 'voice' and 'data' transmissions."[19]

A. Interconnection/Collocation

7. As of the end of May 2001, competitors had obtained more than 1,000 collocation arrangements in Virginia. The number of completed collocation arrangements has grown more than 100 percent since the beginning of 2000.

8. A competitor that collocates in a Verizon central office gains access to all customers served by that office. Through more than 1,000 completed collocation arrangements, competitors have access to 88 percent of the switched access lines served by Verizon in Virginia: approximately 92 percent of Verizon's total business lines, and 86 percent of Verizon's total residential lines. Competitors have obtained collocation in wire centers in cities and towns across Virginia, including Alexandria, Chesapeake, Clear Brook, Fredericksburg, Hopewell, Lowry, Moseley, Richmond, Riner, Roanoke, Stephenson, Virginia Beach, and Yorktown.

9. Competitors exchange traffic with Verizon's network through interconnection trunks supplied by Verizon or the CLECs themselves. As of the end of May 2001, Verizon was providing more than 169,000 interconnection trunks to competitors.

B. NXX Codes and Ported Numbers

10. As of the end of May 2001, CLECs had obtained more than 2,000 NXX codes representing a total of more than 20 million telephone numbers. Competitors have obtained multiple NXX codes to serve customers throughout Virginia. *See* Table 2.

Table 2. Competitor NXX Codes by Area Code

	703/571 (overlay)	757	804/434*	540	Total
NXX Codes	220	150	1,500	90	2,000

[18] Wall St. Transcript Corp., Investext Rpt. No. 2003080, Analyst Interview: Telecommunications – Industry Report at *3-*4 (Sept. 22, 2000) (quoting Trent Spiridellis, Principal and Senior Equity Research Analyst, Banc of America Securities). *See also* A. Lindstrom, *Talkin' 'Bout Next-Generation Telcos*, Business Communications Review at 14 (May 1, 2001) (quoting P. William Bane, vice president of Mercer Management Consulting: "New business models based on the use of IP-oriented switches have an infinitely better value proposition for carriers. . . . They'll enable gross margins in the 60 percent-plus range and the ability to provide differentiated offerings.").

[19] *Prepared Testimony of James W. Cicconi, General Counsel and Executive Vice President, AT&T Corp., Before the House Committee on Commerce*, Federal News Service (Apr. 25, 2001).

11. Verizon has ported approximately 301,000 numbers to more than 20 CLECs through long-term (permanent) number portability (LNP). Competitors have ported numbers to win customers throughout Virginia. *See* Table 3. Ported numbers through LNP have grown more than 350 percent since the beginning of 2000.

Table 3. Ported Numbers by Area Code

	703/571 (overlay)	757	804/434*	540	Total
LNP	117,000	89,000	73,000	21,000	301,000

C. Customers Served by Competitive Facilities

12. As of the end of May 2001, competitors had obtained approximately 150,000 facilities-based directory listings (excluding UNE-platform listings), including more than 121,000 for residential customers and approximately 29,000 for business customers.[20] Based on the number of E911 listings competitors have obtained, however, it is clear that competitors are serving at least 319,000 business lines using facilities they have deployed themselves.[21] Competitors have obtained both business and residential directory listings in every area code of Virginia. *See* Table 1 & Exhibit 11.

13. The increase in the number of interconnection trunks obtained from Verizon by competitors, and the minutes that competitors are exchanging with Verizon over those trunks, provides further evidence of dramatic growth in facilities-based competition. The number of interconnection trunks obtained by competitors has grown more than 600 percent since the beginning of 1999, and nearly 170 percent since the beginning of 2000. Verizon terminated an average of over 77 million minutes from Virginia CLECs each month in 2001, an increase of 235 percent over the average number of CLEC minutes terminated in 1999, and an increase of 50 percent over the average number of CLEC minutes terminated in 2000. William Irby, director of the Virginia SCC's communications division, remarked that growth in local competition since 1998 has been "phenomenal."[22]

USE OF UNBUNDLED NETWORK ELEMENTS

14. Numerous CLECs are purchasing Verizon UNEs and UNE platforms to serve business and residential customers throughout Virginia. The number of platforms purchased by CLECs has grown by an average of nearly 50 percent *each month* over the past six months for which data are available.

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[20] The number of facilities-based business directory listings substantially understates the number of business lines served, because a single business listing typically represents many lines served. *See* Exhibit 1.

[21] E911 listings data show that competitors are serving more than 440,000 lines over facilities they have deployed themselves. After excluding facilities-based UNE-platform data from residential facilities-based and UNE-platform directory listings figures, the data show that competitors are providing service to more than 121,000 residential customers over facilities they have deployed themselves. The remaining 319,000 facilities-based lines serve business customers. *See also* Exhibit 1.

[22] G. Edwards, *Competition Comes Calling*, Richmond Times-Dispatch at D-16 (Jan. 10, 2000).

15. As of the end of May 2001, Verizon has provided a total of approximately 124,000 unbundled loops to more than 25 different competitors. This figure includes more than 116,000 loops provided on a stand-alone basis, plus more than 7,600 loops provided as part of platforms. Competitors have obtained loops to serve both residential and business customers, and have obtained loops across Virginia. *See* Exhibit 12.

16. Verizon is providing unbundled local switching to approximately 5 different CLECs. As of the end of May 2001, Verizon was providing competitors with approximately 7,700 unbundled switching line ports, including more than 7,600 ports provided as part of platforms. Verizon has provided 630 unbundled dedicated local transport facilities to CLECs in Virginia.

RESALE COMPETITION

17. Numerous competitors are providing resale service to every type of customer in every part of the state. As of the end of May 2001, approximately 50 competitors in Virginia were reselling approximately 107,000 lines, including more than 70,000 business lines and more than 36,000 residential lines. *See* Exhibit 13. Three companies resell more than 10,000 lines, another 16 resell more than 1,000 lines, and another 17 resell more than 100 lines. All but one of Verizon's wire centers in Virginia have at least one resold line, and 90 percent have at least ten.

PROFILES OF MAJOR FACILITIES-BASED COMPETITORS

A. AT&T

18. AT&T, one of the largest facilities-based CLECs in the U.S., serves **[AT&T PROPRIETARY BEGINS]** **[AT&T PROPRIETARY ENDS]** lines in Virginia over facilities it has deployed itself, as of the end of June 2001. Included in this total are **[AT&T PROPRIETARY BEGINS]** **[AT&T PROPRIETARY ENDS]** residential lines that AT&T serves over its own cable network, based on facilities-based directory listings as of the end of May 2001.[23] AT&T has deployed a network in the Richmond metropolitan area with two local voice switches.[24] The company also operates local voice switches in Norfolk, Roanoke, Fredericksburg, and Arlington.[25] AT&T has ported **[AT&T PROPRIETARY BEGINS]** **[AT&T PROPRIETARY ENDS]** numbers, and is using **[AT&T PROPRIETARY BEGINS]** **[AT&T PROPRIETARY ENDS]** unbundled, standalone loops. AT&T has obtained **[AT&T PROPRIETARY BEGINS]** **[AT&T PROPRIETARY ENDS]** NXX codes in Virginia.

19. AT&T is also one of the largest cable operators in Virginia, with approximately 150,000 cable subscribers in Richmond and Ashland and the counties of Henrico, Hanover,

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[23] *See also* G. Edwards, *Changes Affect Local Cable Firms; AT&T Converting to Digital Service*, Richmond Times-Dispatch at B-8 (Aug. 24, 2000) (as of August 2000, AT&T had 7,268 local phone customers in Virginia).

[24] *CLEC Report 2001*, Ch. 13 – AT&T Corp. at 22; *May 2001 LERG*.

[25] *May 2001 LERG*.

Goochland and Louisa.[26] AT&T is competing for local phone customers in the Richmond area through its cable company, MediaOne.[27] AT&T has made significant upgrades to its network in central Virginia in preparation for its digital cable, telephone, and high-speed Internet access service offering.[28]

B. WorldCom

20. WorldCom began providing competitive local services in Virginia in 1995.[29] WorldCom currently operates a local voice switch in Reston, and a network in Richmond with 35 buildings on-net.[30] WorldCom's local networks in Virginia include at least 71 route miles of fiber.[31] WorldCom serves **[WORLDCOM PROPRIETARY BEGINS] [WORLDCOM PROPRIETARY ENDS]** lines over facilities it has deployed itself as of the end of June 2001, including **[WORLDCOM PROPRIETARY BEGINS] [WORLDCOM PROPRIETARY ENDS]** residential lines based on facilities-based directory listings as of the end of May 2001, and resells **[WORLDCOM PROPRIETARY BEGINS] [WORLDCOM PROPRIETARY ENDS]** lines. As of the end of May 2001, WorldCom was providing residential service to **[WORLDCOM PROPRIETARY BEGINS] [WORLDCOM PROPRIETARY ENDS]** business customers using UNE platforms. WorldCom has ported **[WORLDCOM PROPRIETARY BEGINS] [WORLDCOM PROPRIETARY ENDS]** numbers, and is using **[WORLDCOM PROPRIETARY BEGINS] [WORLDCOM PROPRIETARY ENDS]** unbundled, standalone loops.

C. Cavalier Telephone

21. Cavalier Telephone, based in Richmond, boasts "a state-of-the-art telecommunications network in Richmond, Hampton Roads, and northern Virginia, including 150 miles of fiber optic backbone, three Lucent 5EE switches, and more than 60 colocation sites."[32] Cavalier states that its "one purpose" is to provide competition for Verizon.[33] The company targets both business and residential phone customers for its voice, Internet, and data service offerings. Cavalier began offering local service in the Richmond area in 1999.[34] Seventy percent of its customer base in Virginia is residential.[35] Cavalier recently announced its intention

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[26] G. Edwards, *AT&T Cable Monthly Rate to Go Up 5%, or About $1.50*, Richmond Times-Dispatch at B-12 (Jan. 4, 2001).

[27] G. Edwards, *Phone Companies in Dispute on Rates*, Richmond Times-Dispatch at B-10 (Oct. 13, 2000).

[28] G. Edwards, *Changes Affect Local Cable Firms*, Richmond Times-Dispatch at B-8 (Aug. 24, 2000).

[29] MFS began offering service in Richmond in 1995. *CLEC Report 1997* at 450.

[30] *CLEC Report 2001*, Ch. 13 – WorldCom at 23; *May 2001 LERG*.

[31] *CLEC Report 1997* at 450.

[32] Cavalier Telephone, *Company History*, http://www.cavtel.com/about/about_history.htm. Cavalier operates local voice switches in Richmond, Norfolk, and Herndon. *May 2001 LERG*.

[33] Cavalier Telephone, *About Us*, http://www.cavtel.com/about/about_main.htm.

[34] G. Edwards, *Competition Comes Calling*, Richmond Times-Dispatch at D16 (Jan. 10, 2000).

[35] V. Sinha, *$175 Million Pumped Into Richmond Phone Firm Competition Pleased That Investors Are Supporting Telecom*, Virginian-Pilot at D1 (Jan. 3, 2001).

to purchase Conectiv Communications.[36] Cavalier also received $175 million from a variety of corporate and institutional investors to fund its expansion.[37]

22. Cavalier provides local voice and data service in Alexandria, Annandale, Arlington, Baileys Crossroads, Centerville, Chantilly, Fairfax, Falls Church, Hampton Roads, Herndon, McLean, Norfolk, Reston, Richmond, Springfield, Sterling, Tysons Corner, and Vienna.[38] As of the end of June 2001, Cavalier provides service to **[CAVALIER PROPRIETARY BEGINS]** **[CAVALIER PROPRIETARY ENDS]** lines over facilities it has deployed itself,[39] including **[CAVALIER PROPRIETARY BEGINS]** **[CAVALIER PROPRIETARY ENDS]** lines to residential customers based on directory listings data. Cavalier has ported **[CAVALIER PROPRIETARY BEGINS]** **[CAVALIER PROPRIETARY ENDS]** numbers, and is using **[CAVALIER PROPRIETARY BEGINS]** **[CAVALIER PROPRIETARY ENDS]** unbundled, standalone loops. Cavalier has obtained **[CAVALIER PROPRIETARY BEGINS]** **[CAVALIER PROPRIETARY ENDS]** NXX codes in Virginia.

D. Net2000 Communications

23. Net2000 is a facilities-based communications services provider that markets itself as "an alternative to the traditional telephone companies."[40] Net2000 offers integrated packages of local, long distance, high-speed data, and video services.[41] Net2000 focuses primarily upon Verizon's service territory.[42] Chairman and CEO Charlie Thomas remarked that Net2000 is doing "extraordinarily well" in Virginia markets.[43]

24. Net2000 has a major presence in Virginia. The company provides voice and data services in Alexandria, Hampton Roads, Norfolk, Richmond, and Williamsburg, operating both a local voice and a data switch in Richmond, as well as a data switch in Norfolk.[44] Net2000 also plans to operate a data switch in Alexandria.[45] The company announced recently that it will deploy metropolitan fiber rings, as well as next generation softswitches, optronics, and other

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[36] G. Edwards, *Cavalier Telephone to Buy Conectiv Communications*, Richmond Times-Dispatch (June 7, 2001).

[37] V. Sinha, *Industry Watchers Say There's Plenty of Room for Competition Despite Setbacks, Young Market Still Shows Promise*, Virginian-Pilot at D8 (Jan. 21, 2001).

[38] *CLEC Report 2001*, Ch. 13 – Cavalier Telephone at 5-6.

[39] *See also* R. Burke, *Phone Wars*, Virginia Business at 25 (July 2001) (Cavalier serves 80,000 access lines in Richmond, Hampton Roads, and northern Virginia).

[40] Net2000, 2000 10-K at 5 (SEC filed Apr. 13, 2001).

[41] *Id.*

[42] *CLEC Report 2001*, Ch. 13 – Net 2000 Communications at 3.

[43] R. Burke, *Phone Wars*, Virginia Business at 29 (July 2001).

[44] *CLEC Report 2001*, Ch. 13 – Net 2000 Communications at 11-12; *May 2001 LERG*.

[45] *CLEC Report 2001*, Ch. 13 – Net 2000 Communications at 11-12.

network equipment in order to rely less on local incumbents in connecting with customers.[46] Net2000 serves **[NET2000 PROPRIETARY BEGINS]** **[NET2000 PROPRIETARY ENDS]** lines over facilities in Virginia it has deployed itself as of the end of June 2001, and **[NET2000 PROPRIETARY BEGINS]** **[NET2000 PROPRIETARY ENDS]** business lines on a resale basis. Net2000 has ported **[NET2000 PROPRIETARY BEGINS]** **[NET2000 PROPRIETARY ENDS]** numbers, and has obtained **[NET2000 PROPRIETARY BEGINS]** **[NET2000 PROPRIETARY ENDS]** NXX codes in Virginia.

E. Adelphia Business Solutions

25. Adelphia Business Solutions (formerly Hyperion Telecommunications) was formed in 1991 by Adelphia Communications, one of the nation's largest cable television providers, to provide integrated communications services, including local service, to business customers.[47] Adelphia operates three fiber networks with three local voice switches in Virginia.[48] These fiber networks and switches are located in Richmond, Norfolk and Danville.[49] In addition, the company is building a 700-mile network out of Norfolk.[50] Adelphia activated its switching facility in Hampton Roads in March 2000 in order to give it "more independence from Bell Atlantic."[51]

26. As of the end of June 2001, Adelphia serves **[ADELPHIA PROPRIETARY BEGINS]** **[ADELPHIA PROPRIETARY ENDS]** lines in Virginia over facilities it has deployed itself, virtually all of which are to business customers, and **[ADELPHIA PROPRIETARY BEGINS]** **[ADELPHIA PROPRIETARY ENDS]** lines to business customers on a resale basis as of the end of May 2001. Adelphia has ported **[ADELPHIA PROPRIETARY BEGINS]** **[ADELPHIA PROPRIETARY ENDS]** numbers, and has obtained **[ADELPHIA PROPRIETARY BEGINS]** **[ADELPHIA PROPRIETARY ENDS]** NXX codes in Virginia.

F. Allegiance Telecom

27. Allegiance Telecom is a facilities-based integrated communications provider serving primarily business customers in the Washington DC area, including the communities of Alexandria, Arlington, Falls Church and McLean in northern Virginia.[52] As of the end of June

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[46] *Competitive Telecom Carrier Net2000 Raises $190 Million in Additional Capital, Fully Funding Current Business Plan*, Business Wire (Mar. 29, 2001).

[47] Adelphia Business Solutions Press Release, *Hyperion Telecommunications, Inc. Completes Name Change to Adelphia Business Solutions, Inc.* (Oct. 25, 1999).

[48] *CLEC Report 2001*, Ch. 13 – Adelphia Business Solutions at 16-17.

[49] *Id.*; *Ticker*, Daily Press at E1 (Mar. 12, 2000); *CLEC Report 2000*, Ch. 9 – Adelphia Business Solutions at 15-16; *May 2001 LERG*.

[50] V. Sinha, *$175 Million Pumped into Richmond Phone Firm Competition Pleased that Investors are Supporting Telecom*, Virginian-Pilot at D1 (Jan. 3, 2001).

[51] *Ticker*, Daily Press at E1 (Mar. 12, 2000).

[52] *CLEC Report* 2001, Ch. 13 – Allegiance Telecom, Inc. at 3.

2001, Allegiance serves **[ALLEGIANCE PROPRIETARY BEGINS]** **[ALLEGIANCE PROPRIETARY ENDS]** lines in Virginia over facilities it has deployed itself. Allegiance has ported **[ALLEGIANCE PROPRIETARY BEGINS]** **[ALLEGIANCE PROPRIETARY ENDS]** numbers, and is using **[ALLEGIANCE PROPRIETARY BEGINS]** **[ALLEGIANCE PROPRIETARY ENDS]** unbundled, standalone loops. Allegiance operates one voice switch and one data switch in Washington DC that serves its northern Virginia customers.[53]

G. ALLTEL

28. ALLTEL offers a full range of telecommunications services, including local service (both as an incumbent and as a CLEC), long distance, wireless, and DSL services.[54] ALLTEL has more than ten million communications customers in 24 states, and more than $7 billion in annual revenues.[55] ALLTEL currently offers competitive local voice and data services in Hampton, Newport News, Norfolk, Portsmouth, Virginia Beach, and Williamsburg, and in Richmond and Chesapeake, where it operates local voice switches.[56] ALLTEL's competitive offerings in Virginia focus on providing bundled services.[57] ALLTEL serves **[ALLTEL PROPRIETARY BEGINS]** **[ALLTEL PROPRIETARY ENDS]** lines in Virginia over facilities it has deployed itself as of the end of June 2001, including **[ALLTEL PROPRIETARY BEGINS]** **[ALLTEL PROPRIETARY ENDS]** lines to residential customers based on directory listings as of the end of May 2001. ALLTEL has ported **[ALLTEL PROPRIETARY BEGINS]** **[ALLTEL PROPRIETARY ENDS]** numbers, and is using **[ALLTEL PROPRIETARY BEGINS]** **[ALLTEL PROPRIETARY ENDS]** unbundled, standalone loops.

H. Comcast Business Communications

29. Comcast Business Communications (CBC), a wholly-owned indirect subsidiary of Comcast Corporation, provides "crystal-clear voice transmissions over a broadband optical network – offering unparalleled reliability and scalability" to small and medium-sized business customers.[58] CBC's strategy is to focus its operations within Comcast's cable footprint to leverage existing infrastructure, rather than pursue a capital-intensive nationwide market expansion.[59] CBC provides service to **[COMCAST PROPRIETARY BEGINS]**

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[53] *Id.*, Allegiance Telecom Inc. at 18; *May 2001 LERG.*

[54] *CLEC Report 2001,* Ch. 13 – ALLTEL at 3.

[55] *CLEC Report 2001,* Ch. 13 – ALLTEL at 7.

[56] *CLEC Report 2001*, Ch. 13 – ALLTEL at 9-10; *May 2001 LERG*; *On the Move,* Daily Press (Jan. 8, 2001).

[57] ALLTEL Press Release, *ALLTEL Offers Local Phone Service in Virginia Beach Area* (Jan. 10, 2000); ALLTEL Press Release, *ALLTEL Offers Single Connection That Saves Up to 30 Percent* (June 22, 2001).

[58] Comcast Business Communications Press Release, *Comcast Business Communications Names Rick C. Attanasio Senior Vice President of Engineering* (June 13, 2001); Comcast Business Communications, *Local,* http://www.comcastbusiness.com/frames.asp?section=products_and_services&page=local&border=4; *CLEC Report 2001*, Ch. 13 – Comcast Business Communications at 3.

[59] *CLEC Report 2001*, Ch. 13 – Comcast Business Communications at 4.

[COMCAST PROPRIETARY ENDS] lines in Virginia as of the end of June 2001, including at least 9,700 lines in Alexandria, where it operates a local voice switch with 43 buildings on-net, and at least 1,520 lines in Prince William County, where it has 11 buildings on-net.[60] CBC has ported **[COMCAST PROPRIETARY BEGINS]** **[COMCAST PROPRIETARY ENDS]** numbers.

I. Cox Communications

30. Cox provides service to business and residential customers over its cable network using circuit-switched technology.[61] Cox has deployed at least 1,800 route miles of fiber and operates local voice switches in Norfolk and Newport News.[62] In March 2001, Cox launched the Cox Office Solutions Pak, a flat-rate offering for small and medium-sized businesses.[63] Cox Digital Telephone service offers Cox cable customers "a less expensive, digital, reliable alternative for residential service."[64] According to Cox president and CEO Jim Robbins, Cox customers are responding "[b]eyond [Cox's] wildest expectations."[65] Cox Digital Telephone service is currently available in Hampton Roads and parts of Newport News, Williamsburg, and Virginia Beach.[66]

31. Cox provides local phone service to more than 62,000 lines in Virginia.[67] Cox serves **[COX PROPRIETARY BEGINS]** **[COX PROPRIETARY ENDS]** lines in Virginia over facilities it has deployed itself as of the end of June 2001, including **[COX PROPRIETARY BEGINS]** **[COX PROPRIETARY ENDS]** lines to residential customers based on facilities-based directory listings as of the end of May 2001. Cox also provides service to **[COX PROPRIETARY BEGINS]** **[COX PROPRIETARY ENDS]** business customers on a resale basis. Cox has ported **[COX PROPRIETARY BEGINS]** **[COX PROPRIETARY ENDS]** numbers, and is using **[COX PROPRIETARY BEGINS]** **[COX PROPRIETARY ENDS]** unbundled, standalone loops.

J. Intermedia Communications

32. Intermedia is one of the largest independent CLECs in the United States with a significant presence in Virginia.[68] On September 5, 2000, WorldCom and Intermedia announced

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[60] *Id.*, Comcast Business Communications at 6; *May 2001 LERG.*

[61] *CLEC Report 2001*, Ch. 13 – Cox Communications at 3.

[62] *May 2001 LERG.*

[63] *CLEC Report 2001*, Ch. 13 – Cox Communications at 3.

[64] Jim Robbins, President and Chief Executive Officer, Cox Communications, Inc., *Telecommunications Competition Is Flowing*, http://www.cox.com/corp/Competition.asp.

[65] *Id.*

[66] Cox Communications, *Cox Digital Telephone*, http://www.cox.com/Hamptonroads/DigitalTelephone/default.asp?c=main.asp&; Cox Communications, *Cox Digital Telephone: Availability*, http://www.cox.com/Hamptonroads/DigitalTelephone/default.asp?c=main.asp&.

[67] R. Burke, *Phone Wars*, Virginia Business at 25 (July 2001).

[68] *CLEC Report 2001*, Ch. 13 – Intermedia at 3.

their intention to merge.[69] Pursuant to a consent decree entered into with the Department of Justice, WorldCom will spin off all of Intermedia's operations, except for Digex, its web-hosting business, by the end of the year.[70]

33. Intermedia's operations in Virginia include voice networks in Arlington, Herndon, Richmond, and Norfolk, and also in Fairfax, where it has deployed a local voice switch.[71] Intermedia also operates a data network with a data switch in Richmond.[72] Intermedia serves **[INTERMEDIA PROPRIETARY BEGINS]** **[INTERMEDIA PROPRIETARY ENDS]** lines over facilities in Virginia it has deployed itself as of the end of June 2001, and has ported **[INTERMEDIA PROPRIETARY BEGINS]** **[INTERMEDIA PROPRIETARY ENDS]** numbers as of the end of May 2001.

K. KMC Telecom

34. KMC Telecom is a fiber-based integrated communications provider, offering voice, data, and network applications services.[73] KMC operates in 37 cities in the U.S., with more than 12,000 customers using eight million access lines over 150,000 fiber optic miles.[74] KMC focuses on business customers in Tier III cities (those with 100,000 to 750,000 residents).[75]

35. KMC began reselling Verizon services in Virginia in 1998.[76] KMC has since deployed at least 150 route miles of fiber, and operates one local voice switch in Roanoke and another local voice switch in Portsmouth.[77] KMC also operates data switches in both Roanoke and Hampton Roads.[78] In Hampton Roads, KMC has already deployed over 150 route miles of fiber.[79]

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[69] WorldCom Press Release, *WorldCom Gains Control of Digex Through Merger with Intermedia* (Sept. 5, 2000).

[70] WorldCom Press Release, *U.S. Department of Justice Approves WorldCom-Intermedia Merger* (Nov. 17, 2000). The parties agreed to complete the divestiture within six months after the merger closed; the merger was completed on July 1, 2001. WorldCom Press Release, *WorldCom, Inc./Intermedia Merger Completed* (July 1, 2001).

[71] *CLEC Report 2001*, Ch. 13 – Intermedia at 19-23; *May 2001 LERG.*

[72] *CLEC Report 2001,* Ch. 13 – Intermedia at 24-28.

[73] KMC Press Release, *KMC Telecom Launches ASP Services in Roanoke, Providing Key Business Software Applications Via Fiber Optic Network* (Jan. 8, 2001); *In Business*, Roanoke Times & World News at A8 (Jan. 9, 2001).

[74] KMC Telecom, *Executive Strategies* (Roanoke, VA), Vol. 1, No. 1 (Spring 2001). http://www.kmctelecom.com/cities/pdf/Roanoke.pdf.

[75] KMC Telecom, *About KMC*, http://www.kmctelecom.com/company/index.cfm.

[76] P. Dujardin, *N. J. Firm To Provide Local Phone Service: KMC Telecom Holdings Will Target Business Customers*, Daily Press at C9 (May 19, 1999).

[77] *CLEC Report 2000*, Ch. 9 – Cavalier Telephone at 5; KMC Telecom at 11; *May 2001 LERG.*

[78] *CLEC Report 2001*, Ch.13 – KMC Telecom at 12-13.

[79] *Ticker*, Daily Press at C8 (Dec. 16, 1999).

36. According to Pete Kraehmer, KMC's Hampton Roads director, "the market has been receptive to alternative services."[80] In January 2000, KMC launched its "KMC The 1" campaign in Virginia, which focuses directly on competing with Verizon for bundled services customers.[81] KMC COO Roscoe Young, II noted that "increased competition in telecommunications has stimulated the range of choices available."[82] KMC serves **[KMC PROPRIETARY BEGINS]** **[KMC PROPRIETARY ENDS]** lines over facilities in Virginia which it has deployed itself as of the end of June 2001, and has ported **[KMC PROPRIETARY BEGINS]** **[KMC PROPRIETARY ENDS]** numbers as of the end of May 2001. KMC provides service to **[KMC PROPRIETARY BEGINS]** **[KMC PROPRIETARY ENDS]** business customers on a resale basis, and has obtained **[KMC PROPRIETARY BEGINS]** **[KMC PROPRIETARY ENDS]** NXX codes in Virginia.

L. NTELOS

37. NTELOS is a regional integrated communications provider offering a broad range of wireless and wireline products and services to business and residential customers in Virginia, West Virginia, Kentucky, Tennessee and North Carolina.[83] In February 2001, the company completed its merger with Daleville-based R&B Communications, a competitive communications provider to business and residential customers in the Roanoke area, as well as in the New River Valley, since April 1998.[84] R&B Communications also operated as an incumbent in Botetourt County.[85] As of December 31, 2000, NTELOS operated a 200-mile fiber optic network in Virginia, with 5,900 CLEC access lines installed.[86] Rob Cale, vice president of marketing, noted that NTELOS has "put a great deal of emphasis . . . on owning the facilities. It helps us control the quality of service [and] the cost factor."[87]

38. NTELOS's network in Virginia consists of three local voice switches in Staunton, Winchester, and Troutville, and data networks with data switches in Roanoke and Waynesboro.[88] NTELOS also serves customers in Charlottesville, Danville, Harrisonburg, Lexington, Lynchburg, Martinsville, New River Valley, Richmond, Staunton, and Winchester through on-net facilities.[89] In addition to lines provided over facilities it has deployed itself, NTELOS

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[80] M. Clark, *Phone Companies Prepare for Battle in Virginia*, Virginian-Pilot (June 11, 1999).

[81] M. Clark, *Competition Heats Up for High-Speed Net Access in Virginia Beach, Va.*, Virginian-Pilot (Jan. 18, 2000).

[82] M. Clark, *Choices for Phone, Net Service Expand*, Virginian-Pilot at D11 (Jan. 23, 2000).

[83] NTELOS, Inc., *10-Q* (SEC filed May 15, 2001).

[84] NTELOS Press Release, *NTELOS and R&B Merger Finalized* (Feb. 13, 2001); NTELOS, Inc., *10-Q* (SEC filed May 15, 2001); J. Sturgeon, *New Jersey-based KMC to Compete with Bell Atlantic in Roanoke, Va.*, Roanoke Times (Sept. 20, 1998).

[85] J. Sturgeon, *New Jersey-based KMC to Compete with Bell Atlantic in Roanoke, Va.*, Roanoke Times (Sept. 20, 1998); NTELOS, Inc., 10-K405 (SEC filed Mar. 30, 2001).

[86] NTELOS, Inc., 10-K405 (SEC filed Mar. 30, 2001).

[87] R. Burke, *Phone Wars*, Virginia Business at 29 (July 2001).

[88] *May 2001 LERG*; *CLEC Report 2001*, Ch. 13 – NTELOS, Inc. at 7.

[89] *CLEC Report 2001*, Ch. 13 – NTELOS, Inc., at 6.

serves **[NTELOS PROPRIETARY BEGINS]** **[NTELOS PROPRIETARY ENDS]** business lines on a resale basis. NTELOS has ported **[NTELOS PROPRIETARY BEGINS]** **[NTELOS PROPRIETARY ENDS]** numbers, and is using **[NTELOS PROPRIETARY BEGINS]** **[NTELOS PROPRIETARY ENDS]** unbundled, standalone loops.

M. US LEC

39. US LEC is a switch-based telecommunications carrier providing integrated local, long distance, data and Internet services to businesses in major cities throughout the southeastern and mid-Atlantic United States.[90] Using its 24 switching centers, the company serves 5,000 medium and large-sized business customers in 60 markets.[91] US LEC does not operate its own fiber network and leases the transport from various sources.[92] The company began providing service in Virginia in March 1999.[93] According to Aaron Cowell, US LEC executive vice president and general counsel, "[t]he rapid growth and favorable business climates in Virginia and the District of Columbia have afforded US LEC valuable opportunities to provide new and innovative services to customers here."[94] Jay Lowery, US LEC Director of Sales - Norfolk/Virginia Beach, added that "[b]usinesses in this area are receptive to a new choice for telecommunications."[95]

40. US LEC's network in Virginia consists of three local voice switches in Richmond, Virginia Beach, and Tysons Corner, and Lucent CBX500 ATM data switches in Richmond, Norfolk, and northern Virginia/Washington, D.C.[96] US LEC serves **[US LEC PROPRIETARY BEGINS]** **[US LEC PROPRIETARY ENDS]** access lines over these networks as of the end of June 2001, including **[US LEC PROPRIETARY BEGINS]** **[US LEC PROPRIETARY ENDS]** residential lines based on directory listings as of the end of May 2001. US LEC has ported **[US LEC PROPRIETARY BEGINS]** **[US LEC PROPRIETARY ENDS]** numbers, and has obtained **[US LEC PROPRIETARY BEGINS]** **[US LEC PROPRIETARY ENDS]** NXX codes in Virginia.

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[90] US LEC, *About Us*, http://www.uslec.com/.

[91] *Id.*

[92] *CLEC Report 2001*, Ch. 13 – US LEC Corp., at 3, 11, 12.

[93] US LEC Press Release, *US LEC Completes Switch Installation in Northern Virginia/Washington, DC* (Jan. 12, 2000).

[94] *Id.*

[95] US LEC Press Release, *US LEC Completes Switch Installation in Norfolk/Virginia Beach, VA* (Mar. 23, 1999).

[96] *May 2001 LERG*; US LEC Press Release, *US LEC Enhances Data Network* (May 17, 2001).

N. Other Competitors

41. Other competitors have announced their plans to provide facilities-based service in Virginia. For example, as part of the SBC/Ameritech merger commitments, SBC's CLEC subsidiary SBC Telecom plans to begin providing service in Norfolk by the end of 2001.[97]

42. RCN has been certified to provide competitive local exchange service in Virginia since August 1999.[98] RCN's Starpower venture received approval in August 2000 to provide competitive cable services to more than 90,000 households in Arlington County.[99] As of January 2001, RCN is in the process of obtaining approval to provide service in Fairfax County.[100] RCN has deployed voice and data networks in Falls Church, and a data network in Arlington.[101] Starpower "will be constructing a new advanced high-capacity fiber-optic network that will offer residents state-of-the-art digital video services, clear telephone connections, fast Internet access and the best overall value in the marketplace."[102]

43. Digital Teleport, Inc. (DTI) is a facilities-based provider that offers high-capacity voice and data transmission services. DTI focuses on underserved markets in secondary and tertiary cities.[103] In March 2000, DTI signed an agreement with the Virginia Department of Transportation for the use of approximately 1,300 miles of interstate highway rights-of-way.[104] DTI plans to deploy fiber-optic cable that will track 20 percent of Virginia's interstates and highways.[105] Construction began in northern Virginia and will continue through Richmond and Hampton Roads.[106] DTI CEO Richard Weinstein explained that DTI's interest in the deal

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[97] *CLEC Report 2001*, Ch. 13 – SBC Telecom at 8-9.

[98] RCN Press Release, *RCN Signs First Agreement to Offer Competitive Communications Services in State of Virginia* (Aug. 10, 1999).

[99] Starpower Communications Press Release, *Starpower Granted Franchise Agreement to Offer Its Competitive Cable Television Services to Residents of Arlington County, Va.* (Aug. 8, 2000), http://www.starpower.net/news/08-00/08-08-2000.html (quoting John D. McCallum, Starpower's co-chairman and president of Pepco Communications).

[100] Roanoke Times & World News at A9 (Jan. 25, 2001).

[101] *CLEC Report 2001*, Ch. 13 – RCN Corporation at 10-13.

[102] Starpower Communications Press Release, *Starpower Granted Franchise Agreement to ffer Its Competitive Cable Television Services to Residents of Arlington County, Va.* (Aug. 8, 2000), http://www.starpower.net/news/08-00/08-08-2000.html (quoting John D. McCallum, Starpower's co-chairman and president of Pepco Communications).

[103] Digital Teleport, Inc., *About DTI*, http://www.dti-usa.com/aboutFrame.tpl.

[104] Digital Teleport, Inc. Press Release, *Digital Teleport, Inc. Announces Interstate Highway Rights-of-Way Agreement With the State of Virginia* (Mar. 20, 2000).

[105] *VDOT Getting In on the Fiber Optic Act,* Associated Press (Apr. 1, 2001); *CLEC Report*, Ch. 13 – Digital Teleport at 11.

[106] Digital Teleport, Inc. Press Release, *Digital Teleport, Inc. Announces Interstate Highway Rights-of-Way Agreement With the State of Virginia* (Mar. 20, 2000); *CLEC Report*, Ch. 13 – Digital Teleport at 11.

resulted from "the substantial pent up demand for telecommunications facilities in Virginia."[107] DTI provides voice, data, and Internet services in Richmond and in northern Virginia.[108]

OTHER SOURCES OF LOCAL COMPETITION

44. Data now accounts for a significant share of traffic on Verizon's telephone network, and data traffic is growing much faster than voice traffic. Many of the voice, video, and wireless competitors discussed below have specifically targeted the data market, and several Virginia cable operators provide high-speed Internet access through cable modem service. Some of these cable operators now provide voice services over their cable networks.[109] In 1999 alone, for example, Virginia cable companies invested $300 million in infrastructure within the Commonwealth "in order to improve service quality and reliability, and to offer new services such as high speed data over cable modems, telephone service and digital cable."[110] Voice over IP and ATM technologies allow end users to "place a call anywhere over a data network and enjoy the level of quality that is associated with circuit switched technology."[111] DSL providers and fixed wireless networks are expected to provide competitive voice services in the near future.[112]

45. **Cable Modem Providers.** Cox Communications provides cable service to over 700,000 customers in Virginia.[113] Cox began aggressively advertising Cox@Home, a high-speed Internet service, to its 58,000 cable customers in Roanoke, Roanoke County, and Vinton,

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[107] Digital Teleport, Inc. Press Release, *Digital Teleport, Inc. Announces Interstate Highway Rights-of-Way Agreement With the State of Virginia* (Mar. 20, 2000); *CLEC Report*, Ch. 13 – Digital Teleport at 11.

[108] *CLEC Report 2001*, Ch. 13 – Digital Teleport at 9-11.

[109] *See, e.g.*, G. Edwards, *MediaOne to Offer Phone Service*, Richmond Times-Dispatch at B-6 (Oct. 1998) (MediaOne, now AT&T Broadband, began offering local phone service in Richmond over its cable network in 1998).

[110] Virginia Cable Telecommunications Association, *Cable's Contributions to Virginia*, http://www.vcta.com/contributions.html.

[111] D. Heger, A.G. Edwards & Sons, Inc., Investext Rpt. No. 2820891, Telecommunications Equipment – Industry Report (Dec. 9, 1998); *see also* B. Robinson, *Sticking Around – Don't Believe Everything You Read (Except This), ATM Is Still Alive and Kicking*, tele.com (Nov. 27, 2000) (ATM "offers quality of service (QoS) for voice and can handle the service converged with data.").

[112] *See* D. Paiste, "*It's the Content*," Union Leader (Apr. 23, 2001) (quoting Morgan Stanley analyst Michael Lynch: "[W]e continue to believe that voice over DSL (VoDSL) will be a 'killer application' delivered as part of a broadband service offering."); E. Blackwell, *Reality Walks In*, Broadband Week at 1 (Apr. 16, 2001) (quoting Jason Marcheck, DSL analyst with The Strategis Group: "In the second half of 2001, you're going to see some movement with VoDSL. . . You're going to see some rollouts and some success stories."); The Strategis Group Press Release, *Market Downturn to Leave U.S. Fixed Wireless Market Unfazed, Says The Strategis Group* (Apr. 25, 2001).

[113] *See* Cox Communications, *About Cox*, http://www.cox.com/HAMPTONROADS/About/default.asp?c=main.asp& (Cox provides service to nearly 400,000 customers through out the Hampton Roads area); Cox Communications, *About Cox*, http://www.cox.com/ROANOKE/About (over 58,000 cable customers in the Roanoke area); Cox Press Release, *Cox Communications to Acquire Media General Systems in Northern Virginia* (Apr. 22, 1999) (Cox acquired more than 260,000 customers in Fairfax County and Fredericksburg through the acquisition of Media General systems in 1999).

last year.[114] Cox spent $13 million to upgrade its network there, and laid 550 miles of fiber-optic and coaxial cable to offer new broadband service, including cable modem and digital TV.[115] Cox has been offering cable modem service in Newport News since 1997,[116] in Hampton Roads since 1999,[117] and in northern Virginia since 2000.[118] Cox Digital Telephone service is currently available in Hampton Roads and parts of Newport News, Williamsburg, and Virginia Beach.[119]

46. AT&T Broadband, "the nation's largest broadband service provider,"[120] has been providing cable modem service in Richmond since June 1999.[121] In addition to Richmond, AT&T currently offers its Road Runner cable modem service in Ashland, and parts of Henrico, Hanover, and Goochland counties.[122] As of August 2000, AT&T had 2,500 subscribers to its Road Runner service in Virginia,[123] and that number is undoubtedly much higher today.

47. Comcast Cablevision began offering its @Home service in Chesterfield County in July 1998.[124] As of May 2000, approximately 5,000 of Comcast's 70,000 cable subscribers there had signed up for high-speed Internet access.[125] Comcast also offers service through its Planet

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[114] S. Brown Kelly, *Online on Cable; Cox Communications Isn't Just for TV Lovers Anymore. It Has Started Connecting with Internet Fans, Too*, Roanoke Times & World News at 1 (July 16, 2000).

[115] *Id.*

[116] L. Wagner, *Cox Offers Speedier Internet*, Virginian-Pilot at D1 (Nov. 25, 1997).

[117] S. Brown Kelly, *Online on Cable; Cox Communications Isn't Just for TV Lovers Anymore. It Has Started Connecting with Internet Fans, Too*, Roanoke Times & World News at 1 (July 16, 2000).

[118] *Id.* Cox offers @Home service in Hampton Roads, Road Runner service in Fairfax, and ISP Channel service in Fredericksburg. Cable Datacom News, *Commercial Cable Modem Launches in North America*, http://cabledatacomnews.com/cmic/cmic7.html.

[119] Cox Communications, *Cox Digital Telephone*, http://www.cox.com/Hamptonroads/DigitalTelephone/default.asp?c=main.asp&; Cox Communications, *Cox Digital Telephone: Availability*, http://www.cox.com/Hamptonroads/DigitalTelephone/default.asp?c=main.asp&.

[120] AT&T Broadband, *About Us*, http://www.attbroadband.com/services/other/AboutUs.html.

[121] G. Edwards, *Internet Service Starts Today*, Richmond Times-Dispatch at C-1 (June 12, 1999). AT&T's Road Runner service in Richmond was launched by MediaOne. *Id.*

[122] Cable Datacom News, *Commercial Cable Modem Launches in North America*, http://cabledatacomnews.com/cmic/cmic73.html; M. McCance, *Monthly Fee Cut Is Result of High-Speed Net Fight*, Richmond Times-Dispatch at E-6 (Jan. 21, 2001).

[123] G. Edwards, *Changes Affect Local Cable Firms*, Richmond Times-Dispatch at B-8 (Aug. 24, 2000).

[124] G. Edwards, *Comcast Enters High-Speed 'Net Service in Richmond, Va.-Area*, Richmond Times-Dispatch (July 1, 1998).

[125] M. McCance, *Jacking Up the Connection; Companies Roll Out High-Speed Internet Access for Homes*, Richmond Times-Dispatch (May 22, 2000) (quoting Comcast General Manager Kirby Brooks).

Cable partnership in the Carlisle/Chambersburg area.[126] In northern Virginia, Comcast provides @Home service in Alexandria and Woodbridge, and Expressnet service in Arlington.[127]

48. Adelphia provides cable modem services extensively throughout Virginia, offering its Powerlink service in Waynesboro, Winchester, Staunton, Fredericksburg, Charlottesville, and Blacksburg.[128] As a result of recent acquisitions including 30,000 cable subscribers through Cablevision of Loudoun,[129] and 43,000 cable subscribers through Prestige Cable,[130] Adelphia's Virginia cluster exceeds 700,000 cable subscribers.[131] Adelphia CFO Timothy Rigas noted that as of year-end 2000, the company's "weekly sales rate is ramping significantly. In recent weeks we have been adding up to 4,500 new high-speed data customers per week which puts us slightly ahead of our goals for 2001."[132]

49. Bedford CableVision offered the first cable modem service in central Virginia in November 1996.[133] Charter Communications provides service in Bedford City, Franklin County, Christianburg, and Russell County,[134] and plans to offer high-speed Internet service in Suffolk in the middle of 2001.[135] Chatmoss Cablevision offers cable modem service in Danville.[136] Cable modem access is available to 90 percent of Antietam Cable's system in Hagerstown, according

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[126] *Cable TV Firms Rollout High-Speed Internet Access with More Nodes*, Quad-State Bus. J. at 17 (Nov. 2000). Comcast completed its acquisition of Jones Intercable, which provided cable modem service in Alexandria and Prince William County, in March 2000. Comcast Press Release, *Comcast Completes Acquisition of Jones Intercable, Inc.* (Mar. 2, 2000).

[127] Cable Datacom News, *Commercial Cable Modem Launches in North America*, http://cabledatacomnews.com/cmic/cmic7.html. Jones Intercable, which was later acquired by Comcast, began offering cable modem service in Alexandria in 1996. *See* M. Mills, *Bell Atlantic Joins the Internet Access Party Line*, Washington Post at C01 (July 30, 1996).

[128] Cable Datacom News, *Commercial Cable Modem Launches in North America*, http://cabledatacomnews.com/cmic/cmic73.html. Adelphia began providing cable modem service in March 1998. M. Clothier, *High-Speed Internet Access Offered; Cable Modems Now Available*, Roanoke Times & World News at NRV2 (Mar. 21, 1998).

[129] *Community Networks Targets Smaller Cable Systems* (Apr. 7, 1997), http://www.ee.surrey.ac.uk/ Contrib/Edupage/1997/04/13-04-1997.html; S. Schafer, *Board Approves Cablevision Sale after Companies Agree to Terms*, Wash. Post at V01 (Oct. 21, 1999).

[130] Q7 Group, Inc., *The Q7 Group, Inc. is the Exclusive Media Rep for WNVT*, http://www.q7web.com/ wnvt/reach.htm. Adelphia acquired Prestige Cable in 2000. *See* M. Farrell, *Adelphia Bulks Up with Va. Cable Buys*, Multichannel News at 46 (June 19, 2000).

[131] *Adelphia to Buy More Cable Systems in Virginia*, Sky Report Headline News (June 14, 2000), http://www.skyreport.com/skyreport/jun2000/061400.htm.

[132] Adelphia Communications Press Release, *Adelphia Communications Announces Fourth Quarter and Full Year 2000 Results* (Apr. 2, 2001).

[133] J. Poindexter, *Tired of Web Ebb?*, Roanoke Times & World News at B6 (Oct. 24, 1996).

[134] S. Brown Kelly, *Online on Cable; Cox Communications Isn't Just for TV Lovers Anymore. It Has Started Connecting with Internet Fans, Too*, Roanoke Times & World News at 1 (July 16, 2000) (quoting David Burke, general manager of Charter Communications-Bedford).

[135] V. Sinha, *Cox Communications Works to Upgrade to Digital Cable*, Virginian-Pilot at D1 (Feb. 3, 2001).

[136] Cable Datacom News, *Commercial Cable Modem Launches in North America*, http://cabledatacomnews.com/cmic/cmic73.html.

to Cindy Garland, director of special projects. "We beta-tested it last January [1999] and began offering it in March [2000]. We're not mass marketing it yet; we're doing a gentle roll-out to avoid a backlog."[137]

50. **DSL Providers.** Several data CLECs have deployed DSL services in Virginia. Covad has been offering DSL service in Virginia since the end of 1998.[138] It provides service to both business and residential customers in Arlington, Alexandria, and Fairfax, as well as Richmond and Norfolk.[139] Covad has completed **[COVAD PROPRIETARY BEGINS]** **[COVAD PROPRIETARY ENDS]** physical collocation arrangements and **[COVAD PROPRIETARY BEGINS]** **[COVAD PROPRIETARY ENDS]** virtual collocation arrangement(s) in Virginia central offices, with another **[COVAD PROPRIETARY BEGINS]** **[COVAD PROPRIETARY ENDS]** physical arrangement(s) in progress. Covad is using **[COVAD PROPRIETARY BEGINS]** **[COVAD PROPRIETARY ENDS]** unbundled loops. Rhythms NetConnections provides DSL service in Richmond, Norfolk, and Virginia Beach.[140] Rhythms has completed **[RHYTHMS PROPRIETARY BEGINS]** **[RHYTHMS PROPRIETARY ENDS]** physical collocation arrangements and **[RHYTHMS PROPRIETARY BEGINS]** **[RHYTHMS PROPRIETARY ENDS]** virtual collocation arrangement(s) in Virginia central offices and has **[RHYTHMS PROPRIETARY BEGINS]** **[RHYTHMS PROPRIETARY ENDS]** physical collocation arrangement(s) in progress. Rhythms is using **[RHYTHMS PROPRIETARY BEGINS]** **[RHYTHMS PROPRIETARY ENDS]** unbundled loops. Network Access Solutions (NAS) offers service in Norfolk and Richmond.[141] NAS has completed **[NAS PROPRIETARY BEGINS]** **[NAS PROPRIETARY ENDS]** physical collocation arrangements and **[NAS PROPRIETARY BEGINS]** **[NAS PROPRIETARY ENDS]** virtual collocation arrangement(s) in Virginia central offices, with another **[NAS PROPRIETARY BEGINS]** **[NAS PROPRIETARY ENDS]** physical arrangement(s) and **[NAS PROPRIETARY BEGINS]** **[NAS PROPRIETARY ENDS]** virtual arrangement(s) in progress. NAS is using **[NAS PROPRIETARY BEGINS]** **[NAS PROPRIETARY ENDS]** unbundled loops.

51. Other CLECs are also offering advanced telecommunications services in Virginia, both on a stand-alone basis and bundled with other telephone services. Companies that have invested in and are providing DSL services to Virginia customers include Cavalier Telephone and NTELOS. As of the end of May 2001, Verizon has provisioned approximately 22,000 unbundled loops for this purpose (primarily xDSL loops).

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[137] *Cable TV Firms Rollout High-Speed Internet Access with More Nodes*, Quad-State Bus. J. at 17 (Nov. 2000).

[138] *See* Covad Press Release, *Covad Communications Announces DSL Services in Washington D.C. Area* (Nov. 23, 1998).

[139] Covad Press Release, *Covad Communications Announces DSL Services in Washington D.C. Area* (Nov. 23, 1998); Covad Press Release, *Covad Extends Its DSL Network to Norfolk and Richmond Business and Home Users* (Jan. 31, 2000).

[140] *See CLEC Report 2001*, Rhythms NetConnections at 7.

[141] Network Access Solutions Corp., *10-K* (SEC filed Mar. 30, 2001).

52. **Wireless and Satellite Providers.** The Strategis Group recently affirmed fixed wireless providers' "enormous potential for success," and noted that "there is still good reason to be bullish on the LMDS sector."[142] Broadband wireless services are expected to generate $6.3 billion by 2005, representing a compound annual growth of almost 60 percent.[143] Adelphia, NTELOS, and XO have LMDS licenses covering all of Verizon's wire centers in Virginia.[144] AT&T and Adelphia own 39 GHz licenses that together cover nearly half of Verizon's wire centers in Virginia.[145] NTELOS holds MMDS licenses enabling it to serve customers in Richmond, Roanoke, Charlottesville, Staunton, and their surrounding counties and covering 81 of Verizon's wire centers in Virginia.[146] WorldCom holds MMDS licenses enabling it to serve customers in Arlington, Alexandria, Norfolk, and surrounding counties, and covering 91 of Verizon's wire centers in Virginia.[147] WorldCom corporate sales forces have begun offering MMDS broadband services. "This is an integrated part of WorldCom's overall strategy," remarked Joe Brooks, vice president of sales and market development at WorldCom Broadband Solutions.[148]

53. Frontier Broadband plans to test its wireless broadband service in Richmond.[149] The company's strategy is to offer residential and business service to suburban and "semi-rural" areas. According to Frontier Broadband partner Mark Gottfried, "Smaller markets are not being served, and that's our business plan."[150] "The big thing is being able to bypass the local telephone company and cable company for high-speed service."[151]

54. Four mobile wireless companies that provide full coverage of the U.S. – AT&T, Sprint PCS, VoiceStream, and Cingular Wireless – operate wireless networks in Virginia. The FCC has cited statistics on increasing MOUs as a reflection of "decreasing prices and the general

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[142] The Strategis Group Press Release, *Market Downturn to Leave U.S. Fixed Wireless Market Unfazed, Says The Strategis Group* (Apr. 25, 2001) (quoting Peter Jarich, Director of Global Broadband Research). *See also Despite Challenges, Broadband Fixed Wireless Revenues to Increase 10 Fold, Reports Cahners In-Stat Group*, Business Wire (June 11, 2001) (quoting Cahners In-Stat Group's Wireless Group director Becky Diercks: "By circumventing the costs and time associated with laying expensive fiber, broadband fixed wireless technology offers an excellent means by which to capitalize on the vast potential of the broadband market.").

[143] The Strategis Group Press Release, *Market Downturn to Leave U.S. Fixed Wireless Market Unfazed, Says The Strategis Group* (Apr. 25, 2001).

[144] *See* FCC Wireless Telecommunications Bureau, *Universal Licensing System*, http://www.fcc.gov/wtb/uls/.

[145] *See id.*

[146] In February 2001, the company completed its merger with R&B Communications and changed its name from CFW Communications to NTELOS, Inc. NTELOS Press Release, *NTELOS and R&B Merger Finalized* (Feb. 13, 2001). *See also* FCC Wireless Telecommunications Bureau, *Auction Charts*, http://www.fcc.gov/auctions/.

[147] WorldCom completed its acquisition of CAI Wireless, an MMDS provider, in August 1999. MCI Worldcom Press Release, *MCI Worldcom Completes CAI Wireless Acquisition* (Sept. 1, 1999). *See also* FCC Wireless Telecommunications Bureau, *Auction Charts*, http://www.fcc.gov/wtb/auctions/.

[148] M. Grebb, *Can Broadband Save MMDS?*, Cablevision at 32 (May 28, 2001).

[149] M. McCance, *Richmond, Va., Partners Plan to Bring Broadband to Overlooked Locales*, Richmond Times-Dispatch (Feb. 20, 2001).

[150] *Id.*

[151] *Id.* (quoting Frontier Broadband partner Mark Gottfried).

wider acceptance of and reliance upon wireless service,"[152] and it has stated that this trend "may also indicate that mobile telephony is moving away from just complementing existing wireline voice service and towards competing directly with it."[153] In 2000, according to the FCC, the number of wireless phone subscribers in Virginia increased 32 percent – more than the nationwide growth of 27 percent.[154]

55. Analysts have recently noted that two-way broadband satellite technology also is poised to compete with terrestrial facilities: "We believe there is hidden value in business plans that focus on satellite's inherent advantages over terrestrial medium: the ability to broadcast a signal to unlimited subscribers over a wide region and cost-effective two-way communications in areas of low density."[155] Bear Stearns estimates that, in 2001, the first full year of service, StarBand and DirecPC will obtain 500,000 subscribers nationwide.[156]

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[152] *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993*, Fifth Report at 23, FCC 00-289 (rel. Aug. 18, 2000) (citing Paul Kagan Associates).

[153] *Id. See also Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993*, Sixth Report at 32, FCC 01-192 (rel. July 17, 2001) ("For some, wireless service is no longer a complement to wireline service but has become the preferred method of communication.") ("*Sixth CMRS Report*").

[154] *Sixth CMRS Report*, App. C at Table 2.

[155] M.E. Nabi, Merrill Lynch Capital Markets, Investext Rpt. No. 2807069, Telecommunications – Industry Report at *1 (Apr. 12, 2001).

[156] P. Jakel, *The DBS Box*, TelecomClick (May 23, 2001), http://www.telecomclick.com/newsarticle.asp?newsarticleid=202038.

CERTIFICATE OF SERVICE

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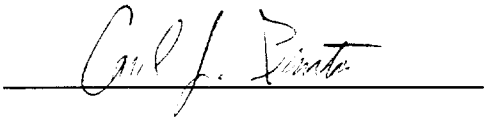

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