***** REDACTED VERSION *****

STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

Proceeding on Motion of the Commission to Consider Cost Recovery by Verizon and to Investigate the Future Regulatory Framework	**Case 00-C-1945**

INITIAL PANEL TESTIMONY OF VERIZON NEW YORK INC. ON THE NEW YORK COMPETITIVE MARKETPLACE

Members of the Panel:

Kenneth Gordon
William E. Taylor

May 15, 2001

TABLE OF CONTENTS

Page

***** REDACTED VERSION *****

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I. INTRODUCTION AND SUMMARY

A. Introduction Of The Panel

Q. Please state your names, positions and current business addresses.

A. My name is Dr. Kenneth Gordon. My business address is One Main Street, Cambridge, Massachusetts 02142. I am a Special Consultant of National Economic Research Associates, Inc. ("NERA"). Previously, I was Senior Vice President at NERA.

My name is William E. Taylor. I am Senior Vice President of NERA, One Main Street, Cambridge, Massachusetts 02142. I am currently the head of its telecommunications economics practice and head of its Cambridge office.

Q. Dr. Gordon, please summarize your educational and professional qualifications.

A. I am an economist and former Chairman of the Maine Public Utilities Commission ("Maine Commission") and the Massachusetts Department of Public Utilities ("Mass. DPU"). The Mass. DPU is now known as the Massachusetts Department of Telecommunications and Energy.

I have been an economist since 1965, and I have been directly involved with developing and establishing regulatory policy at the federal and state levels since 1980, when I became an industry

economist at the Federal Communications Commission ("FCC"). I received my A.B. degree from Dartmouth College in 1960. I received my M.A. degree in 1963 and my Ph.D degree in 1973, both in economics, from the University of Chicago. I have taught applied microeconomics, industrial organization, and regulation (as well as other subjects) at Georgetown University, Northwestern University, University of Massachusetts at Amherst, and Smith College.

From 1980 to 1988, I was an industry economist at the FCC's Office of Plans and Policy, where I worked on a full range of regulatory issues, including telecommunications, cable, broadcast, and intellectual property rights. At the FCC, one of the major focuses of my work was activity aimed at introducing competition into communications markets.

Prior to joining NERA in November 1995, I chaired the Maine Commission (1988 to December 1992) and the Massachusetts Department of Public Utilities ("DPU") (January 1993 to October 1995). During my term as Chairman of the Mass. DPU, the DPU investigated and approved a price cap incentive regulation plan for NYNEX and also undertook a proceeding to examine interconnection and other issues related to the development of competition at all levels of telecommunications, including basic local service.

While I was its Chairman, the Mass. DPU issued a series of orders aimed at the reform of electric rate regulation, including revisions to integrated resource management procedures, the introduction of incentive regulation, the treatment of acquisition premiums in mergers and acquisitions, and the design of electric industry restructuring. I was very heavily involved in developing Massachusetts' plan to introduce competition in retail electric markets in that state and the concurrent efforts to establish practical policies to address stranded costs and other transitional issues that arise in restructuring the electric utility industry. While in Massachusetts, I co-chaired the Governor's task force on electricity competition.

While a regulator, I was active in the National Association of Regulatory Utility Commissioners ("NARUC"), serving on its Communications and Executive Committees. In 1992, I served as President of NARUC. I was also Chairman of the Bellcore Advisory Committee and the New England Governor's Conference Power Planning Committee. (My curriculum vitae, Part A to the Exhibit Accompanying Competition Panel Testimony, describes my qualifications in greater detail.)

Q. Dr. Taylor, please summarize your educational and professional qualifications.

A. I have been an economist for over twenty-five years. I received a B.A. degree in economics (Magna Cum Laude) from Harvard College in 1968, a master's degree in statistics from the University of California at Berkeley in 1970, and a Ph.D. in Economics from Berkeley in 1974, specializing in industrial organization and econometrics. I have taught and published research in the areas of microeconomics, theoretical and applied econometrics, and telecommunications policy at academic institutions (including the economics departments of Cornell University, the Catholic University of Louvain in Belgium, and the Massachusetts Institute of Technology) and at research organizations in the telecommunications industry (including Bell Laboratories and Bell Communications Research, Inc.). I have participated in telecommunications regulatory proceedings before state public service commissions, the Federal Communications Commission ("FCC"), and the Canadian Radio-television and Telecommunications Commission concerning competition policy, incentive regulation, access charges, pricing of public telephone services, measuring economic costs and efficient pricing. (My

curriculum vitae, Part B to the Exhibit Accompanying Competition Panel Testimony, describes my qualifications in greater detail.)

Q. Are there any other witnesses testifying for Verizon NY on issues related to competition?

A. Yes. In separate testimony, Dr. Alfred E. Kahn addresses the questions posed by the Commission concerning its policies and their effect on the development of competition in the State. In addition, the other panel of Verizon NY witnesses (on which Dr. Taylor also sits) discusses in greater detail than we do here the policy implications of the evidence of competition that we present here as they relate to the pricing and service quality issues raised by Verizon NY's proposal.

Q. Is there an exhibit accompanying your testimony?

A. Yes there is. Our "Exhibit Accompanying Competition Panel Testimony" ("Exhibit") consists of multiple parts and sections.

Q. What is the purpose of your testimony?

A. The purpose of our testimony is (i) to describe the substantial competition that exists for all telecommunications services currently provided by Verizon NY; (ii) to discuss the policy implications of such competition as they relate to Verizon NY's proposed plan for

alternative regulation; and (iii) to address the following questions raised by the New York Public Service Commission ("the Commission") in its "Order Instituting Proceeding" concerning the efficacy of its competition policies:

- "[W]hat else must be done to ensure that meaningful and permanent telecommunications competition flourishes"?[1]
- Is its current approach "conducive to the growth of facilities-based competition?"[2] and
- What, if any, measures are "needed to complete the transition to full and effective competition"?[3]

We answer these questions in the context of an assessment of the exchange and access competition currently faced by Verizon NY undertaken by Dr. Taylor in Section II of this panel testimony.

Q. Please summarize the aspects of the testimony for which each witness on this panel is responsible.

A. We are jointly responsible for the testimony regarding economic principles and the policy recommendations summarized in Section I and discussed in detail in Section III. Dr. Taylor is responsible for

[1] Case 00-C-1945, "Order Instituting Proceeding" (issued November 3, 2000) (the "Instituting Order") at 7.

[2] *Id.*

[3] *Id.* at 8.

the quantitative evidence presented in Section II regarding the competition in New York.

Q. How is your testimony organized?

A. Section I summarizes the evidence on competition as well as our conclusions concerning the policy implications of that evidence and the questions posed by the Commission regarding policies to encourage competition.

Section II describes the substantial competition that has emerged in New York. Subsection A thereof addresses the appropriate economic criteria the Commission should rely upon to assess the extent and effectiveness of competition in the areas served by Verizon NY and others. Subsection B focuses on the availability of substitute services and the extensive network facilities deployed by Verizon NY's competitors throughout the areas served by Verizon NY. Subsection C presents evidence on ease of entry and expansion in the New York markets. Subsection D shows that New York leads the nation in telecommunications competition. Subsection E explores the pattern of competition in New York and explains how the Commission's policies may have distorted entry and expansion decisions—*e.g.,* CLECs have relied primarily on Unbundled Network Element Platforms ("UNE-Ps") to serve

residence customers and the Commission's local exchange pricing policies are likely retarding increased use of facilities-based competition for residence and small business customers in low-density areas.

In Section III we explain that implementing more economically efficient policies—*e.g.,* raising residence rates to more competitive levels, resisting efforts to artificially stimulate competition by underpricing inputs used by competitive local exchange carriers ("CLECs"), and eliminating excessive requirements on the incumbent local exchange carrier ("ILEC")—would stimulate even more facilities-based competition.

B. Summary Of Findings On Competition And Policy Recommendations

Q. Please summarize the evidence presented in Section II regarding the extent and nature of competition faced by Verizon NY.

A. The evidence confirms what Commission Chairman Helmer told the world in a press release issued on September 20, 2000: "the competitive markets here are flourishing and consumers are benefiting. More and more New Yorkers can choose among an ever-increasing number of companies that offer pricing and services to fit their needs." As we explain in more detail later:

1. There is already substantial facilities-based competition in Verizon NY's area. E911 listings of CLECs show that CLECs were serving at least 1.27 million lines (using at least their own switches and, in most cases, using only their own facilities) as of April 2001.

2. As of April 2001, CLECs were serving over 3.4 million end-user lines in Verizon NY's service area, using a mix of their own facilities, unbundled network elements ("UNEs") and resale of Verizon NY's services.

3. There is substantial competition for residence and small business customers throughout Verizon NY's service area:

   - CLECs serve business customers of all sizes—including those with 5 or fewer lines—throughout Verizon NY's service area.
   - Competitors are currently serving residential customers in 517 of Verizon NY's 524 wire centers and can readily serve residential customers in the other 7 wire centers.
   - Facilities-based competition is present in wire centers that serve over 90 percent of Verizon NY's business lines.
   - Facilities-based competition is present in wire centers that serve over 64 percent of Verizon NY's residence lines.
   - Facilities based competitors use their own facilities to serve over 120,000 residence lines.

4. Competition is growing extremely rapidly in Verizon NY's area.

- The number of lines served by competitors increased by 117 percent from year end 1999 to year-end 2000.
- CLECs added about 1.4 million of their more than 1.8 million residential lines since the end of 1999, when Verizon NY's 271 approval became imminent.

5. New York accounts for a disproportionately large amount of all of the facilities-based competition in the country.

Verizon NY data imply there were over 1 million CLEC-owned lines—*i.e.*, lines provided without use of *any* ILEC network elements or resale—in Verizon NY's service area by April 2001.[4] Based on the most recently available (June 2000) data for the US and Verizon NY data for June 2000, about 19 percent of the CLEC owned lines in the entire country are in Verizon NY's service area.[5]

[4] This includes full bypass only, while the 1.27 million E911 listings reported above captures both full bypass and lines served by CLEC switches using UNE loops. We estimated the number of CLEC-owned lines by subtracting the number of UNE loops Verizon NY provides to CLECs from total CLEC E911 listings.

[5] As we explain later, CLECs were serving over 836,000 lines without using Verizon UNEs as of July 2000. The FCC reports that for the country as a whole—including New York—only about 4.2 million CLEC lines are "CLEC-owned" *i.e.*, provided entirely over CLEC facilities as of June 2000. We estimated the total for Verizon NY by subtracting the 191,680 UNE loops from the 1,071,848 E911 listings reported by Verizon NY for July 2000 and adjusting that figure to remove the estimated growth since June 2000. These data imply that Verizon NY accounted for about 19 percent of all of the CLEC-owned local access lines in the country. The national data are for June 2000, the most

(continued...)

6. There is much more overall competition in New York than in other states. By mid 2000, New York CLECs had captured 16 percent of end user lines, compared to about 7 percent nationwide.[6] Thus, although New York has about 7 percent of total US end user lines (13.7 million of 191.6 million), it accounts for about 17 percent of all CLEC lines (*i.e.*, including lines provided using UNEs or resale) in the US.[7]

7. Competition has been growing faster in New York than in the rest of the country. While New York CLEC lines grew by 81 percent, or about 1 million lines, in the first half of 2000, the number in the rest of the country grew by only 49 percent.[8]

(...continued)

recent date for which national data are available from the FCC. Source: FCC Common Carrier Bureau Industry Analysis Division, "Local Telephone Competition: Status as of June 30, 2000," December 2000, Table 3.

[6] FCC Common Carrier Bureau Industry Analysis Division, "Local Telephone Competition: Status as of June 30, 2000," December 2000, Table 5.

[7] *Id.* The FCC reports that CLECs had 2,157,618 end-user lines in New York and 12,746,924 total end-user lines in the United States as of June 30, 2000. These data underestimate the actual number of CLEC lines because only CLECs with greater than 10,000 access lines in a state are required to report those lines to the Commission.

[8] *Id.* FCC Common Carrier Bureau Industry Analysis Division, "Local Telephone Competition at the New Millennium," August 2000, Table 4.

8. Residence and small business lines account for a much larger portion of New York CLEC lines[9] than of CLEC lines in other states. As of June 30, 2000, 61 percent of New York CLEC lines served residences or small businesses,[10] compared to an average of only 36 percent in the remaining states for which such data were reported by the FCC.

9. New York has more widespread competition than any other state. FCC data on the number of Zip Code areas served by CLECs reveal that New York has the highest percentage of Zip Codes with CLEC service in the country. Thus, about 88 percent of New York Zip Code areas are served by CLECs while only 45 percent of Zip Code areas are served by CLECs in other states.[11]

10. The competition faced by Verizon is permanent. First, competitors have invested in and built a tremendous amount of facilities in Verizon NY's service area including: over

[9] The FCC defines small businesses as enterprises with three or less local exchange lines.

[10] FCC, Common Carrier Bureau Industry Analysis Division, "Local Telephone Competition Status as of June 30, 2000," December 2000, Table 7: Percentage of Lines Provided to Residential and Small Business Customers (as of June 30, 2000).

[11] FCC Common Carrier Bureau Industry Analysis Division "Local Telephone Competition Status as of June 30, 2000," December 2000, Table 11.

160 local voice switches; collocation in 277 offices that serve 93 percent of Verizon NY's lines; and thousands of miles of local fiber optic facilities that are literally "sunk" investments. Second, Verizon NY's 271 approval forced the major IXCs to compete vigorously for local services so that they can provide the full bundle of services to compete with Verizon NY. They will not abandon this effort as they clearly are committed to providing bundles of local and long distance services.[12] Third, although some competitors have recently exited the local exchange market in New York, their facilities remain in place, the market remains competitive and, indeed, will be stronger with the normal shakeout we would expect to see in this industry. Thus, even though competitors may come and go, the process of competition is clearly permanent or "irreversible."

11. Facilities-based competition is, as expected, more prevalent for business than for residence customers. CLECs use their own facilities to serve at least 1.15 million business lines and

[12] Although Sprint decided to discontinue serving local customers using UNE-Ps, it has already deployed Integrated On-Demand Network ("ION") switches capable of providing voice channels and DSL to customers using UNE loops and/or other local facilities: *see* Telcordia Local Exchange Routing Guide ("LERG"), January 2001.

about 120,000 residence lines (as derived from CLEC E911 listings). In contrast, CLECs use UNE-Ps to serve over 1.6 million residence lines—*i.e.*, about 94 percent of the total lines served by CLEC using Verizon NY's UNE-Ps. This pattern appears to stem from the following factors:

- The higher prices and lower costs of serving business customers made facilities-based competition for business customers attractive well before UNE-Ps became widely available and therefore, it was not necessary to use the UNE platform to serve business customers once it became widely available.

- The major IXCs understood that, once Verizon NY entered the long distance market, their supremacy in that market would face a serious challenge. Thus, the IXCs had a strong incentive to delay entering the local market for residence customers so they could claim that Verizon NY's local markets were not yet truly open to competition.

- Once Verizon NY's entry into the long distance market became imminent, UNE-Ps evidently provided the fastest, most profitable means for them to enter and expand in the local exchange market. Using this option allows them to minimize the risk of long distance losses by offering a bundle of local and long distance services and to minimize their own investment, yet take advantage of access charge savings.

Nevertheless, there is substantial facilities-based competition throughout the State for residence and small business customers and a few modifications to the Commission's policies would accelerate the spread of even more facilities-based competition for

these and other customers.

Q. Please summarize the policy implications of the data presented in this testimony.

A. The data discussed in detail in Section II below show that "meaningful and permanent competition" is already flourishing in the areas served by Verizon NY; and the Commission 's policies have been conducive to the growth of facilities-based competition—New York has the most of any state. This pervasive competition—coupled with the ongoing requirements of the 1996 Act—have clear policy implications in this proceeding.

First, the Commission should adapt regulation so as to allow market forces to operate as they should. As discussed in greater detail by witnesses on the other panel, this means that the Commission need no longer dictate the prices Verizon NY should charge for retail services, nor specify the quality of service it should provide its customers (by, for example, penalizing Verizon NY if it were to fall below Commission standards). Rather, it should allow Verizon NY to compete by providing service at prices and quality levels that the market demands. To do otherwise would be to hobble Verizon NY as a competitor and ultimately harm consumers who would be denied the full benefits of competition.

Second, while it is not precisely clear what the Commission means when it refers to "full and effective competition," the pattern that has emerged implies that its concern that it must somehow institute policy changes to "complete the transition to full and effective competition" may well be unfounded. As we show in detail in Section II, "effective competition" already exists in New York: Competitors can readily enter the relevant markets and are currently providing a full range of telecommunications services to both residence and business customers in all areas served by Verizon NY; and they can use their own facilities, alone and/or in combination with Verizon NY's UNEs, to compete effectively with Verizon NY—*i.e.*, to prevent Verizon NY from exercising market power over retail services.

However, assuming that the Commission equates "full" competition with facilities-based competition, "the transition to full and effective competition" would be facilitated by the following policies:

- Re-institute the process of moving to more efficient, cost-based rates that reduce the remaining subsidy to residence customers. Increasing monthly residence basic rates to bring them closer to cost-based levels—as proposed by Verizon NY—will stimulate more facilities-based competition for residence customers. Adopting the proposed business access line rate increase would stimulate additional competition for small business customers.

- Resist proposals to stimulate competition artificially—*e.g.,* by setting wholesale (UNE and resale) rates below economically appropriate levels. Obviously, if UNE rates are set too low, competitors will free ride on Verizon NY's network, rather than invest in their own network.

In the end, even if the Commission took no further action (or, more specifically, did not adopt the policy changes we recommend), it should nonetheless adopt Verizon NY's proposed alternative regulation plan. The level and type of competition that already exists in Verizon NY's service area, together with the requirements of the 1996 Act,[13] have eliminated any underlying market power that Verizon NY may once have had in the provision of retail services and will require Verizon NY to provide high quality service at competitive prices. As Professor Kahn has pointed out and discusses in his own testimony, "… the obligations imposed on the ILECs by the Telecommunications Act and complementary state policies have come as close as conceivable to making the provision of telephone services *at retail* perfectly contestable *and therefore regulation of the retail rates simply unnecessary*."[14]

[13] Our conclusion depends on the proposition that the unbundling and resale obligations of the Act have been effectively implemented. In fact, in obtaining authority to offer long distance under Section 271, Verizon NY demonstrated to both this Commission and the FCC that it had opened its markets in compliance with the requirements of the 1996 Act.

[14] Alfred E. Kahn, *Letting Go: Deregulating the Process of Deregulation*, Michigan State University Institute of Public Utilities, 1998, pp. 56-58, footnotes excluded.

II. ANALYSIS OF DATA ON COMPETITION FACED BY VERIZON NY

A. Assessing Competition

Q. How should the Commission assess the efficacy of competition?

A. To assess whether a firm faces effective competition for a service, economists consider whether: (1) current competitors can supply sufficiently close substitutes to the service to prevent a small but significant price increase above the competitive level;[15] or (2) entry barriers are sufficiently low that the threat of new entry can itself discipline the market price. In either case, competition will be sufficiently effective to replace regulation as the vehicle for protecting consumers.

The most reliable means of gauging whether effective local competition exists is to examine objective criteria concerning (i) availability of like and substitute services—including evidence that competitors are presently providing services (or possess the ability to rapidly provide services) in competition against an incumbent company; and (ii) ease of entry into the market. It is particularly

[15] The price increase contemplated by economic theory is an increase over *competitive* prices. In most local access markets, BA-NY's residence basic local rates are substantially below the competitive (cost-based) levels; thus, a price increase would be associated with a move towards competitive rates.

important to weigh evidence that competitors can rapidly provide services and that entry is easy in a market recently opened to competition. In recently opened markets, market share measures typically overstate the market power, if any, of the incumbent. Thus, the analysis should not focus solely on static market structure data from the recent past, although, as we will demonstrate, even those data show that competition is already present throughout the area served by Verizon NY for the services at issue. Moreover, the analysis must consider the regulatory context in which the incumbent is operating.

Q. Why should the Commission consider the regulatory context as well as the economic factors you just mentioned?

A. Regulation, together with underlying market conditions, affect supply and entry conditions. For example, it is significant that Verizon NY's prices for UNEs will continue to be set based on cost and governed by the 1996 Act and the Commission because the competitors' ability to use Verizon NY's network at cost—as well as their own networks, in cases where that is more cost effective—virtually eliminates Verizon NY's ability to raise prices above competitive (cost-based) levels.

1. Availability Of Substitute Services

Q. What is the significance of the availability of substitute services when evaluating the efficacy of competition?

A. If substitute services are available, firms cannot profitably raise prices above competitive levels. If enough customers would respond to such a price increase by shifting to one or more substitute services (or simply stop using the firm's service), then the price increase would not be profitable, and the firm would not be able to charge prices above competitive levels. Similarly, if the quality of a firm's service deteriorates, customers will seek service from other competitors who are already providing service or can readily do so.

Q. Are there conditions under which raising rates does not signal the presence of market power?

A. Yes. The key is whether the rate increase would bring prices above competitive levels. Thus, in the present case, Verizon NY's proposal to raise basic residence and business rates will bring rates—currently set by regulation below competitive levels—closer to competitive levels. (*See* the panel testimony of Mr. Garzillo, and Dr. Taylor regarding pricing.)

Q. Do services have to be identical in all respects and sold at the same price to be considered substitute services?

A. No. Alternative services certainly need not be identical nor must they be equivalent in all respects in order for them to limit the ability of the regulated firm to raise prices profitably. All that is required is that customers be able to purchase from other providers a service or services that would fulfill the same function for them as the incumbent's service(s). A spectrum of alternatives may offer viable competitive options. Customers constantly make tradeoffs and choices among imperfect substitutes—*e.g.,* customers may be willing to purchase a service at a slightly higher price from one competitor than a similar service from another if the customers believe that the more expensive service is higher in quality or offers a unique feature. We might purchase a Volvo instead of a Buick because the Volvo is thought to be safer, even if it costs somewhat more. We might choose AT&T local service if it comes as part of a bundle with toll service, even if it is more expensive than Verizon NY's local service. The customer could alternatively find a lower-quality service more desirable at a lower price.

Q. What information should the Commission assess when it examines the availability of substitute services?

A. The availability of like or substitute services can be shown by a range of evidence. Of course, data showing that customers can switch suppliers (and are doing so) constitute clear evidence that substitute services are available. Data demonstrating the presence of competitors—*e.g.,* data regarding competitors' facilities and recent sales of the services at issue—also show that viable substitutes are available. Data on competitors' facilities show that competitors are committed, through these investments, to provide services they believe customers will find sufficiently attractive as substitutes for the incumbent's services. Data on recent sales and switching behavior show that customers view competitive offerings to be substitute services. Competitors' tariffs essentially announce to customers that competitors offer the services for which they have tariffs in place. Promotional materials—*e.g.,* advertisements, marketing pieces, and web site information—provide another level of evidence that like or substitute services are available. Such evidence shows the availability of like or substitute services because tariffs and marketing efforts require time and effort to develop and disseminate. Further, making claims regarding the availability of service and then not providing such service can damage a firm's reputation.

Q. How does evidence regarding the presence of competitors shed light on the availability of substitutes?

A. Competitors presently selling or reselling the services in question are obviously providing substitutes. They do not necessarily have to have network facilities in place to provide the service in question in order to establish their presence in the market. The resale of telecommunications services requires no deployment of a competing network whatsoever. Similarly, the use of UNEs by competitors requires little or no deployment of facilities. Yet resellers and CLECs providing service using UNEs are clearly "present" in the market.

Q. Can a competitor be considered "present" in the market by virtue of its facilities alone?

A. Yes. Data showing that competitors have facilities in place that are capable of supplying the same services as those supplied by the incumbent also demonstrate the availability of viable substitutes for the incumbent's services. Competitors invest substantial sums of money in such facilities only if they believe they can capture customers and use the facilities to compete to offer the services they are capable of offering. Further, it defies logic to believe that firms would build such facilities and let them lie fallow for any length of

time.[16] For example, CLECs would not have spent hundreds of millions of dollars to deploy 165 digital switches[17] capable of providing local voice services in the areas served by Verizon NY and then not use them to provide local services in competition against Verizon NY.

Q. Does collocation provide another measure of the presence of competitive alternatives?

A. Yes. Collocation is undertaken to install competitors' network facilities in the ILEC's central offices thereby allowing competitors to reach every customer that the ILEC serves from that central office by using a combination of the two firms' network facilities. In a recent decision granting pricing flexibility, the FCC used collocation to assess the presence of competitors and found that "collocation by competitors in incumbent LEC wire centers is a reliable indication of sunk investment by competitors."[18]

[16] Later in the testimony we discuss the Department of Justice Merger Guidelines approach to the presence of competitors.

[17] 116 of these switches belong to carriers with E911 listings in Verizon NY's database. These data verify that these carriers are providing local exchange services to customers in Verizon NY's territory today. This is a very conservative number because it excludes long distance switches not yet adapted for local service, packet switches, and numerous wireless switches providing local services.

[18] Fifth Report and Order, CC Docket Nos. 96-262, 94-1, 98-157 and CCB/CPD File No.
(continued...)

The D.C. Circuit Court of Appeals recently upheld the FCC's reliance on collocation data to assess the presence of competitors and to trigger pricing flexibility.[19] WorldCom and other competitors challenged the FCC's decision arguing that "regulatory relief provided for by the FCC's Order is tantamount to foregoing dominant carrier regulation altogether, and can only be justified upon a finding of actual competition."[20] The Court rejected those arguments and upheld the FCC's approach, finding that "*collocation can reasonably serve as a measure of competition in a given market and predictor of competitive constraints upon future LEC behavior*."[21] In reaching this

(...continued)

98-63, August 27, 1999, FCC 99-206, ¶ 81. To obtain "Phase II" pricing flexibility for dedicated transport and special access services, ILECs can demonstrate that competitors have established a significant market presence in the provision of the services at issue (¶ 69) as follows: For Dedicated Transport & Special Access Services, show that competitors have operational collocation arrangements in 50% of wire centers in an MSA (¶ 148); OR, competitors have operational collocation arrangements in wire centers accounting for 65% of ILEC's revenues from services in question in that MSA (¶ 149). For Channel Terminations between LEC end office and end user, show that: competitors have operational collocation arrangements in 65% of wire centers in an MSA (¶ 150); OR, competitors have operational collocation arrangements in wire centers accounting for 85% of ILECs revenues from services in question in that MSA (¶ 150). Doing so allows ILECs to cease compliance with Part 69 or Part 61 with respect to those services (special access and dedicated transport) within an MSA; and allows LECs to raise and lower rates on one day's notice. (¶ 153).

[19] *WorldCom, Inc., v. FCC*, 238 F.3d 449 (D.C. Cir. 2001).

[20] *Id.* at 458.

[21] *Id.* at 459 (emphasis supplied).

conclusion, the Court also took into account the FCC's finding that there are reasons to believe that, if anything, collocation underestimates competition in relevant markets as "it fails to account for the presence of competitors that ... have wholly bypassed incumbent LEC facilities."[22]

Q. Are there any other means of determining the presence of competitors?

A. Yes. Competitors may be considered present in a market if they have existing customer relationships that they can leverage to rapidly (*e.g.*, within a year) diversify from a related product or adjacent geographic market into the market in question. For example, long distance carriers have established relationships with business and residence customers to whom they provide long distance and intraLATA toll services. Thus, they may be present in the local exchange services market by dint of their ongoing relationships with customers, their existing billing and customer care capabilities, and collocation arrangements that facilitate their efforts to serve customers' local service requirements.

[22] *Id.* at 462.

Similarly, carriers currently providing local services to larger business customers can diversify readily to serve smaller business customers or residence customers.

Integrated (local and toll) network service providers, such as AT&T and WorldCom, are particularly well positioned to expand their local presence and can readily diversify in this manner. Indeed, they are able to take advantage of both their existing customer relationships with residence and small business customers and the equipment already in use to serve larger customers. TCG's Paul Kouroupas made exactly this point when he testified three years ago before the New Jersey Board of Public Utilities on behalf of TCG (now a subsidiary of AT&T):

> TCG was founded to focus on the demanding needs of the most sophisticated business telecommunications customers. As the company's geographic scope and product mix have broadened it has been expanding its focus down market to medium-size customers. A natural extension of this strategy is to pursue the unmet needs of the small office/home office niche.[23]

[23] Testimony of Paul Kouroupas before the Board on behalf of TCG, I/M/O Investigation Regarding the Status of Local Exchange Competition in New Jersey, Docket No. TX98010010, March 2, 1998 at 8-9.

Q. Do economists and government agencies take account of such factors as facilities and existing customer relationships when they assess whether competitors are present in a market?

A. Yes. As noted, the FCC regards collocation as reliable evidence of a competitor's sunk investment and, hence, presence in the market. In discussing the use of collocation to assess the presence of competition, the FCC stated:

> Once multiple rivals have entered the market and cannot be driven out, rules to prevent exclusionary pricing behavior are no longer necessary. Investment in facilities, particularly those that cannot be used for another purpose, is an important indicator of such irreversible entry. If a competitive LEC has made substantial sunk investment in equipment, that equipment remains available and capable of providing service in competition with the incumbent, even if the incumbent succeeds in driving the competitor from the market. (¶ 80)

Moreover, antitrust authorities, including the United States Department of Justice ("DOJ"), recognize that where a firm can enter the relevant market quickly (*e.g.,* within a year) without significant sunk costs, it may be more appropriate to consider the firm to be a participant in a market as opposed to merely a potential competitor.[24]

[24] *See also* Landes and Posner who recognize the importance of supply substitution and entry. William M. Landes and Richard A. Posner, "Market Power in Antitrust Cases," *Harvard Law Review, Vol.* 95, pp. 945, 962-3 (1981).

According to the DOJ Merger Guidelines, Sections 1.321 and 1.322:

> …. If a firm has existing assets that likely would be shifted or extended into production and sale of the relevant product within one year, and without incurring significant sunk costs of entry and exit, in response to a "small but significant and nontransitory" increase in price for only the ***relevant product, the Agency will treat that firm as a market participant***. In assessing whether a firm is such a market participant, the Agency will take into account the costs of substitution or extension relative to the profitability of sales at the elevated price, and whether the firm's capacity is elsewhere committed or elsewhere so profitably employed that such capacity likely would not be available to respond to an increase in price in the market.
>
> 1.322 Obtaining New Assets for Production or Sale of the Relevant Product. ***A firm may also be able to enter into production or sale in the relevant market within one year and without the expenditure of significant sunk costs of entry and exit***, in response to a "small but significant and nontransitory" increase in price for only the relevant product, even if the firm is newly organized or is an existing firm without products or productive assets closely related to the relevant market. ***If new firms, or existing firms without closely related products or productive assets, likely would enter into production or sale in the relevant market within one year without the expenditure of significant sunk costs of entry and exit, the Agency will treat those firms as market participants***. [emphasis added.]

2. Ease Of Market Entry

Q. Why is ease of market entry or expansion relevant in considering whether a firm is able to exercise market power?

A. Absent barriers to entry or expansion in a market, the presence of above-normal profits in that market would attract entrants who would

expand the supply of services and reduce prices. In this case, market entry is sufficient to constrain an incumbent's prices and, thus, the ease of market entry is a relevant means of gauging the existence of market power.

Q. How do economists evaluate ease of entry into a market?

A. Ease of entry refers to competitors' ability to enter a market or expand their presence in a market within a reasonable period of time in response to potential efforts by an incumbent to raise prices above competitive levels.[25] Economists determine whether entry barriers exist by examining the costs faced by an entrant but not by the incumbent. The smaller these costs are, the lower and less significant are the entry barriers. Economists also consider whether there are substantial *sunk* costs—*i.e.*, costs that an entrant must incur to enter or expand and cannot recover if it subsequently leaves the market. Again, if these are low or minimal, entry barriers will also be considered insignificant. In particular, as noted, the *Merger Guidelines* count uncommitted entrants as participants in the market if they would likely enter within one year and "without the expenditure

[25] *See* DOJ Merger Guidelines Sections 3.0-3.4. Antitrust authorities including the DOJ, use a one-year period. Landes and Posner also recognize the importance of supply substitution and entry. *See* pp. 945 and 962-3.

of significant sunk costs of entry and exit" in response to a non-transitory price increase.[26]

For policy purposes, ease of entry does not mean that competitors face no costs at all or that they can instantly enter a market. Rather, ease of entry can be shown even if firms must incur some modest sunk costs to enter the market. The fact that a firm has incurred such costs demonstrates that that firm has made the determination that such costs are warranted by the business opportunity presented.

Economists also consider whether, in regulated industries, regulation itself hampers entry and expansion by new competitors.[27]

Q. What measures can be used to assess ease of entry?

A. Ease of entry can be assessed by examining: (1) the level and growth of competition for a product or service as measured by, for example, the number of competitors in the market and the number of customers they serve; (2) whether competitors have invested in facilities to deploy a service; and (3) the regulatory and economic

[26] Department of Justice and Federal Trade Commission, *Horizontal Merger Guidelines*, April 2, 1992, § 1.32. The role of sunk costs in economic theory is outlined in William Baumol, John Panzar and Robert Willig, *Contestable Markets and the Theory of Industry Structure* (New York: Harcourt Brace Jovanovich, 1982).

[27] We note that the 1996 Act prohibits regulations that hinder entry.

conditions that affect entry such as, for example, the technical ability of firms to expand readily their array of services and/or their geographic scope of service.

It is sufficient to examine the third measure alone to determine whether there is ease of entry into a market consistent with economic principles, because entry may be easy even if there is no evidence of current competition or investment to provide the service at issue. Therefore, a small number of competitors in a recently opened market does not mean that entry barriers are high; however, substantial entry, investments, and growth by competitors, such as those we describe later, provide clear evidence of ease of entry.

Q. Do economic principles support the use of market share or related measures of market power to assess the efficacy of the competition facing Verizon NY?

A. No. Indeed, where a traditionally regulated monopoly is exposed to competition, market shares (or other concentration measures[28]) are particularly poor indicators of market power. Landes and Posner make this point quite forcefully:

[28] Besides market share, economists use the four- or eight-firm concentration ratio (the market share of the largest four or eight firms combined), and the HHI (the sum of squared market shares of all firms in the market) to measure concentration.

> ***To the extent that regulation is effective, its effect is to sever market power from market share. …***
>
> This is obviously so when the effect of regulation is to limit a monopolist's price to the competitive price level. A subtler effect should also be noted, however. Regulation may increase a firm's market share in circumstances where only the appearance and not the reality of monopoly power is created thereby. For example … price may be above marginal cost in some markets and below marginal cost in others. In the latter group of markets, the regulated firm is apt to have a 100% market share. The reason is not that it has market power but that the market is so unattractive to sellers that the only firm that will serve it is one that is either forbidden by regulatory fiat to leave the market or that is induced to remain in it by the opportunity to recoup its losses in its other markets. … ***In these circumstances, a 100% market share is a symptom of a lack, rather than the possession, of market power.***
>
> ***Notice in this case that the causality between market share and price is reversed. Instead of a large market share leading to a high price, a low price leads to a large market share; and it would be improper to infer market power simply from observing the large market share.***[29]

Thus, we would expect Verizon NY to begin competition with a high market share because it has been the only legal provider of most local services in its service area and because regulation has kept

[29] William M. Landes and Richard A. Posner, "Market Power in Antitrust Cases," *Harvard Law Review, Vol.* 95, pp. 975-976 (1981), footnotes omitted (emphasis added).

local service prices below competitive levels. This does not mean, however, that Verizon NY would be able to exercise market power once regulation of services is relaxed (as proposed by Verizon NY here).

Q. In assessing competition, should the Commission account for market trends and likely future developments?

A. Yes. Although we focus on substantial evidence regarding current competition, the Commission should also focus on future events—*i.e.*, entry and expansion of competitors—that will affect future competition but nonetheless constrain the incumbent's actions in the present. Where entry is not encumbered, incumbent firms—even in markets without current competitors—are not likely to profit from raising prices above competitive levels. Such efforts would merely attract new competitors who would expand supply and render the price increase unprofitable. Further, even if the incumbent retains the majority of customers, the fact that a substantial number of customers have already switched and that competitors' lines have been growing implies that existing services are viable substitutes. Thus, the incumbent would be unlikely to set prices above competitive levels.

Q. What are the key effects of UNE requirements on entry and the ability of competitors to constrain Verizon NY's behavior?

A. By using Verizon NY UNEs (that will, even under the new Plan, remain subject to the requirements of the 1996 Act) competitors can: (1) enter the market without incurring investment costs that the incumbent incurred to build the network, at a price reflecting the full economies of scale and scope that Verizon NY would experience; and (2) incur minimal incremental sunk investment costs to supply a host of local services. Thus, Verizon NY would not find it profitable to raise prices above competitive (cost-based) levels. If Verizon NY were to attempt to increase retail prices above competitive levels, the margin between the prices of the UNEs that a competitor is using (or could use) to provide the retail service and the retail market price would increase. Moreover, additional entrants could now compete profitably, customers would have additional choices, and the initial decision to raise retail prices would prove unprofitable. In short, competitors who rely in whole or in part on UNEs to compete against Verizon NY constrain Verizon NY's behavior.

Q. Do carriers who compete against Verizon NY using resale constrain Verizon NY's pricing behavior?

A. Yes. Verizon NY is required to provide to its competitors every retail

telecommunications service at a wholesale price determined by subtracting Verizon NY's retailing costs from its retail price. If the reseller can provide the retailing function for less than Verizon NY's retailing costs, then it can compete successfully in the retail market. If Verizon NY were to attempt to increase the price of a retail service, then the fact that the discount is a fixed percentage of the retail price means that the *absolute* resale discount—measured in cents per minute or dollars per line per month—would increase, at least in the short run. This would attract additional entry to provide retail services and, thus, constrain Verizon NY's effort to raise rates.

3. Overview Of The Analysis Of Competition In Verizon NY's Service Area

Q. What data do you analyze in Section II to determine whether competitors are offering substitute services in competition with Verizon NY?

A. We assess the following data in Section II:

1. Statistics showing actual substitution from Verizon NY to its competitors' local services—as measured by the number of lines competitors serve and Verizon NY's losses to competitors. These data include:

   - E911 listings that measure the number of lines served by a competitor using at least its own switch;

- ported numbers that capture the number of telephone numbers that customers keep when they switch to another facilities-based carrier;
- the number of UNE-P lines and resale lines in use;
- line loss data that capture the geographic, revenue and service characteristics of customers who have substituted away from Verizon NY's local exchange products; and
- the number of competitors actually selling services in competition against Verizon NY.

2. The amount of local switches, fiber and other facilities that competitors have deployed and are using to serve customers in the areas also served by Verizon NY. These data—combined with the data on collocation—show that competitive services are available or can be made available in a short time in every area served by Verizon NY and that entry barriers are low;

3. Collocation arrangements that capture the number and location of carriers' leased space in Verizon NY's central offices for purposes of using their own facilities in combination with Verizon NY's local loops to serve customers; and

4. Information on major competitors' offerings from market research reports and web site searches.

We also examine several closely related sets of products offered by

Verizon NY's competitors—*e.g.*, switched business services offered to general business customers (defined as those providing revenues of $5,000 or less per month), special access/private line services, and residence services.

It is important to emphasize that—for reasons we just explained—evidence of competition for one service can also be evidence that competitors could readily diversify to provide other services. Switches and collocation arrangements set up to serve business customers can rapidly be used to serve residence customers. Thus, the Commission should not look at services in isolation.

Q. Please summarize how the combination of evidence fits together to show that permanent competition exists in Verizon NY's service area.

A. E911 listings show where competitors are currently using their facilities (sometimes with Verizon NY UNE loops)[30] to provide local services. Data on CLEC switches and fiber show where the CLECs have deployed their own facilities. Collocation data show the wire centers in which CLECs can use their switches (and other facilities)

[30] As used herein, UNE loops generally refer to stand alone unbundled loops, as opposed to the UNE loops included in part of the UNE platform.

along with Verizon NY's unbundled loops to provide switched local services. UNE-Ps and resale lines (taken together with E911 listings) provide a lower bound on the number of lines served by CLECs and show where they are providing retail services. Data on the level and growth of competition also shed light on the ease with which competitors can enter and expand—*i.e.*, extensive presence and rapid growth shows that entry barriers are by no means substantial.

The combination of evidence we have assembled provides powerful and ample evidence that full and effective competition exists throughout Verizon NY's service area *now*.

B. Evidence Regarding The Availability Of Substitutes Shows That New York Has Substantial, Permanent Competition

1. Numerous Competitors Are Currently Providing Local Services In All Areas Served By Verizon NY

Q. How many CLECs are currently providing local exchange services in competition against Verizon NY?

A. A total of 91 firms already provide local exchange services in areas served by Verizon NY. In total, 31 competitors are providing facilities-based services (*i.e.*, have one or more E911 listings);

17 competitors use UNE-Ps; and 59 resell Verizon NY services.[31]

Q. Are competitors providing substitutes in every area served by Verizon NY?

A. Yes. To assess the geographic spread of competition we examine the geographic areas used in this Commission's report on local competition. (We augment the Verizon NY regions used by the Commission in its local competition report—New York Metro, Albany, Binghamton, Buffalo, Poughkeepsie and Syracuse—by disaggregating the New York Metro area into Manhattan, the rest of New York City, Nassau/Suffolk, and Westchester.)[32] As shown in the following table, numerous competitors are already providing service using all three forms of competition—facilities-based, UNE-Ps, and resale—in every one of these areas.

[31] There is a total of 91 unique CLECs that provide local service to customers in Verizon NY's service area. However, many firms provision local exchange service through more than one means, hence, the sum of the types of competitors listed above is greater than 91.

[32] Rochester Telephone data are not included in this or other analyses that rely on Verizon NY records, except to the extent such data may be included to reflect possible activity by Frontier acting as a CLEC serving areas also served by Verizon NY.

Table 1: Numerous Competitors Serve Every Area Served by Verizon NY

Area	Facilities-Based	UNE-Ps	Resale	Total [33]
Total State	31	25	76	91
Manhattan	23	17	59	73
Rest of New York City	22	17	50	64
Nassau/Suffolk	15	16	55	62
Westchester	16	14	44	57
Poughkeepsie/Dutchess	11	15	54	61
Rochester/Buffalo	8	15	44	50
Albany	10	18	48	56
Syracuse	9	15	47	53
Binghamton/Elmira	9	12	36	43

In addition, when discussing the pattern of competition in Subsection E below, we show that competitors serve tens of thousands or hundreds of thousands of lines in each area using each mode of entry; and that competitors are already providing services in wire centers that account for the vast majority of Verizon NY's lines in all nine of these areas.

[33] Note that because many competitors are providing service using their own facilities and/or UNE-Ps and/or resale or any combination of these modes of entry, the totals do not necessarily equal the sum of the counts of each form of competition in the individual areas. Similarly, because many competitors operate in one or more areas listed, the sum of the total competitors in the Total State does not equal the sum of Total competitors in the individual areas.

2. There Is Already Substantial Facilities-Based Competition In The Areas Served By Verizon NY

a. CLECs Use Their Own Facilities To Serve At Least 1.27 Million Lines In Verizon NY's Area

Q. Please describe the extent to which facilities-based competitors are serving customers in the areas served by Verizon NY today.

A. We have determined the number of lines served by facilities-based carriers using two sources of data—E911 listings and ported numbers.

Based on estimates derived from E911 listings, we determined that, as of year-end 2000, CLECs served at least 1.27 million lines using at least their own switch.[34] We assume that each E911 listing corresponds to a single line.[35] Subtracting UNE loops from E911 listings implies that CLECs are serving approximately 1 million lines without using *any* Verizon NY network elements.

It is important to note that the true count of CLEC business access

[34] Facilities-based lines are estimated using E911 listings that include use of at least the CLEC's own switch, possibly with UNE loops.

[35] This assumption is conservative since each E911 listing can correspond to multiple customer access lines; in particular, multi-line residential customers may have only one E911 listing, and business customers may have hundreds of access lines at a location corresponding to a single E911 listing.

lines likely include millions of additional special access lines used to carry a mix of voice and data traffic from end users to competitors' networks. In particular, major carriers use high-capacity digital lines capable of carrying multiple voice grade equivalent circuits to provide both voice and data services to business customers. (It is not possible to know with precision how many additional business line and circuits CLECs serve using such lines in New York because complete data are not publicly available. However, as we discuss later, SEC filings suggest AT&T and WorldCom alone may use this approach to serve about 10 million voice grade equivalent lines in New York.)

Data on ported numbers reflect actual losses by Verizon NY to facilities-based competitors. By April 2001, customers had already ported over 760,000 telephone numbers from Verizon NY to a competitor. Although this is one measure of direct competitive losses, ported numbers actually *understate* the total number of lines served by facilities-based competitors because they exclude lines not served previously by Verizon. This measure also excludes lines served via resale and UNE-Ps. We discuss measures that reveal the types of customers lost later.

b. Facilities-Based Competition Is Present In Wire Centers That Account For 98 Percent Of Verizon NY's Lines

Q. How can one determine the geographic reach of facilities-based competition using data available from Verizon NY's records?

A. Verizon NY's records include several types of data that can be mapped to wire centers served by Verizon NY and to broader regions of the State: telephone numbers customers have ported from Verizon NY to CLECs,[36] collocation arrangements, and UNE loops.

Q. Please describe the extent to which facilities-based competitors are able to serve customers in the areas served by Verizon NY.

A. As illustrated in the table below, ported numbers—showing that competitors already use their own facilities to serve customers that were formerly served by Verizon NY—are present in wire centers that serve about 97 percent of the lines served by Verizon NY. As also shown in that table, facilities-based CLECs are present in *all* geographic areas served by Verizon NY, according to each of the

[36] We use ported numbers instead of E911 listings for this purpose because Verizon's records allow us to match ported numbers to its wire centers more completely than can be done using E911 listings. CLEC E911 listings do not perfectly map to Verizon NY wire centers when a listing uses its own NPA/NXX, rather than a ported number with a Verizon NPA/NXX code.

indicators of facilities-based competition.[37]

Table 2: Facilities-based CLECs have substantial presence in every region served by Verizon NY: Percentage of Verizon NY lines in wire centers with each measure of facilities-based competition

Area	Ported Numbers	UNE Loops	Collocation	One or More Measures
Total State	96.9 %	88.7 %	93.8 %	98.4 %
Manhattan	99.8	98.6	100.0	100.0
Rest of NYC	98.3	99.9	98.4	100.0
Nassau/Suffolk	99.7	93.3	100.0	100.0
Westchester	100.0	96.2	100.0	100.0
Poughkeepsie/Dutchess	79.5	55.4	90.3	90.6
Rochester/Buffalo	98.7	73.7	78.6	98.7
Albany	89.3	72.6	81.8	89.5
Syracuse	95.5	61.9	68.5	99.5
Binghamton/Elmira	89.4	61.7	73.2	89.4

These data show that facilities-based competition is widespread in every area served by Verizon NY. In particular, it is ubiquitous in every region of the New York metropolitan area; including Nassau, Suffolk, and Westchester counties; and competitors have strategically chosen to serve wire centers with the most lines in the upstate regions served by Verizon NY. In each of these upstate regions, facilities-based competitors serve wire centers that account for at least 89 percent of the lines served by Verizon NY.

[37] This table shows data for ported numbers as of April 2001, UNE loops as of March 2001, and collocation as of February 2001.

c. CLECs Also Serve Millions Of End-User Lines Using UNE-Ps And/Or Resale In Areas Served By Verizon NY

Q. Please describe the number of resold lines and UNE-Ps used by CLECs in the areas served by Verizon NY.

A. By April 2001, CLECs were serving over 1.7 million lines using UNE-Ps and over 400,000 lines using resale in areas served by Verizon NY. When added to the lower bound estimate of 1.27 million facilities-based lines, these data imply that CLECs already serve over 3.4 million lines in areas also served by Verizon NY.[38]

Q. Is the use of UNE-Ps present throughout the areas served by Verizon NY?

A. Yes. CLECs used more than 1.4 million UNE-Ps as of December 2000 to serve residence lines in wire centers that account for about 99 percent of the residence lines served by Verizon NY.[39] They use about 80,000 UNE-Ps to serve business customers in wire centers that account for 99 percent of the business lines served by

[38] The data reported in the testimony in sections in which we report disaggregated data are lower because such UNE-P data were not available to us at the wire center level for April 2001.

[39] As of April 2001, CLECs were using more than 1.7 million UNE-Ps. The newer data are not yet available on a wire center basis.

Verizon NY.

Q. Is the use of resale present throughout the areas served by Verizon NY?

A. Yes. CLECs resell a total of 74,000 lines to residence customers in wire centers that account for about 99 percent of the residence lines served by Verizon NY. They resell 328,000 lines to serve business customers in wire centers that account for 99 percent of the business lines served by Verizon NY.

d. Data Published By The FCC And The NYPSC Confirm Verizon NY's Data

Q. Are there any information or data from sources outside of Verizon NY that confirm your own estimates of the number of lines served by competitors in Verizon NY's service area?

A. Yes. Although the FCC and the NYPSC have not published data as recent as those that we obtained from Verizon NY, their most recently published data are certainly consistent with our findings. That is, NYPSC and FCC data confirm that CLECs serve millions of end-user lines in New York.

Q. What do the FCC data reveal about competition in areas served by Verizon NY?

A. According to the FCC's most recent report on local competition, New York CLECs had at least 2.16 million end user lines by June 30, 2000—*i.e.*, about 16 percent of total end user lines in the State; and about 90 percent more than they had only six months earlier.[40]

Q. What do the NYPSC data reveal about competition in areas served by Verizon NY?

A. The NYPSC local competition report shows that CLECs were serving about 2.47 million lines by mid 2000.[41] These data are consistent with Verizon NY data for June 30, 2000, which show that CLECs were serving at least 2.48 million lines.

Q. How do you account for the difference in the FCC's data and the NYPSC's data?

A. The difference between the FCC and NYPSC figures seems to be that the FCC exempts CLECs with fewer than 10,000 lines from reporting. The FCC's reporting exemption apparently causes a 20 percent understatement of the number of lines served by

[40] FCC Common Carrier Bureau Industry Analysis Division, "Local Telephone Competition: Status as of June 30, 2000," December 2000, Table 5; FCC, "Local Telephone Competition at the New Millennium" August 2000, Table 4.

[41] This includes the 1.47 million lines reported for the CLECs by the Commission as of year end 1999 (see p. 7 of the report) plus the 1 million lines added in the first half of 2000, according to p. 4 of the report.

competitors. At year end 1999, NY CLECs had 1.2 million lines according to the FCC but 1.5 million according to the NYPSC, which does not omit CLECs serving 10,000 lines or fewer.[42] If we adjust the FCC's most recent (June 2000) data to account for this 20 percent understatement, we obtain about 2.6 million voice grade lines—roughly the same number as we obtain from the NYPSC and Verizon NY data for that same point in time.

e. Competitors Have Deployed Extensive Network Facilities Throughout The Areas Served By Verizon NY.

Q. You testified earlier that competitors are properly considered participants in a market if they have facilities that they are using or can readily deploy to serve customers in that market. Please describe the facilities that competitors have deployed in the areas served by Verizon NY.

A. As we will discuss in greater detail later, competitors had deployed at least 165 voice switches and nearly 14,600 route miles of fiber by early 2001 in the areas also served by Verizon NY. This represents billions of dollars of investment.

[42] FCC, "Local Telephone Competition at the New Millennium," Table 4; NYPSC. "Analysis of Local Exchange Service Competition in New York State," 2000 p.8.

These extensive facilities – and the enormous capital investment they represent – are clear evidence that markets served by Verizon NY are irreversibly open to competition. That competitors have "commit[ted] significant irreversible investments to the market (sunk costs) signals their perception that the requisite cooperation from incumbents has been secured or that any future difficulties are manageable."[43] These investments will not be abandoned. Even if certain competitors leave the market, the network facilities they have deployed will remain to be used by others as illustrated by AT&T's recent acquisition of assets from NorthPoint.[44]

Q. Please summarize the data that you have obtained regarding CLEC facilities in the areas served by Verizon NY.

A. The available data show that CLEC facilities are widely deployed in the State. CLECs do not have to report the locations of their facilities; thus, precise data are not publicly available and the available data are incomplete. However, as we just discussed, data

[43] Affidavit of Marius Schwartz on Behalf of the United Sates Department of Justice, May 14, 1997, ¶ 174.

[44] As we discuss later, the fact that certain CLECs are no longer providing local exchange service in New York provides no reason to conclude that competition in the State is waning or that the Commission's policies have deterred local telecommunications competition. Competitors enter and leave markets all the time and the exit of certain CLECs from the New York market is typical of the kind of shakeout one would expect.

from Verizon NY's records show that competitors are already using their facilities to serve customers in areas that include the vast majority of the lines served by Verizon NY.

The following chart summarizes the geographic deployment of fiber facilities for some of the competitors operating in Verizon NY's service area as of the end of 2000:[45]

Table 3:
Fiber Route Miles in Place for Selected Verizon NY Competitors by Region

Region	# CLECs	Fiber Route Miles
Manhattan	18	
Rest of NYC	15	
NYC Total	**21**	**1807**
Nassau/Suffolk	12	907
Westchester	13	89
NYC suburbs	**17**	**996**
Total NYC Metro	**26**	**2803**
Albany	8	338
Binghamton	**1**	**81**
Central NY	**8**	**338**
Buffalo	7	555
Syracuse	8	107
Western NY	**9**	**662**
Total Upstate NY[46]	**10**	**2300**
Total NY state[47]	**28**	**14633**

[45] Ibulient Technologies 4Q 00, March 2001, Time Warner 1998 10K. Note that because many competitors are present in multiple areas of the state, the totals and subtotals do not necessarily equal the sum of the counts of competitors in the individual areas.

[46] Route miles includes Adelphia's 1300 miles in general upstate region (not specified by city).

[47] Total NY State fiber route miles includes 2000 miles from AT&T, 7300 miles from Cablevision Lightpath, and 230 miles from e.spire.

Table 4: Local Voice Switches in Verizon NY's Service Area by Region		
Region	**# CLECs[48]**	**# of Switches**
Manhattan	30	66
Rest of NYC	8	15
Nassau/Suffolk	9	13
Westchester	2	5
NY Metro	**37**	**99**
Albany	12	18
Poughkeepsie	5	8
Binghamton	5	5
Buffalo	12	17
Syracuse	11	18
Total NY state	**49**	**165**

i. Competitive Facilities In The New York City Metropolitan Area

Q. Please describe generally the facilities that competitors have deployed in the New York City metropolitan area.[49]

A. There are 37 facilities-based competitors in the New York City metropolitan area.[50] These competitors have deployed over 2,800

[48] The total numbers include totals of all operational switches reported in the LERG. Of the totals, 23 carriers, with 115 switches in, have E 911 listings Verizon NY's service area. This indicates that these carriers use at least their own switch to provide local service today.

[49] For the purposes of this report, we define the New York metro area as the area comprised of the following NPAs: 212, 646, 347, 516, 631, 718, 914, and 917. This is roughly the same area as LATA 132, though the 914 area code falls partially outside the LATA boundary.

[50] This is the number of competitors with either fiber or switches (or both), and certainly not an exhaustive count of all the competitors in the New York metro area. Ibulient
(continued...)

route miles of fiber and have 99 local voice grade switches in the New York City metropolitan area. *See* Table 3 and 4 above and Exhibit Part C.

Q. What facilities has AT&T deployed in the New York metropolitan area?

A. AT&T has the most extensive fiber network of all the facilities-based CLECs in the New York metropolitan area. It acquired the core of its network from TCG,[51] and since the beginning of 1998 has quadrupled its fiber route miles to 2000 statewide.[52] In New York City, AT&T's network connects to over 850 buildings.[53] AT&T has 25 local voice switches in the New York City metropolitan area that provide local service.[54]

(...continued)

Technologies, *Verizon Northern CLEC Networks 4Q00*, at 19-29 ("Ibulient Technologies *4Q00*"). For example, 26 non-identical competitors in the New York metro area have E911 listings in Verizon's database.

[51] AT&T acquired TCG in July 1998. *See* AT&T Press Release, *AT&T Completes TCG Merger*, Jul. 23, 1998.

[52] Ibulient Technologies *4Q00*, at 21.

[53] *Id.* at 21.

[54] LERG data.

Q. What facilities has WorldCom deployed in the New York metropolitan area?

A. WorldCom operates eleven switches in the New York City metropolitan area.[55] WorldCom acquired Metropolitan Fiber Systems and Brooks Fiber, two of the original competitive access providers in the nation. Its network comprises 295 route-miles of fiber and connects to nearly 900 buildings.[56] It has fiber and/or switching facilities in Manhattan, Westchester County and in the Nassau/Suffolk areas.

Q. What facilities has Cablevision deployed in the New York City metropolitan area?

A. Cablevision is New York State's second largest cable operator.[57] Its CLEC subsidiary, Lightpath, has 7,300 miles of fiber statewide.[58] It operates six local switches.[59]

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[55] *Id.*

[56] Ibulient Technologies *4Q00,* at 21. This network has been assembled through the consolidation of MFS, Brooks Fiber, and MCImetro, which WorldCom acquired in December 1996, January 1998, and September 1998, respectively.

[57] *See* New Paradigm 2001 CLEC report, at Cablevision Lightpath 2 of 8.

[58] Ibulient Technologies *4Q00*, at 41.

[59] LERG data.

Q. What facilities has Time Warner Telecom deployed in the New York City metropolitan area?

A. Time Warner Telecom operates 78 route-miles of fiber in the New York City metropolitan area,[60] using fiber obtained from Time Warner Cable, the largest cable operator in New York.[61] The network connects to 120 buildings.[62] Time Warner has three local/voice switches in Manhattan.[63]

Q. What facilities have other CLECs deployed in the New York City metropolitan area?

A. XO, e.spire, and RCN each have deployed their own fiber and switches in the New York metropolitan area. Allegiance, Frontier, Focal, Network Plus, Net2000, Pae Tec, Eagle, Metropolitan Telecommunications, and a handful of additional smaller CLECs have all have deployed switches.[64]

Exhibit Part C lists the competitors and available data on their

[60] Ibulient Technologies *4Q00,* at 22.

[61] *See* Time Warner Telecom, SEC form 10-K (March 28, 2001).

[62] Ibulient Technologies *4Q00,* at 22.

[63] LERG data.

[64] Ibulient Technologies *4Q00,* at 21-24.

networks for Manhattan, the rest of New York City, Nassau/Suffolk, and Westchester. Exhibit Part D includes a profile of these and other competitors. Exhibit Part E summarizes available Verizon NY data on CLEC activities, including facilities-based lines (*i.e.*, E911 listings), resold lines, use of UNE-Ps, and collocation. It also indicates whether the CLEC has one or more switches.

ii. Competitive Facilities In Upstate New York

Q. Please describe generally the facilities deployed by some of Verizon NY's major competitors in upstate New York.

A. At least ten facilities-based carriers operate in upstate New York.[65] These carriers have deployed nearly 2,300 route miles of fiber in the upstate regions served by Verizon NY—Albany, Buffalo, Syracuse, Poughkeepsie, and Binghamton.[66] As shown in Table 4, they have also deployed at least 33 local voice switches in upstate New York.

Q. What facilities has Adelphia Business Solutions deployed upstate?

[65] This is the number of competitors with either fiber or switches (or both), and certainly not an exhaustive count of all the competitors in the New York metro area. Ibulient Technologies *4Q00*, at 19-29. At least 16 competitors in upstate New York have obtained E911 listings. Upstate New York is defined to include the 518, 315, 607, and 716 area codes.

[66] This is a highly conservative figure as it does not include fiber for several competitors (continued...)

A. Adelphia Business Solutions (formerly Hyperion) has extensive competitive facilities throughout upstate New York. It operates networks in Buffalo, Syracuse, and Albany. Its Buffalo network extends 400 route miles, connects to over 58 buildings,[67] and contains one local voice switch.[68] Its central New York state network extends 1300 route-miles, connects to over 150 buildings,[69] and contains one local voice switch.[70] Its Albany network extends 75 fiber route miles.[71]

Q. What facilities has AT&T deployed upstate?

A. AT&T operates competitive local networks in Albany, Buffalo, and Syracuse.[72] AT&T operates one local switch in each of these

(...continued)

that are known to have fiber but for which there is no route mile data available.

[67] Ibulient Technologies *4Q00,* at 280-284.

[68] LERG data.

[69] Ibulient Technologies *4Q00,* at 28.

[70] LERG data.

[71] Ibulient Technologies *4Q00,* at 29.

[72] TCG acquired these facilities from ACC in April 1998. *See* AT&T Press Release, *Teleport Communications Group Inc. Completes the Merger with ACC Corp.*, Apr. 22, 1998.

upstate cities.[73]

Q. What facilities has WorldCom deployed upstate?

A. WorldCom operates networks in Albany and Buffalo. Its network in downtown Albany has ten fiber route-miles and connects to 27 on-net buildings.[74] Its network in downtown Buffalo extends 55 fiber route miles and reaches about 40 on-net buildings.[75] WorldCom also has built a 550-route-mile "Infothruway" along the New York State Thruway, which connects the company's separate intra-city networks.[76]

Q. What facilities have other CLECs deployed in upstate New York?

A. A new CLEC, Choice One, launched networks in Albany, Buffalo, and Syracuse in February 1999[77] and operates one local voice switch in each city.[78] Telergy recently built a fiber-optic network

[73] LERG data.

[74] Ibulient Technologies *4Q00,* at 29.

[75] *See id.* at 27.

[76] *See* MCI WorldCom Press Release, *Construction Begins on New York State 'Infothruway,'* Apr. 3, 1997. These facilities are not included in MCI WorldCom's local fiber miles listed in Table 4.

[77] Ibulient Technologies *4Q00,* at 270.

[78] LERG data.

linking Buffalo, Syracuse, and Albany.[79] Time Warner Telecom's Albany network spans 170 route-miles, with 22 buildings on-net.[80] Time Warner Telecom also operates a network in Binghamton, which runs 81 route-miles, with 27 buildings on-net.[81] TSI, a subsidiary of Commonwealth Telephone Enterprises, operates a network in Binghamton.[82]

Exhibit Parts C and D provide additional details on the major competitors' facilities and profiles of the competitors themselves, respectively. Exhibit E summarizes available Verizon NY data on CLEC activities, including facilities-based lines (*i.e.*, E911 listings), use of UNE-Ps, and collocation. It also indicates whether the CLEC has one or more switches.

[79] Ibulient Technologies *4Q00,* at 27

[80] *Id.* at 259-262.

[81] *See* Time Warner Telecom, SEC Form 10-K, at 10 (Dec. 31, 1998).

[82] LERG data.

f. Collocation And Interconnection Are Widespread

i. Competitors Have Collocated In Wire Centers Serving Over 94 Percent Of Verizon's Lines

Q. You testified earlier that collocation and interconnection provide further evidence of the widespread presence of competitors. What is a collocation arrangement?

A. A collocation arrangement allows a competitor to lease space in a Verizon NY wire center office building so that it can connect its facilities to those of Verizon NY. A competitor that collocates in a Verizon NY central office gains access to all customers served by that office. This Commission was the first regulatory body in the nation to require ILECs to allow collocation for both dedicated and switched access.[83]

Q. Please describe the collocation arrangements in place in Verizon NY's central offices.

[83] *See* Case Nos. 29469 & 88-C-004, *Order Regarding OTIS II Compliance Filing* (NYPSC May 8, 1991) (approving Bell Atlantic's tariff for physical collocation for non-switched services); Case No. 28425, *Opinion and Order on Pooling, Collocation and Access Rate Design*, Opinion No. 92-13 (NYPSC May 29, 1992) (approving Bell Atlantic's tariff for collocated interconnection to switched access services in addition to special access services).

A. By February 2001, collocation arrangements were in place in 277 Verizon NY wire centers. These offices serve: about 5.8 million (92 percent) of Verizon NY's residence lines, 3.6 million (96 percent) of its business lines, and 93 percent of its total lines.

Overall, over 50 CLECs had a total of 2,415 collocation arrangements with Verizon NY. Three or more collocation arrangements are present in 209 wire centers, which serve about 87 percent of Verizon NY total access lines and 91 percent of Verizon NY business lines. Competitors have collocation arrangements throughout New York, although they have strategically placed them in the wire centers in the more densely populated areas in Verizon NY's service area.

Collocation is present in all wire centers in Manhattan (NPAs 212, 646, and 917) and in 98 percent of the rest of New York City (NPAs 718, 347). Collocation is also present in 100 percent of the wire centers in Nassau/Suffolk counties (NPAs 516 and 631) and Westchester county (NPA 914).

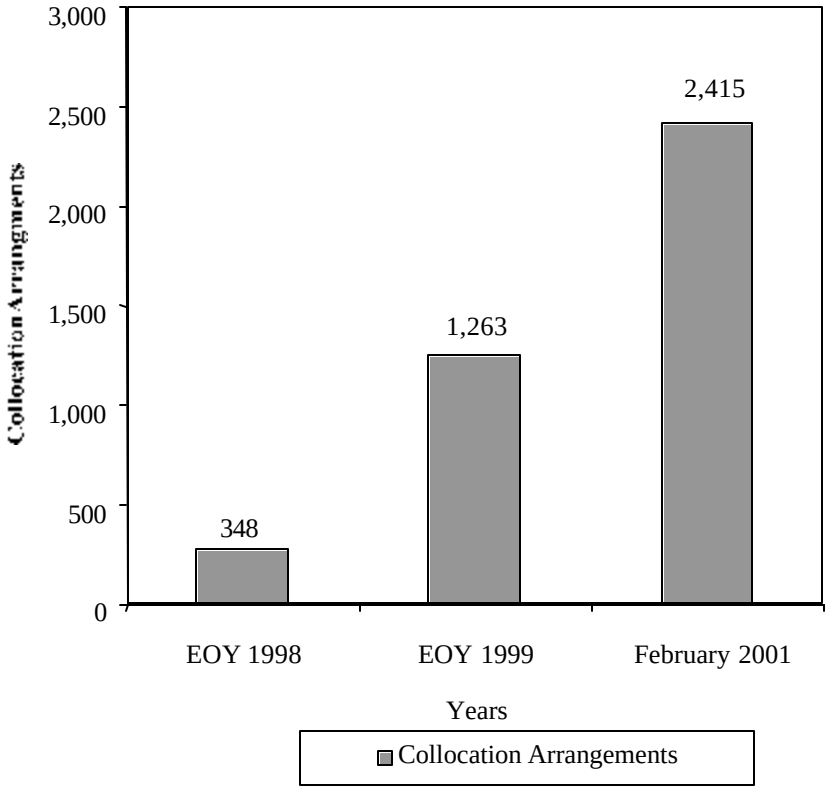
Q. Has the number of collocation arrangements in Verizon NY's central offices grown over time?

A. Yes. In fact, as shown in Figure 1, the growth in such collocation arrangements over the past three years is remarkable and provides

clear evidence that competition is growing rapidly in New York. As of year-end 1998, competitors had obtained 348 collocation arrangements. As of December 1999, competitors had obtained 1,263 collocation arrangements in 218 different wire centers.[84] By February 2001 this number had grown to 2,415 arrangements in 277 wire centers.

[84] 535 additional collocation requests are pending in 207 central offices, of which 40 do not currently have completed collocation arrangements.

Figure 1:
CLEC Collocation Arrangements



1 Q. Where have CLECs obtained collocation arrangements?

2 A. They have obtained collocation arrangements in wire centers in the
3 New York City metropolitan area, in the large, upstate cities of
4 Binghamton, Buffalo, Syracuse, and Albany, as well as in smaller
5 upstate cities such as Hudson, Ithaca, and Utica.

6 Q. How can carriers use collocation arrangements to compete against
7 Verizon NY?

A. Collocation arrangements are used to serve end users in all parts of a wire center's service area through the use of unbundled (Verizon NY) loops that connect end-users to the collocator's network (even in areas where the collocator does not yet have its own local loops). Collocation also allows competitors to substitute their own facilities in place of Verizon NY's access transport facilities.

ii. Interconnection Is Widespread.

Q. Please describe the extent to which competitors have interconnected with Verizon NY's network.

A. Competitors exchange traffic with Verizon NY's network through interconnection trunks supplied by Verizon NY or by the CLECs themselves. The number of interconnection trunks Verizon NY provides to its competitors has grown substantially over the past several years. As of December 1998, Verizon NY was providing 205,490 interconnection trunks to competitors, in wire centers all across New York.[85] As of December 1999, CLECs were using 417,223 local interconnection trunks. The most recent data show that CLECs are now using 610,318 local interconnection trunks.

[85] We have no precise count of interconnection trunks supplied by the CLECs themselves.

Exhibit Part F includes a list of competitors with whom Verizon NY has interconnection agreements.

3. Competitors Provide Or Can Readily Provide Substitutes For Every Service Provided By Verizon NY

Q. Does the evidence show that competitors are providing or can readily provide substitutes for every service provided by Verizon NY?

A. Yes. Competitors are currently providing or have the ability to provide all forms of switched and non-switched (private line or special access) local exchange service. We know this because (1) it is inconceivable that Verizon NY's competitors could have captured over 3.4 million switched voice lines, including at least 1.27 million lines served by facilities-based competitors, unless those competitors were able to provide services comparable to Verizon NY's services; (2) data on line losses show competitors are providing all forms of exchange services—POTS, PBX trunks, and Centrex; (3) the competitors use the same advanced digital switches as Verizon NY does, which implies they can offer all of the same ancillary services or adjuncts to switched services that can be provided using the equipment already in place; (4) market research and competitors' marketing materials show that competitors provide a wide variety of services; and (5) the nature of the competitors'

facilities, combined with their extensive use of Verizon NY UNEs and collocation, make it clear that they can provide any service Verizon NY offers.

In the balance of this section we look at the evidence of substitute services for each of the following service categories: switched services, switched ancillary services, other ancillary services, special access services, private line services, and toll services.

a. Substitutes Are Available for Verizon NY's Switched Local Services.

i. Switched Local Voice Services

Q. Are like or substitute services available for each type of switched voice service?

A. Yes. First, as we have discussed, competitors are providing switched voice local services to millions of lines throughout the State. Second, competitors have captured each type of switched voice access—*i.e.,* basic exchange lines and the local usage, and PBX trunks and DID terminations. We know this from our analysis of losses by Verizon NY to competitors serving residence and general business customers. The data capture certain losses that occurred from 1997 to January 2001, when customers placed service orders to disconnect Verizon NY service and replace it with CLEC service.

ii. Vertical Or Ancillary Services

Q. Can competitors provide substitutes for Verizon NY's vertical or ancillary services?

A. Yes. We know that residence and business customers have alternatives for all of the vertical services as well because competitors are providing local service to 1.27 million lines and have 165 voice switches in New York. Thus, through these switches, they undoubtedly provide any type of switched, vertical or ancillary services as adjuncts to basic dial-tone lines.

Q. Please explain how vertical services are adjuncts to basic dial-tone lines.

A. As their very name implies, switched ancillary services—*e.g.*, call waiting, call forwarding, caller ID—are adjuncts to the underlying switched services. Such services are not generally provided on a stand-alone basis by Verizon NY or its competitors; they are provided along with basic dial tone. In economic parlance, each of these services is a complementary service component to basic exchange services from both a supply perspective and a demand perspective.

Q. Please explain how these are complementary to basic exchange services from a supply perspective.

A. Since the switched ancillary services are delivered from the same switch platform as the underlying switched local services, they can be produced less expensively together than it would be to produce them as separate services.

Q. Does this characteristic mean that they cannot be supplied competitively?

A. No. These features are standard features of the modern switching systems that both Verizon NY and the CLECs use. If other firms offer PBX trunk services, for example, then those firms have the ability to offer the same features that Verizon NY offers to its PBX trunk customers.

Even if a given firm's current service does not match Verizon NY's tariff item for item, the competitor can offer a feature almost as soon as a customer requests it. They have this ability: (i) through their own switch, which is equipped with these functions as standard features; or (ii) through the purchase of unbundled switching elements from Verizon NY, whose switches, by definition, are equipped with these features; and (iii) through resale of Verizon NY services, which also include these features.

One important addition to this pattern is the provision of such ancillary services to multi-line customers via the use of customer premises equipment (CPE) such as PBXs and key systems, that can readily provide many of the same services provided by central office switches.

Q. Please explain how vertical or ancillary services are complementary to basic exchange service from a demand perspective.

A. On the demand side, customers buy these service components as part of the services at issue in this case; thus, it defies logic to analyze separately the availability of competitive alternatives for "pieces" of the overall service. The price of Call-Waiting, for example, is not set in a stand-alone market for Call-Waiting services but is determined jointly with the prices of other local exchange features. Similarly, tires, leather seats and a radio are features of automobiles and even though the features can be purchased separately, their price as part of an automobile is determined jointly. The service components that make up residential local exchange service are considered *complementary* goods in that an increase in the price of any one of them lowers the demand for all of them. Many competitors now market "packages" of service which also include long distance and wireless and internet services with local

exchange services, so that even local exchange service itself becomes a component of telecommunications service in general.

Q. Do the data on revenue losses shed additional light on services competitors are providing residence customers?

A. Yes. These data show that the competitors have captured customers with higher average revenues than those of Verizon NY's remaining customer base. This strongly suggests that the competitors are providing substantial amounts of vertical services to residence customers. Further, 98 percent of the residence customers who shifted service to competitors shifted all of their lines to competitors; thus, we believe that competitors must be able to provide the full spectrum of services that Verizon provides. Note also that 120,000 of the residence lines served by competitors are served with at least the competitors' own switches—and the competitors use the same types of switches used by Verizon NY.

iii. Switched Data Services

Q. Are there like or substitute services available for Verizon NY's switched data services?

A. Yes. First, competitors can resell these services. Second, DSL providers offer like or substitute services for these

Verizon NY services. In addition, many competitors offer T1 services that compete with ISDN PRI. DSL providers state that their service offers a faster, more reliable connection than usage-based ISDN BRI and lower speed dial-up data services at a flat-based price. According to AT&T's web site, "With its advanced DSL technology, AT&T DSL Internet Service gives you a full-time, dedicated connection to the Internet up to 25 times faster than using a typical 56K modem. That's … even up to 12 times faster than ISDN" (www.att.com). DSL providers also claim that, compared with the ISDN PRI competing service, DSL provides the same services at a fraction of the cost. "Covad DSL delivers industrial-strength T1-like speed (as fast as 1.5 Mbps) to multiple users at only 25% of typical T1 costs" (www.covad.com). DSL providers see their service as an effective and cost-efficient alternative to Verizon NY switched data services. Cable modem services also compete with Verizon NY's switched data services, at least for residence customers connecting to the Internet and for telecommuting.

iv. Substitutes Are Available for Verizon NY's Business Services.

Q. What types of services are competitors providing business customers?

A. Verizon NY has lost (and continues to lose) general business lines of all basic types, including predominantly POTS lines. Said differently, facilities-based providers and resellers are providing a full array of services to business customers of all sizes. The Centrex losses Verizon NY has experienced demonstrate that competitors are providing a full range of vertical services today.

[BEGIN VERIZON NY PROPRIETARY]

Table 5: Verizon NY General and Enterprise Business Gross Line Losses by Line Type[86] (1998-2001)

Service	**Lost Lines**
Total POTS lines lost	
PBX trunks lost	
Centrex lines lost	
Total lines and PBX trunks lost	
Estimated voice grade equivalent lines served with PBX Trunks[87]	
Total estimated business voice grade lines lost	

[END VERIZON NY PROPRIETARY]

Note that the sum of lost business lines understates the true losses because (1) it captures only losses from 1998 forward, and business competition has been quite active in New York since well before the 1996 Act; (2) it omits losses that involve complete bypass without

[86] For details on net line losses, *see* section D1.

[87] We estimate that one PBX trunk is equivalent to five POTS lines.

ported numbers; and (3) it does not capture losses to competitors using special access lines in place of switched lines. Centrex losses are understated because these data omit losses to competitors that provide PBX equipment.

Q. Please provide examples of competitive alternatives to Verizon NY's business service offerings.

A. Competitors offer many alternatives to Verizon NY's business options. Indeed, numerous competitors offer New York businesses bundles of local, long distance, Internet and vertical services. For example, WorldCom's business local service offerings in New York include POTS, analog and digital PBX trunks with DID, ISDN PRI, integrated T1 service, and vertical features—all provided on the same bill as a customer's long distance service.[88] WorldCom basic business lines include touch-tone, call forwarding, caller ID blocking, and hunting as standard features.[89] Additional vertical features are available individually[90] or in value-added packages.[91]

[88] Ibulient report, "Products & Pricing, New York Fourth Quarter 2000," at 52, 59-60 ("Ibulient Report").

[89] *Id*, at 52.

[90] Call Waiting ($3.00/month), Call Transfer ($2.00/month), Busy Call Forwarding ($1.00/month), Call Forward No Answer ($1.00/month), Caller ID Number ($5.00/month), Speed Dialing 8 ($2.00/month), Speed Dialing 30 ($4.00/month), and Three Way Calling
(continued...)

AT&T offers two types of local service to businesses in New York; dedicated DS-1 service for T1 access, and switched DS-0 service for regular trunks and lines.[92] The dedicated services include "Digital Link," which bundles local with long distance and internet/data services onto one bill. Digital Link allows businesses efficiently to "combine inward and outward local, IntraLATA, long-distance, and international service on AT&T … dedicated access."[93] AT&T's switched services offer alternatives for the less-intensive user who requires only basic voice services, including POTS, PBX, turn-key and fax services.[94] Other offerings from AT&T provide digital PBX trunk service, ISDN-PRI service, Centrex and a suite of features to customize all their local services.[95]

(...continued)

($2.00/month). Id., at 59.

[91] Feature Package 1 ($4.50/month): call transfer or three-way calling, call forward busy, call forward no answer, speed calling 8; Feature Package 2 ($9.50/month): includes feature package 1 plus speed calling 30 or toll restriction. Id, at 52, 59.

[92] *See* http://www.att.com/local/services/ (May 7, 2001).

[93] *See* http://www.att.com/local/services/dlinkp.html (May 7, 2001).

[94] *See http://www.att.com/local/services/pp.html* (May 7, 2001).

[95] Includes Call Forwarding Busy ($2.31/month), Call Forwarding No Answer ($2.31/month), Call Forwarding Variable ($4.36/month), Call Waiting ($8.40/month), Caller ID ($6.65/month), Speed Dial 8 ($4.36/month) and Three Way Calling ($4.36/month). Ibulient Report, at 21, 24

Cablevision Lightpath's local business offerings are targeted mostly towards large customers in specific industries, including educational, government and healthcare.[96] However, Lightpath provides a broad range of services including Centrex, PBX, ISDN PRI and BRI as well as POTS. Among the features of Lightpath's plans are Automatic Call Back, Call Forward Busy, Call Forward Don't Answer, Call Forward Variable, Call Hold, Call Transfer, Call Waiting, Distinctive Ringing, Line Hunting, Speed Calling, Three-Way Calling, and Touch-Tone Dialing.[97]

Adelphia Business Solutions offers business POTS lines, analog and digital PBX trunks with up to 24 channels on one facility, ISDN BRI service, and dedicated access services that include DS0, DS3 and ISDN PRI. Adelphia offers local exchange service with a comprehensive feature package that includes Touch Tone Dialing, Three Way Conference Calling, Call Waiting, Call Forwarding Variable, Call Forwarding Busy, Call Forwarding No Answer, Speed Dialing, Hunting, and Caller ID.[98] The Adelphia ISDN PRI line offers

[96] Cablevision Lightpath's web site, http://www.lightpath.net/solutions/industry_specific.html (May 7, 2001).

[97] *Id.*, http://www.lightpath.net/solutions/centrex_features.html).

[98] Adelphia Business Solutions web site, http://www.adelphia-abs.com/html/products/4fea.htm. (May 7, 2001)

simultaneous voice, data and video communications over a single T1 and may be configured for DID, DOD or combo service.[99] Exhibit Part G includes additional information on service offerings by major CLECs in New York.

v. Substitutes Are Available For Verizon NY's Residence Service Offerings.

Q. What types of services are competitors providing residence customers?

A. Competitors provide all types of local services and offer a full array of services to residence customers, including vertical services. As shown in Table 6 below, competitors have captured customers using services that appeal to all types of Verizon NY customers—including former Lifeline customers, who switched 200,000 lines to competitors.

[99] Ibulient Report, at 5.

[BEGIN VERIZON NY PROPRIETARY]

Table 6: Verizon NY Consumer Group Gross Customer Losses by Type[100] (1998-2001)	
Customer Type	**Lost Lines**
Flat Rate	
Measured Rate	
Lifeline	
Unknown Type	
Total Number of Customers Lost	

[END VERIZON NY PROPRIETARY]

Q. Has Verizon NY been able to determine the reasons why residence customers switched from Verizon NY to another carrier?

A. In some instances, yes. Through market research, Verizon NY has learned that the primary reason residential customers give for switching to a competitor is their belief that the competitor offers lower prices. Many of these customers respond to direct mail advertisements and special offers by competitors that include special promotional discounts.

For example, on or about March 1, 2001, residents in Brooklyn, NY began receiving full color tri-fold brochures, promoting AT&T Local Service. The cover of the brochure says "Ask why a million people said yes to AT&T Local and you'll get a million answers." Inside the

[100] For details on net line losses, *see* Section D1.

advertisement, AT&T offers the customer up to 360 minutes of free domestic long distance if they sign up for AT&T Local Service. In addition to 360 minutes of domestic long distance calling (60 free minutes of domestic long distance calling every month for the first six months), AT&T Local Service provides 75 hours of local calling a month; 2 cents per minute after that; for a monthly fee of $19.95. A copy of that brochure is included in Exhibit Part H, Section 1.

In other advertisements, AT&T has offered Verizon NY customers "checks" in amounts ranging from $25.00 to $75.00 to switch their residential long distance, regional toll, and local services to AT&T. Copies of these promotions and accompanying checks are included in Exhibit Part H, Section 2.

In another direct mail campaign, MCI WorldCom offers 5000 US Airways bonus miles ("Dividend Miles") to customers who switch to its One Company Advantage 200 service. For $34.99 a month, this plan provides for unlimited local calling, 200 minutes of long distance (in-state and out-of-state), savings on features such as caller ID and call waiting, and five miles for every dollar spent on local and long distance. A copy of that promotion is included in Exhibit Part H, Section 3. Some customers are attracted to competitors because of bundled services that they offer, which include services not offered

by Verizon (*e.g.*, cable television, cable modems). These advertisements, and others included in Exhibit Part H, Sections 4 through 7, make clear the fact that substitutes are available for Verizon NY's residence service offerings.

Q. Please provide examples of competitive alternatives for Verizon NY residence options.

A. Competitors offer many alternatives for residential consumers to Verizon NY's options. WorldCom was leading the pack in signing up residential customers, with over 206,000 residential lines in service as of December 1999.[101] WorldCom's One Company Advantage uses bundled long distance and local service, with additional optional Internet access, to attract customers from Verizon.[102] Their local service package includes many of the same standard and optional features as Verizon NY's local service, including Call Forwarding Variable, Call Forwarding Busy, Call Forwarding No Answer, Remote Access to Call Forwarding, Call Return, Call Screening, Call Trace, Call Waiting, Caller ID, Call Waiting ID, Call Waiting ID with Name,

[101] NYPSC 1999 Competition Report, at 14

[102] WorldCom web site, http://www.mciworld.com/for_your_home/products_services/local/ny_splash.shtml (May 7, 2001).

Multi-Ring, Repeat Dialing, Speed Dial, Three-Way Calling, and Toll Blocking.[103]

As with business service, AT&T is also providing residence service comparable to Verizon NY's and WorldCom's residence service. AT&T's Local OneRate New York calling plan includes Call Waiting, Call Waiting ID with Name, Caller ID with Name, Three-Way Calling, Call Return, Call Forwarding Variable, Speed Dial 8, Repeat Dial, and Caller ID Blocking.[104] In addition, AT&T is offering special deals and discounts to customers who purchase bundled local and long distance service, and to customers who sign up for service and opt to pay their bills online rather than through the mail.[105]

Other major residential local service providers include Broadview Networks, MetTel, and Z-Tel. All three companies offer the same local calling features as Verizon NY and the two large CLECs, MCI WorldCom and AT&T. Broadview claims to offer these services at

[103] *Id*, http://www.mciworld.com/for_your_home/products_services/local/ny/ny_features.shtml (May 7, 2001).

[104] AT&T web page, http://www.local.att.com/Feature_Description_I.jhtml;$sessionid$KXFOCNYAAACUBQFINADRT4UHEEV2UHQK (May 7, 2001)

[105] *Id.*, http://www.local.att.com/LocalServiceLanding_M.jhtml?_requestid=2953 (May 8, 2001).

up to fifteen percent discount off Verizon's service charge, plus savings on bundled local and long distance service.[106] MetTel, with over 62,000 residential customers in 1999,[107] has succeeded by offering customers a choice between flat-rate and per-usage service pricing.[108] Z-Tel's Z-line Home Edition service makes optional features offered by Verizon standard on its basic local residential calling plans.[109]

b. Substitute Services Are Available for Verizon NY's Switched Carrier Access Services.

Q. Are substitutes available for Verizon NY's access services?

A. Yes. Carriers use the same facilities and services they use to provide switched services to provide substitutes for carrier access services. That is, they use:

- Their own switches, transport and local facilities;
- Verizon NY wholesale services—*i.e.*, special access, unbundled loops and transport;

[106] Broadview web site, http://www.broadviewnet.com/residential_solutions/residential_solution_frame.asp?id=3 (May 8, 2001.)

[107] NYPSC 1999 Competition Report, at 14.

[108] MetTel web site, http://www.mettel.net/residential.html#basicservice (May 8, 2001).

[109] Z-Tel web site, http://www.myzline.com/products/he/comparehe_ny.html (May 8, 2001).

- Other firms' wholesale services or network elements—*e.g.,* local or transport capacity; or

- Rapidly growing options such as fixed wireless, cable TV telephony, Internet telephony and DSL.[110]

In fact, CLECs have provided access substitutes for years. They started as competitive *access* providers ("CAPs") selling special access to connect businesses to IXCs' points of presence ("POPs"). They then diversified to provide switched access, local and toll services. Similarly the IXCs transformed themselves into integrated network service providers—with both local and interLATA networks—by developing their own local access facilities and/or purchasing CAPs/CLECs.

The diversification trend to provide full-service packages has transformed and expanded access service competition. In addition, the accelerating development of wireless and two-way cable TV-based alternatives, coupled with UNE-P requirements, imply that access substitutes are or will soon be ubiquitously available.

[110] From an economic perspective, except to the extent that the mode of provision affects price, features and quality characteristics, end-users should be indifferent to whether competitors use their own facilities or resell Verizon NY's retail services or capacity (including use of UNE-Ps) to provide substitutes for Verizon NY's services. Some customers may prefer a single carrier for end-to-end service; however, using wholesale services or elements from other carriers does not preclude end-to-end network control. Internet telephony and DSL services typically are used in conjunction with the other access technologies listed in the text; however, they can be used to gain access to toll networks and thus substitute for Verizon NY's carrier access services.

Q. Please describe how competitors compete to provide access substitutes.

A. Although CAPs/CLECs formerly focused on providing services to link large customers to long distance carriers and to other large customer locations—and, as we have shown, a number of CLECs continue to provide carrier access services—the CLECs' current strategies focus on capturing customers' total communications service demands, rather than on serving other carriers' access service demands on a stand-alone basis. (CLECs with no long distance network can buy toll services at wholesale rates and then sell the full package of services to end-users, rather than sell only local services to end users and access to IXCs.) Further, several of the larger CAP/CLECs were purchased by long distance carriers to form integrated service providers—*e.g.*, AT&T purchased TCG, and WorldCom acquired MFS and Brooks Fiber and then merged with MCI and acquired its MCI Metro services.

Thus, competitors can provide carrier access services to themselves, or, stated another way, carriers that provide local switched service have no need to purchase carrier access service from Verizon NY or any other provider. Thus, even if—contrary to the evidence—competitors did not sell any carrier services to other

Verizon NY competitors, substitutes exist for Verizon NY access services.

Even if CLECs were the exclusive providers of access to their own end-user customers, established long distance carriers could deter CLECs from charging excessively high carrier access prices because (1) CLECs seeking to provide long distance services rely on IXCs for wholesale toll services and facilities; (2) the long distance carriers have entered and are expanding their local and carrier access services; and (3) IXCs can use UNE-Ps and unbundled loops to compete for local services throughout New York, thus eliminating the need to purchase access service. Finally, Internet telephony allows customers to avoid carrier access charges at one or both ends of a toll call. As shown in Exhibit Part D, Verizon NY competitors typically compete to provide full-service packages to customers.

Q. How many competitors provide substitutes for Verizon NY's access services?

A. As shown in Exhibit Part G, at least seven New York facilities-based competitors were providing special access services, and at least seven were providing switched access services. Two of the largest were among the pioneering CAPs—TCG and MFS—which by then

had been acquired by AT&T and WorldCom, respectively. However, they continue to provide access services to other parties as well as to their parent companies.[111] Of course the 31 facilities-based carriers provided switched local service provide access service at least to themselves; and they could use those same facilities to provide carrier access services to others.

Q. Do you expect access substitutes to become more widely available?

A. Yes. Rapid CLEC growth and emerging additional substitutes for Verizon NY access services imply that facilities-based substitutes will be even more widely available.

Fixed wireless, and cable TV telephony services are rapidly emerging competitive substitutes for Verizon NY local residence and small business services and will compete with Verizon NY access services for these customer groups throughout the state. "Wireless cable" (2.1 GHz) and 28 GHz spectrum have the potential to deliver economically viable service even at low subscriber densities. DSL, spurred by consumer demand for high-speed Internet access, can simultaneously provide local and long distance voice services.

[111] See Exhibit Part G

Q. Do UNEs and other wholesale options allow Verizon NY's competitors to provide substitutes for Verizon NY's carrier access?

A. Yes. Competitors can use UNE-Ps or unbundled loops and their own switches and transport to provide local exchange service to their New York customers, thereby avoiding access charges for toll calls originating from or terminating to that line. The UNE-P option is generally available throughout Verizon NY's service area for competitors who wish to serve residence or business customers. Competitors can also use other CLECs' wholesale capacity, as we discuss later.

c. Substitute Services Are Available for Verizon NY's Special Access and Private Line Services.

Q. What are "special access" services?

A. Special access service consists of a dedicated transmission path connecting an end user's premises to an IXC's POP.

Q. Are the customers for special access services the same as those for switched services?

A. No. Special Access purchases are dominated by two small groups of large customers. The first group consists of IXCs, firms like AT&T, WorldCom and Sprint that purchase special access capacity

to provide long distance and other related telecommunications services to large business users. The second group consists of sophisticated business end-users who purchase large volumes of (local and long distance) voice, data and video services. High volume end users are the focus in both customer sets because special access is economical compared with ordinary switched services only for customers that generate sufficient usage. Typically, end users who purchase special access are served by dedicated facilities such as DS-1 or higher capacity facilities and often have PBXs.

Q. How do these differences in customer characteristics bear on your analysis of the availability of substitutes for Verizon NY's special access services?

A. These characteristics explain a great deal about how special access services are bought and sold. First, special access customers make purchasing decisions on a statewide (or national) basis and very often will conduct requests for proposals (RFPs) from multiple vendors and in some cases purchase services from multiple suppliers. They are likely to have multiple sites throughout the state so that they can leverage their business in dense metropolitan areas into rural area locations by requesting aggregated bids for access

services. In effect, the small set of large buyers of access services can use the buying power they have in the urban market – where multiple suppliers (CAPS, CLECs and ILECs) are played off against each other to receive price reductions for special access services statewide. If a supplier of access services attempted to price discriminate or charge unjust rates in rural markets, the large purchaser of these services could threaten to move its urban purchases to a competitor. Thus, large multi-region buyers of special access service can exert competitive pressure on rates they pay in rural areas.

Moreover, there are relatively few special access customers in a large percentage of Verizon NY's wire centers. Most of the customers are found in the more urban parts of the State. Indeed, 94.6 percent of Verizon NY's equivalent DS1 demand is found in only 21.8 percent of Verizon NY's wire centers, which are located in urban and suburban areas. Thus, targeting a relatively small number of wire centers gives competitors access to almost all special access customers.

Verizon NY's competitors for special access services have deployed the greatest amount of facilities—*i.e.,* switches, fiber optic cables—in areas where demand for special access services is greatest—*i.e.*,

Manhattan and the surrounding metropolitan area. Most of its other special access revenues are derived from upstate urban areas (*e.g.*, Albany, Buffalo and Syracuse) where competitors have deployed their own facilities. Exhibit Part G enumerates competitors that offer special access services in Verizon NY's territory.

Clearly, substitutes for Verizon NY's special access services are available. In fact, the Commission concluded two years ago that the markets for Special Services are "already competitive."[112]

Q. Are substitute services available for Verizon NY's private line services?

A. Yes. Unfortunately, unlike the case for switched services, Verizon's internal data do not allow us to determine directly if competitors have sold any private line services. However, it is reasonable to conclude that if they can provide dial tone lines—which include loops and switching—and they can provide interoffice transport and other service components for special access services, then they can provide private line services on the same facilities.

Several of the large CLECs serving New York offer private line services that are comparable to Verizon NY's. Time Warner

[112] Case 98-C-0690, "Order Directing Tariff Revisions" (issued March 24, 1999) at 8.

provides digital transmission services in various grades. These include DS0 voice grade service (transmitting at 64 kilobytes per second), broadcast video (one-way) service, digital data service at speeds up to 44 megabytes per second (Mbps), LAN connection service, dedicated private networks and virtual hub services.[113] Their private line services include DS1 and fractional DS1 service for customers with lower transmission requirements, at 56 kilobytes per second (kbps) or 64 kbps. The company's rate schedules for these services are available either on a per-channel, per-mile or individual basis;[114] perhaps more important, Time Warner's DS0, DS1, and Type 1 Digital Data Service private line service rates "will not exceed those charged by [Verizon NY]."[115] WorldCom offers its private line services in packages based on the distance between customer premises. The company's Metro Private Line is designed to serve locations in the same metropolitan area, whereas the Domestic

[113] Time Warner Telecom, "Regulations and Schedule of Intrastate Charges Applying to Communications Services Between Fixed Points in the State of New York: Private Line Services," effective October 18, 1999 ("Time Warner Telecom Tariff"), at Original Page 40, 41.

[114] Time Warner Telecom Tariff, at Original page 45.

[115] The Time Warner Telecom Tariff was written before the merger of Bell Atlantic (d.b.a. New York Telephone) and GTE to create Verizon. Time Warner Telecom Tariff, at Original page 48, 49.

Private Line service has a national reach. WorldCom even offers an International Private Line service for locations in 60 countries. In the Metro and Domestic Private Line services, WorldCom has available a Synchronous Optical Network (SONET) with digital transmission speeds up to OC12 (622.08 Mbps).[116] AT&T's Private Line Local Channel Service provides dedicated connections between a customer's premises and AT&T's central office. This service comes in several categories, including Terrestrial T1.5, Digital Data, Voice Grade, ACCUNET SONET, and Local Frame Relay.[117] On the low-speed end, Digital Data service transmits at speeds between 2.4 kbps and 56 kbps. On the high-speed end, AT&T's ACCUNET SONET transmits at 155 Mbps.

d. Substitute Services Are Available for Verizon NY's IntraLATA Toll Services.

Q. Does Verizon NY face competition for intraLATA toll services?

A. Yes. A substantial number of business and residence customers have switched from Verizon NY to competitors by presubscribing to

[116] WorldCom web site, http://www.worldcom.com/usa_products/private_line (May 9, 2001).

[117] AT&T, " Schedule of Charges, Rules, Regulations, and Explanatory Statements for Private Line Channel Services in the State of New York," effective July 6, 1987 ("AT&T Tariff"), at Section 3, 5th Revised Leaf No. 2, effective February 25, 1999.

other carriers' intraLATA toll services. As shown in the table below, almost 2.3 million Verizon NY local residence lines have already been presubscribed to competitive toll carriers and almost 930,000 Verizon NY business lines have presubscribed to competitive toll carriers.

Table 7: Verizon NY Local Lines Presubscribing to Other Carriers' IntraLATA Toll Service

	Residence	Business	Total
Upstate	667,921	372,669	1,040,590
Downstate	1,610,143	556,058	2,166,201
Total	2,278,064	928,727	3,206,791

In addition, to these lines for which Verizon NY provides the local service component, it is extremely likely that the vast majority of residence and business customers who subscribe to competitive local services also subscribe to these competitors' toll services. Even if only half of the 3.4 million lines to which CLECs were providing switched local services used CLEC toll services, competitors would be providing intraLATA toll services to about 4.9 million lines.

Q. Are there other ways in which competitors can serve toll traffic without presubscription or without using local switched lines?

A. Yes. Competitors can and do use special access lines that bypass local switches and carry local and toll traffic directly to competitive toll carriers' switches.

In fact, data from SEC filings strongly suggest that CLECs serve many times more lines than are indicated from data available from Verizon NY records, or from data published by the FCC or the NYPSC. For example, AT&T and WorldCom filings with the SEC show that these two companies alone were serving about 100 million voice-grade equivalent access lines in the U.S. in the third quarter of 2000, or almost eight times as many lines reported by the FCC for all of the CLECs.[118] Unless they are filing misleading data on switched access lines to the FCC and state regulators, these data imply that at least these two carriers alone are serving millions of voice grade equivalent lines using special access services. Assigning the AT&T and WorldCom voice grade equivalent lines to New York on the basis of AT&T and WorldCom's local voice switches in New York

[118] This is 7.8 times as many lines as the number of CLEC lines reported by the FCC for US by June 2000 for all of the CLECs. Since AT&T reported only the number of high-capacity access lines in its 10Q, we estimated voice-grade equivalent lines using the approximately 21-to-1 ratio of voice-grade equivalents to access lines that is implicit in AT&T's 1998 annual report. To this estimate we added MCI's total Voice Grade Equivalent lines, as reported in their 10Q. Then we compared that number with the total number of CLEC end-user lines reported by the FCC. *See* AT&T's and MCI WorldCom's third quarter 2000 Form 10Qs. FCC's Local Telephone Competition: Status as of June 30, 2000, December 2000, Table 5.

compared to their total switches nationwide implies that these two carriers alone may serve the equivalent of 10 million voice grade lines in the state.[119]

Of course, we have no way of knowing what precisely is carried over these lines or that this is the precise number for New York; however, it is quite clear that the data ascertainable from Verizon NY's records (and from regulatory reports), on which we rely, vastly understate the true number of such lines. A recent WorldCom filing confirms that they do use their network for both voice and data traffic, in place of ILEC lines:

> We will continue to utilize our networks to benefit our customers and reduce our costs. The global reach and quality of our networks enable us to provide complex services at low operating costs as a result of our facilities-based, on-net approach. *The on-net approach allows our customers to send data streams or voice traffic locally, across the United States, or to any of our facilities-based networks in Europe or Asia, without ever leaving our networks.* We believe this approach lowers our operating costs and provides our customers with superior reliability and quality of service. Our networks are also highly scalable for future capacity expansions at lower per unit costs, and are

[119] According to the LERG for January 2001, 34 of AT&T's 382 voice switches (*i.e.*, about 9 percent) serve New York. Multiplying their total of 44 million voice grade equivalent access lines in the country by this percentage yields 3.9 million lines. Similarly, 15 or (11.5 percent) of WorldCom's switches are in New York; and multiplying this percentage times its 55 million voice grade lines implies they have almost 6.4 million voice grade equivalent lines in New York.

designed to cost-effectively integrate future generations of optical-networking components to enhance efficiency and quality.[120]

e. Competitive Substitutes Are Available Throughout the State.

Q. Please describe your analysis of the geographic availability of competitive substitutes.

A. Local residence, local business, and access services all involve connections from end-users to the network. Thus, carriers use the same facilities to originate and terminate both local calls and carrier access traffic. This implies that data on the geographic availability of substitutes for local services and carrier access should be considered jointly. Doing so reveals that substantial switching capacity and transport capacity are already in place and collocation is widespread; thus, facilities-based substitutes for local and carrier access services are available throughout Verizon NY's service area. As we have discussed, carriers are already using these facilities to compete against Verizon NY. Moreover, carriers can use these facilities to readily expand their current service offerings. For

[120] Registration No. 333-, Form S-4, Registration Statement Under The Securities Act Of 1933, As filed with the Securities and Exchange Commission, WorldCom, Inc., December 28, 2000, Page 99. Emphasis added.

example, carriers currently using their own facilities to provide local exchange service to business customers can diversify readily to serve residential customers as well. Integrated network service providers are particularly well positioned to expand their local presence and can readily diversify into the local residence market.

i. Competitors Already Serve Customers Throughout The State

Q. Does your analysis of the geographic pattern of competition show that competitors are already present throughout the state?

A. Yes. As shown in other sections of the testimony:

- At least 43 competitors are providing some form of service in every one of the nine regions served by Verizon NY, including at least nine facilities-based competitors who operate in every region;
- Facilities-based competitors are present today in wire centers that account for 98 percent of Verizon NY's lines—*i.e.*, they have ported numbers, collocation arrangements and/or UNE loops in over 400 wire centers that account for 98 percent of Verizon NY's lines;
- Facilities-based competition, as measured by these same indicators, is present in at least 89 percent of the wire centers in every one of the nine regions served by Verizon NY;
- Competitors using UNE-Ps and/or resale are present in wire centers that account for at least 98 percent of Verizon's lines in every region served by Verizon NY; and

- In total, competitors are already serving customers in wire centers that account for over 99 percent of Verizon NY's lines.

ii. Competitive Facilities Are Widespread

Q. Do the facilities described in this section (and the extensive collocation in the areas served by Verizon NY) imply that local access and transport options are widely available as substitutes for Verizon NY's services?

A. Yes. As we have shown above, competitors have facilities located in every one of the regions served by Verizon NY. First, the 165 local voice switches[121] deployed by Verizon NY's competitors by March 2001 have widespread reach. Competitors' switches are located in each of these regions, (*see* Table 4) and, with current technology, switches located in one area can serve customers located hundreds of miles away.[122] Even without remote switching modules, firms can use digital carrier facilities to serve customers within a 125-mile radius of the switch.

[121] This is a very conservative number because it excludes long distance switches not yet adapted for local service, packet switches, and numerous wireless switches providing local services.

[122] For example, the Lucent 5ESS enables remote switch modules to "be located up to 600 miles from the host switch, making it easy to enter new territories." *See* http://www.lucent-sas.com/switching/products/configurations/switch.shtml (May 1, 2000).

Second, alternatives to Verizon NY loops and transport are already widespread and are growing in availability and technological capabilities. Verizon NY's competitors already have 16,700 fiber route miles in the State, and their fiber is present in the most heavily populated areas. (*See* Section II(B)(2), above, and Exhibit Parts C and E.) The presence of fiber in an area does not mean that the carrier has a line to each customer in that area. It does mean that the carrier has transport to that area and has at least the ability to serve rapidly customers adjacent to or within some distance from the fiber.

Competitors also can reach customers beyond their own networks by purchasing capacity and service from each other. Verizon NY's competitors are providing wholesale offerings to other carriers. (*See* Exhibit Part G.)

Finally, collocation and UNEs allow competitors to provide ubiquitous service more rapidly.

Q. How do collocation and UNEs allow competitors to provide ubiquitous service?

A. As we mentioned, collocation allows competitors to serve end users throughout Verizon NY's service area by using unbundled loops to connect end users to their networks (even in areas where they do

not yet have their own local loops).

f. Demand For Competitive Substitutes Is Large And Growing Very Rapidly

Q. Does the New York marketplace provide evidence that competitive alternatives are viable substitutes for Verizon NY services?

A. Yes. Available data show that competitors have both a large and rapidly growing customer base in New York. These data provide compelling evidence that: (1) customers view competing options to be good substitutes for Verizon NY services; and (2) at the end of the proposed rate stabilization period, Verizon NY will face even more substantial and vibrant competition. We have examined measures of growth based on information available to Verizon NY. These measures, however, exclude certain services and facilities supplied without Verizon NY inputs. Accordingly, the measures may understate the amount of competition and its likely growth. Nevertheless, the data below show that competition is growing extremely rapidly.

Table 8: Growth of Competition		
	Year-End 1998 to Year-End 1999	Year-End 1999 to Year-End 2000
Resold Lines	34%	19%
UNE Loops	178%	218%
UNE-Platforms	1674%	290%
Ported Numbers	544%	140%
Collocation	263%	91%

g. Market Forces Are Intensifying The Competition Faced By Verizon NY

Q. What market forces will intensify the competition faced by Verizon NY?

A. The relevant market forces include industry trends toward service packages that are reducing Verizon NY's local service to but one part of the communication service package most consumers want; Cable TV migration to digital networks and two-way services; and the development of DSL services for data and voice applications.

i. Cable TV Is Rapidly Becoming A Facilities-Based Alternative To Verizon NY Services

Q. Have cable TV firms entered telephone service markets?

A. Yes. Cable TV firms have entered or are in the process of entering the telephone market. Cable TV firms already compete with Verizon NY to provide two-way telecommunications, *i.e.*, high-speed Internet access. As illustrated in the table below, all of the major cable TV

companies in Verizon NY's service territory currently provide cable modem service that competes with Verizon NY's data services. At least two providers—Cablevision and RCN—provide local telephone service to residential customers in Verizon NY's territory. Cablevision Lightpath provides business services on Long Island and in New York City.

Table 9: The Major New York Cable TV Firms All Provide Cable Modem Service

Cable Operator	Homes Passed in NY	Cable Modem Provider?
Time Warner Cable	3,026,085	Yes
Cablevision Systems Corp.	1,561,789	Yes
Adelphia Communications Corp.	662,953	Yes
AT&T Broadband	113,544	Yes
RCN Corp.	32,892	Yes
Mid-Hudson Cablevision Inc.	24,900	Yes

Source: Veritas Inc. Second Quarter 2000 Data; Cable Datacom News, May 2001.

ii. DSL Competes For Voice As Well As Data Traffic

Q. Please describe how DSL competes for access service.

A. Although DSL has been marketed, thus far, as a substitute for high-speed cable TV modem service, recent developments establish that it too will be a substitute for Verizon NY's voice access services.

Similarly, Sprint's ION employs DSL technology to provide its "any distance" services to homes and offices: "Sprint ION will enable users to conduct multiple phone calls, high-speed Internet sessions, fax transmissions and videoconferences simultaneously over one connection." (And, it will do so over ILEC loops, wireless local loops, and cable TV connections.)[123]

Moreover, the FCC's recent line-sharing requirement will facilitate the growth in DSL offerings because the UNE cost of the high-frequency portion of ILECs' local loops is likely to be lower than the cost of self-provisioning loops or buying entire UNE loops.[124] Since the new unbundling requirement applies to most ILEC loops that currently provide analog voice service, DSL has the potential to become widely available.[125]

h. Packaged Services Are Changing The Marketplace.

Q. How have packaged services changed the marketplace?

[123] Sprint Press Release, "Sprint Announces Record Third Quarter Results," October 20, 1999.

[124] FCC 99-355, Third Report and Order in CC Docket No. 98-147 and Fourth Report and Order in CC Docket No. 96-98, released: December 9, 1999, ¶ 36.

[125] *Id.*, at ¶ 71. The effective range of DSLs is generally assumed to the about 18,000 feet from the central office, and it is commonly believed that 85 percent of the nation's

(continued...)

A. As discussed above, efforts to assemble packaged services are blurring the distinctions between local and long distance, wireless and wireline, cable TV and telephone services. The emergence of service packages allows competitors to compete more effectively, because local service is but one part of the service package and any market power Verizon NY might have had from its local exchange legacy would be vitiated. For a service package containing local exchange, toll and video services, Verizon NY does not play the role of an incumbent supplier.

Q. But AT&T recently announced that it was breaking itself up. Does this not signal that it has given up on pursuing the sort of bundled service strategy to which you refer above?

A. No. AT&T's recently announced restructuring plans[126] do not signal that it has abandoned its local services entry strategies. AT&T's chairman and CEO C. Michael Armstrong put it this way, "Each of these new companies will move faster in meeting customer needs,

(...continued)

loops are within that range.

[126] AT&T Press Release, "AT&T To Create Family of Four New Companies; Company To Offer To Exchange AT&T Common Stock for AT&T Wireless Stock," http://www.att.com/press/item/0,1354,3420,00.html, October 25, 2000.

but they'll serve them under one of the world's most recognized and respected brands and they'll still be able to offer bundled services through inter-company agreements."[127] Further, according to AT&T's press release, "Armstrong stressed that the new companies will continue to collaborate closely. AT&T Business, for example, will continue to bundle the Wireless company's services into its offers for business customers. AT&T Business will continue to use AT&T Broadband's cable systems in serving some customers."[128] AT&T's Broadband unit also plans to continue its deployment of two-way digital communication and cable telephony.[129] AT&T will license its brand name to all the restructured business units. AT&T's restructuring clearly leaves its capabilities of providing both local and long-distance services to business customers unaffected. In addition, since AT&T's plan provides for common use of its brand name by all units, and since it emphasizes collaboration and bundled

[127] *Id.*

[128] *Id.*

[129] "The pace at which we have been installing those services [two-way digital communication and cable telephony] has increased sharply throughout the year and will continue in the coming months." Dick Martin, AT&T VP, "AT&T Is Paving the Broadband Highway," *Business Week Online Edition*, http://www.businessweek.com/2001/01_02/c3714163.htm#b3714164 (accessed January 2, 2001).

services, the restructuring should not decrease the intensity of AT&T's local services expansion and bundling for the consumer segment, either.

Q. What does WorldCom's recent announcement concerning its restructuring mean in terms of its continued provisioning of bundled services?

A. WorldCom plans to create two tracking stocks— one principally for the large business market segment and one principally for the consumer and small business market segment.[130] Since each of the resulting companies can offer local and bundled services for its respective market segment, this restructuring should not reduce the aggressiveness of their local service programs.

C. There Are No Substantial Entry Barriers In Verizon NY's Territory

Q. What do the data you just presented suggest about the existence of entry barriers to the local exchange markets?

A. They show that entry and expansion barriers have been effectively eliminated in the residence and business local exchange markets in

[130] *See also* WorldCom Press Release, "WorldCom to Realign Businesses, Create Two Tracking Stocks," http://www.worldcom.com/about_the_company/press_releases/display.phtml?cr/20001101, November 1, 2000.

every area served by Verizon NY. This is established both by the level and growth of competition and confirmed by NYPSC and FCC evaluations of that competition during the course of Verizon NY's Section 271 proceedings. In fact, when the FCC approved Verizon NY's application to provide in-region, interLATA service in New York, New York Public Service Commission Chairman Helmer correctly observed, "The FCC's decision confirms that our local telephone market is fully and irreversibly open to competition and that is good news for New York's consumers.[131]

Q. Must there be actual competitors offering services for Verizon NY's retail prices to be constrained?

A. No. Holding aside the substantial actual competitive activity currently taking place throughout Verizon NY's service area, economic theory informs us that an incumbent's ability to raise prices above the competitive level is constrained by the ease with which a potential competitor can enter the market, provide a substitute service and apply competitive downward pressure on the market price.

[131] Statement of Chairman Maureen O. Helmer, issued December 22, 1999,

1. There Are No Substantial Regulatory Entry Barriers In New York.

Q. Is regulation a substantial entry barrier in New York?

A. No. The process by which a competitor obtains Commission authorization to offer local exchange service is hardly onerous and, in fact, the Commission has actively sought to promote local competition by welcoming new competitors into the market. Numerous firms wishing to resell Verizon NY's services, interconnect their facilities with Verizon NY's network, or purchase UNEs pursuant to the 1996 Act have obtained Commission-approved agreements with Verizon NY. As shown in Exhibit Part F, from the passage of the 1996 Act through April 2001, the Commission approved interconnection agreements between Verizon NY and 210 facilities-based providers, 43 wireless mobile providers, and 113 resale competitors. Additional agreements for 415 carriers were pending as of April 2001.

If anything, as discussed below, regulation in New York facilitates competition by making resale and UNEs available to all competitors. It is by no means a barrier to entry.

2. There Are No Substantial Economic Entry Barriers In New York.

Q. Are there substantial economic barriers to entry?

A. No. The evidence of investments by and growth of numerous firms, both large and small, currently operating in areas served by Verizon NY demonstrates that no substantial economic entry barriers exist in New York local telecommunications markets. (Even if only a small number of competitors were present in a recently-opened market, it would not necessarily mean that entry barriers were high.) The Commission need not be concerned that entrants face costs that the ILECs do not or that entrants must incur substantial sunk costs as such concerns are unwarranted.

Q. Why are such concerns unwarranted?

A. Economic entry barriers might have been significant before the Commission's implementation of the 1996 Act, but they are no longer an issue. Under the 1996 Act, competitors need not incur substantial sunk costs to enter the relevant market(s). By using Verizon NY UNEs (that will, even under the new Plan, remain subject to the requirements of the 1996 Act), competitors can: (1) enter the market without incurring investment costs that the incumbent incurred to build the network, at a price reflecting the full

economies of scale and scope that Verizon NY would experience; and (2) incur minimal incremental sunk investment costs to supply a host of local services. With these policies, a competitor can enter the market and, should it fail to gain customers, leave the market without incurring substantial losses.

Indeed, the Commission's policies on UNE-Ps, extended loops, and access pricing were designed to accelerate the spread of competition for local residence and small business service. In particular, the Commission's UNE-P policies have reduced potential entrants' costs by mandating that UNE-Ps be made available. Under Verizon NY's PSC 915 Tariff, Verizon NY offers several different types of UNE-Ps to all carriers, except in certain limited situations.[132]

Q. Please explain the significance of the Commission's and the FCC's UNE-P policies.

[132] PSC Tariff 915, Section 5.12.3.3 provides: "In the central offices set forth in Appendix D, UNE-P will not be provided in connection with combinations involving the following line port types: Primary Rate ISDN port; DS1 DID/DOD/PBX port interface for the termination of digital PBX systems; Public Access Line (PAL) ports for use by requesting TCs to serve customers with 4 or more voice grade or DS0 equivalent lines; and Coin ports for use by requesting telecommunications carriers to serve customers with 4 or more voice grade or DS0 equivalent lines."

PSC Tariff 915 Section 5.12.3.4 provides: "In the central offices set forth in Appendix E, each of which is located in New York City and has two or more TCs collocated to provide local exchange service through unbundled links, UNE-P will not be provided for use by requesting TCs to serve business customers with 4 lines or more."

A. Verizon NY must sell UNE-Ps to its competitors at "cost"—*i.e.*, at prices set based on forward-looking costs reflecting the full economies of scale and scope that Verizon NY would experience. If Verizon NY attempted to raise local prices above competitive levels, its competitors could buy UNE-Ps at or below Verizon NY's cost and use them to sell their own service packages at lower rates. Further, use of UNE-Ps to carry toll traffic allows competitors to avoid access charges. Thus, the policy effectively eliminates any market power Verizon NY might have had for carrier access services and local loops.

If anything, the UNE-P policy adopted by the Commission and the FCC appears to unduly favor Verizon NY's competitors because they: (1) can pick and choose the most profitable means of serving customers—using their own facilities (with or without Verizon NY UNEs) or using UNE-Ps or resale of Verizon NY's services; and (2) have no corresponding obligations to provide their facilities and services at their cost to Verizon NY or other competitors. Therefore, the policy not only eliminates any residual market power Verizon NY may have retained; it asymmetrically disadvantages Verizon NY.[133]

[133] Indeed, it undermines competitive parity by providing much more of a free ride on Verizon NY's network than that which AT&T criticized when AOL and others sought open
(continued...)

Q. Can competitors use their existing capacity rapidly to enter other product and/or geographic markets?

A. Yes. As we discussed before, in many areas of the state, CLECs already have substantial capacity that could rapidly be brought to bear to serve many more customers than they currently serve.

Q. Is the need to install switching capacity an entry barrier?

A. No. As noted above, competitors already have numerous switches. New lines can be added rapidly. Additional switches also can be added rapidly. Several companies offer switches that facilitate local service provision. For example, Lucent offers the 5ESS-2000 AnyMedia platform that supports wireless, landline, gateway, toll, local, advanced ISDN, and other applications on the same exchange, "with minimal investment in hardware."[134]

(...continued)

access to AT&T's broadband cable TV networks. Indeed, AT&T has been fighting vigorously against requirements sought by Internet service providers to provide high-speed data services over AT&T's cable TV systems, bypassing AT&T's @Home, cable ISP. See, for example, Bloomberg News, "Excite At Home Shares Rise on AOL-AT&T Speculation," Update 5, September 29, 1999.

[134] Lucent markets this switch to CLECs as follows: "[w]ith a minimal investment in hardware, real estate and staff, emerging competitors can quickly provide telecommunications services and support a large number of customers and services …." Lucent developed prefabricated central offices to speed switch deployment times: the entire process, "from prefab to the deployment of service" takes only 40 days. Nortel describes its DMS-500 as a cost-effective option for cable operators, long distance carriers, and CLECs to quickly enter local markets. See

(continued...)

Q. Does the need to install interoffice transport present a significant barrier to entry?

A. No. The evidence we presented earlier shows that competitors have substantial fiber optic facilities in place. In addition, they have wireless options at their disposal, and can make use of wholesale transport from Verizon NY and from others.

Q. Does the local loop represent a barrier to entry?

A. No. The local loop is no longer an entry barrier. Competitors' extensive fiber facilities can be used on their own or in combination with collocation and Verizon NY unbundled loops rapidly to overcome whatever advantage Verizon NY might have had in the past with respect to the local loop. Fixed wireless and cable TV services provide other ways to bypass the local loop.

Q. How does local number portability facilitate competitive entry?

A. Local number portability allows CLECs to serve customers throughout Verizon NY's service area without requiring the customer to obtain a new telephone number. By doing so, it allows customers

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(...continued)

http://www.lucent.com/wirelessnet/products/networks/5ess_adv.html, May 2,2000.

to keep their own numbers when they change carriers.

3. Ease Of Entry Is Proved By The Fact That Competition Is Growing Rapidly

a. Verizon Data Show That Competition Is Growing Rapidly In The Areas Served By Verizon NY

Q. Please describe the extent to which competition has grown in the areas served by Verizon NY.

A. CLECs more than doubled the number of lines they served from about 1.2 million at year end 1999 to over 3.4 million by April, 2001, according to Verizon NY data. This suggests that CLECs now serve about 33 percent as many lines in areas served by Verizon NY as Verizon NY serves.[135]

These data are confirmed by other analyses of competitive activity performed by the Commission.

b. NYPSC Data Confirm The Rapid Growth Of Competition In New York.

Q. Has the Commission recognized the growth in competition in New York?

[135] This is the ratio of lines served by CLECs to lines served by Verizon NY. It is not a market share.

A. Yes. The most recent Commission report on local competition substantiates our own findings that competition has increased substantially in the last two years as measured by the number of CLECs, CLEC lines, and CLEC local revenues.[136] In particular, the Commission report states:

- "The number of … CLECs serving over 1,000 local exchange lines increased from 13 at year end 1997 to 38 at year end 1998 to 54 at year end 1999."[137]
- "The number of local exchange lines served by CLECs grew from 288,000 lines or a market share of 2.3% at year end 1997 to 649,000 lines or a market share of 4.8% at year end 1998 to 1,469,000 lines or a market share of 9.8% at year end 1999."[138]
- "CLEC basic local service revenues increased from $247 million in 1998 to $480 million in 1999. CLEC market share, in terms of local service revenue, increased from 6% in 1998 to 8% in 1999…."[139]

The CLECs' revenue share grew more slowly than their line shares at least, in part, because CLECs exhibited more rapid growth of residence lines than of business lines.

[136] New York Public Service Commission, NY Local Competition Report: Analysis of Local Exchange Service Competition in Reflecting Company Reported Data and Statistics as of December 31, 1999.

[137] NYPSC, "Analysis of Local Exchange Service Competition in New York State, 2000," p 3.

[138] *Id.*

[139] *Id.*

The report also notes:

> Local service competition accelerated during the first half of 2000. Based on monthly data supplied by [Verizon NY], it appears that there was a gain of approximately one million CLEC exchange lines during the first half of the year. This was more than the increase in CLEC exchange lines for all of 1999.[140]

D. There Is More Competition In New York Than In Other States

1. There Is Much More Competition Overall In NY Than In The Rest Of The Country

Q. How does the level of local exchange competition in New York compare to levels in other states?

A. New York has far more local exchange competition than any other state in the country. By mid 2000, New York CLECs had captured sixteen percent of end user lines (*i.e.*, all lines serving customers), compared with about six percent for the rest of the country.[141] Thus, although New York has about seven percent of total US end user lines (13.7 million of 191.6 million) by mid 2000, it accounted for

[140] *Id.* at 4

[141] FCC Common Carrier Bureau Industry Analysis Division, "Local Telephone Competition: Status as of June 30, 2000," December 2000, Table 5.

about 17 percent of CLEC lines in the US.[142]

2. New York Has More Facilities-Based Competition Than The Rest Of The Country

Q. How much of that competition is facilities-based?

A. New York State has far more facilities-based competition than any other state in the nation. Verizon NY data for April 2001 imply that about one million CLEC switched voice lines (about 35 percent of the total CLEC lines in its territory) are provided without the use of Verizon NY network elements or resale. The FCC reports that, as of June 2000, for the country as a whole—including New York—only about 4.2 million CLEC lines are "CLEC-owned"—*i.e.*, lines provided entirely over CLEC facilities.[143] These data imply that CLECs in areas served by Verizon NY accounted for about 16 percent of all of the CLEC-owned local access lines in the country.[144]

[142] *Ibid*. Total NY lines / Total US lines = 13,689,883/191,611,831= 7.1%; Total NY CLEC lines / Total US CLEC lines = 2,157,618/12,746,924 = 16.9 %.

[143] FCC Common Carrier Bureau Industry Analysis Division, "Local Telephone Competition: Status as of June 30, 2000," December 2000, page 1: "CLEC's provided about one-third of end-user lines over their own local loop facilities." In Table 5 of the same report, the FCC counts at total of 12,746,924 CLEC lines. One third of this number is 4.249 million lines.

[144] Because the FCC only requires CLECs with greater than 10,000 access lines to report to the Commission, we estimate that the FCC underreports the number of CLEC lines in the country by 20 percent. *See* section 2D.

The large share of CLEC owned lines accounted for by Verizon NY may be partially attributable to demographic factors—*e.g.,* the substantial concentration of telecommunications activity in Manhattan. However, New York is clearly well ahead of the rest of the country in terms of facilities-based local competition. About half of all CLEC facilities-based lines in Verizon NY's territory are in areas other than Manhattan.

3. Competition Has Been Growing Faster In NY Than In The Rest Of The Country

Q. How does the growth of competition in New York compare with that in other states?

A. Competition in New York has been growing faster than anywhere else in the country. While New York CLEC lines grew by 81 percent or about one million lines in the first half of 2000, CLEC lines in the rest of the country grew by only 49 percent.[145]

[145] We subtracted UNE loops from the total number of CLEC E911 listings in Verizon NY's database to obtain this estimate.

4. New York CLECs Serve A Much Larger Portion Of Residence And Small Business Lines Than Are Served By CLECs In Other States

Q. How does competition in the residence and small business local exchange markets in New York compare with that in other states?

A. Residence and small business lines—*i.e.*, lines of customers with three or fewer lines—account for a much larger portion of New York CLEC lines than such lines account for in other states. As of June 30, 2000, 61 percent of New York CLEC lines served residences or small businesses, compared with a national average of only 36 percent.[146] In addition, the difference between the share of residential and small business lines served by ILECs in the State and new entrants is only six percentage points in New York. In contrast, on average outside New York, residence and small business lines account for a much smaller percentage of CLEC lines than they account for of the ILECs' lines. The difference between the percentage of CLEC lines that serve residence and small business customers and the percentage of ILEC lines that serve such customers is 48 percentage points in other states. And, in the

[146] FCC Common Carrier Bureau Industry Analysis Division, "Local Telephone Competition: Status as of June 30, 2000," December 2000, Table 7.

state with the next lowest differential—Colorado—the difference between the residence/small business percent of lines that CLECs serve compared to ILECs is 19 percentage points, or more than three times the New York differential. The table below summarizes these data.[147]

Table 10: Percentage of Lines Provided to Residential and Small Business Customers

State	Percentage of ILEC Lines serving Residence and Small Business Customers	Percentage of CLEC Lines Serving Residence and Small Business Customers	Difference (ILEC – CLEC)
New York	67%	61%	6%
Colorado	76	57	19
Nationwide	79	36	43
Average of All Reporting States (Less NY)	74	26	48

5. New York Has Widespread Competition, More Than In Other States.

Q. How does the pervasiveness of local competition in New York compare with that in other states?

A. New York has many more geographic areas with a multiplicity of

[147] FCC, Common Carrier Bureau, Industry Analysis Division, "Local Telephone Competition: Status as of June 30, 2000," December 2000.

CLECs than any other state. It has the largest percentage of Zip Codes with seven or more CLECs present—36 percent. In Texas—the next highest state—the same figure is 27 percent. The table below summarizes these data.[148]

Table 11: Percentage of Zip Codes by Number of Competitive Local Exchange Carriers Reporting they Serve a Zip Code Area

State	Zero CLECs	One-Three	Four	Five	Six	Seven or More CLECs
New York	12	28	10	8	6	36
Texas	18	36	8	7	5	27
Nationwide Mean *	46	36	5	4	2	7

* As reported by the FCC.

Source: FCC Common Carrier Bureau Industry Analysis Division, "Local Telephone Competition: Status as of June 30, 2000," December 2000, Zip Code Supplement.

E. Analysis Of The Mix Of Competition In New York

Q. What is the purpose of analyzing the mix of competition—by geographic area, by customer class, and by whether facilities-based competition is present?

A. As we discussed at the outset of our testimony, the Commission is interested in what, if anything, must be done to promote "the

[148] FCC Common Carrier Bureau Industry Analysis Division, "Local Telephone Competition: Status as of June 30, 2000," December 2000, Zip Code Supplement.

transition to full and effective telecommunications competition." We rely on this analysis of the mix of competition to draw certain conclusions concerning the extent to which the Commission's policies may have affected the development of competition. Based on this analysis, we recommend a set of policy changes the Commission should consider to encourage even greater facilities-based competition (as would appear to be its objective).

It is important to note again, that once facilities and collocation are in place, competitors can use UNE loops to bring facilities-based services to additional classes of customers—*e.g.*, diversify from large business to small business and to residence customers—assuming market and regulatory conditions make such competition profitable.

1. Competition For Business Customers Includes All Sizes And Types Of Customers Throughout Verizon NY's Territory

Q. Please summarize the geographic pattern of competition for business customers.

A. As can be seen from the tables below, CLECs serve business lines in every area served by Verizon NY. And, they serve them using every form of competition.

Table 12 : CLECs have substantial numbers of Business lines throughout Verizon's territory[149]

Area	Facilities-Based (E911 Listings)	UNE-Ps	Resale	Total
Manhattan	597,722	14,653	92,949	705,324
Rest of NYC	138,064	14,966	39,350	192,380
Nassau/Suffolk	211,940	11,824	53,192	276,956
Westchester	42,176	9,094	21,105	72,375
Dutchess	6,298	6,642	19,550	32,490
Buffalo	47,167	4,301	30,912	82,380
Albany	44,126	6,784	30,442	81,352
Syracuse	53,118	7,541	31,628	92,287
Binghamton	13,476	5,122	9,619	28,217

Q. Please describe the proportions of Verizon NY lines located in wire centers in which competitors already serve business customers.

A. CLECs serve lines in wire centers that account for virtually all of Verizon's business lines. Furthermore, as shown in the following

[149] The UNE-P totals in this table do not match those in Exhibit Part E. This is because the most recent available UNE-P data by NPA were for December 2000; whereas Exhibit Part E contains UNE-P data by carrier that were tabulated for April 2001.

table, this pattern is present in every part of the state served by Verizon NY. Facilities based CLECs serve business customers throughout Verizon NY's service area. They have chosen so far to provide business service in those parts of the areas served by Verizon NY in which it has most of its business access lines.

Table 13: CLECs Have Substantial Presence throughout Verizon's Service Area: Percentage of Verizon Business Lines in Wire Centers by Type of Competition.[150]

Area	Facilities-based	UNE-P	Resale	One or More Types of Competition
Manhattan	100	99	100	100
Rest of NYC	100	100	100	100
Nassau/Suffolk	98	100	100	100
Westchester	94	96	100	100
Dutchess	49	100	100	100
Albany	86	99	100	100
Syracuse	83	99	99	99
Binghamton	90	100	100	100
Buffalo	90	100	100	100

Q. Please describe the data on line losses by Verizon NY to competitors serving business local exchange services.

A. Verizon NY lost lines from at least 113,000 customers in the General Business category and 16,000 customers in the Enterprise category.[151] From 1998 to April 2001, Verizon NY lost at least

[150] The numbers in the table have been rounded up. i.e. 99.5 is reported as 100 percent.

[151] These data account for customers who switched at least one line away from Verizon. The number of losses is understated by these data because Verizon only tracks losses that occur when a customer ports its phone number to a CLEC. As a result, customers who leave Verizon for CLECs and obtain new phone numbers from other carriers are not (continued...)

348,000 general business lines from customers with revenues of $5,000 or less per month and over 83,000 lines from customers with total revenue greater than $5,000 per month.[152] Competitors serve business customers with five or fewer lines in 514 of the 524 wire center areas that Verizon NY serves.

Q. Is competition in the business local exchange markets limited to large business customers?

A. Absolutely not. As summarized in the table below, from 1998 to April 2001, Verizon NY's record of competitive losses (which greatly understates total customers served by competitors) shows that competitors have captured general business customers of all sizes and that most of the customers had five or fewer lines.

(...continued)

accounted for.

[152] This figure represents gross line losses and does not account for lines that were switched back to Verizon at a later date.

[BEGIN VERIZON NY PROPRIETARY]

Table 14: Distribution of (Gross) General Business Losses by Customer Line Size (1998-2001)		
Line Category	**Number of Lines Lost**	**Number of Customers Lost**
1 Line		
2 Lines		
3-5 Lines		
6-10 Lines		
11-20 Lines		
>20 Lines		
Total		

[END VERIZON NY PROPRIETARY]

Q. Have CLECs been successfully capturing high-value business customers?

A. Yes. CLECs have successfully captured business lines from customers with above-average total billed revenue throughout Verizon NY's service territory.

As Table 15 demonstrates below, the Verizon general business customers who switched at least one line to a CLEC have **[BEGIN VERIZON NY PROPRIETARY] [END VERIZON NY PROPRIETARY]** percent higher average revenue than Verizon's general business customer base.

[BEGIN VERIZON NY PROPRIETARY]

Table 15: CLECs Have Successfully Targeted High Revenue General Business Customers throughout Verizon NY's Service Territory			
Metro Area	**Average Revenue of Lost Customers[153]**	**Average Revenue of Verizon NY Customers[154]**	**Percent Difference**
Manhattan			
Rest of NYC			
Nassau/Suffolk			
Westchester			
Poughkeepsie/			
Buffalo			
Albany			
Syracuse			
Binghamtonmir			
All Verizon NY			

[END VERIZON NY PROPRIETARY]

2. Competition For Residence Customers Includes All Types Of Customers, Although CLECs Are Focusing On High Margin Customers

Q. Please summarize the geographic pattern of competition for residence customers.

A. As can be seen from the tables below, CLECs serve residence lines

[153] These data reflect the average revenue of customers who had at least one line ported away from Verizon NY.

[154] These data reflect the revenue of Verizon business customers with total monthly billed revenue below $5,000 in March 2001.

[155] Based on Year 2000 losses only.

in every area served by Verizon NY.

Table 16: CLECs Have Substantial Residence Lines throughout Verizon's Service Area [156]

Area	Facilities based	UNE-Ps	Resale	Total
Manhattan	33,697	179,530	18,782	232,009
Rest of NYC	13,181	565,661	22,438	601,280
Nassau/Suffolk	31,054	261,932	9,910	302,896
Westchester	1,051	78,365	3,245	82,661
Dutchess	24,452	73,669	2,719	100,840
Rochester/Buffalo	6,023	107,463	6,602	120,088
Albany	6,039	78,381	4,997	89,417
Syracuse	3,576	77,177	5,329	86,802
Binghamton	1,536	29,708	635	31,879

Q. Please describe the proportions of Verizon NY residence lines located in wire centers in which competitors already serve residence customers.

A. CLECs serve lines in wire centers that account for virtually all of Verizon NY's residence lines. Furthermore, as shown in the

[156] The UNE-P totals in this table do not match those in Exhibit Part E. This is because UNE-P data by NPA are for December 2000. We were unable to get more recent UNE-P data by NPA and as a result the data in the table understates the UNE-P business lines. Exhibit Part E contains more recent data.

following table, this pattern is present in every region served by Verizon NY. CLECs serve residence customers using their own facilities (*i.e.*, have E911 listings) throughout the areas served by Verizon NY; however, this form of competition is more concentrated in the more densely populated urban and suburban areas in which Verizon NY has most of its residence access lines. Nevertheless, competitors serve residence customers today using UNE-Ps and resale in virtually every Verizon NY wire center.

Table 17: CLECs Have Substantial Presence throughout Verizon's Service Area: Percentage of Verizon Residence Lines in Wire Centers by Type of Competition.[157]

Area	Facilities-based (E 911 Listings)	UNE-P	Resale
Manhattan	88	100	100
Rest of NYC	57	98	98
Nassau/Suffolk	80	100	100
Westchester	53	100	100
Poughkeepsie/Dutchess	10	100	100
Albany	28	100	99
Syracuse	41	100	99
Binghamton/Ithaca	44	100	98
Buffalo	59	100	99

However, we should point out that the presence of facilities-based competition extends beyond current sales—*e.g.*, providers with

[157] The numbers in the table have been rounded; thus, some , *e.g.*, . 99.5 is reported as 100 percent

facilities in place and access to Verizon NY UNE loops can rapidly expand from business to residence customers. Thus, current collocation, switches and fiber can be used to serve additional customers—including residential customers.

Note also that this geographic analysis of the presence of facilities-based competition for residence customers relies on CLEC E911 listings which can be mapped only imperfectly to Verizon wire centers; thus, it understates the geographic spread of facilities based competition. (The same limitation is true of the geographic analysis of facilities-based competition for business customers.) The use of ported numbers to identify wire centers with facilities-based competition shows that it is more widespread—reaching wire centers that account for at least 80 percent of lines in ever region served by Verizon NY and wire centers that account for 96 percent of Verizon NY's total lines.

Q. Please describe the results of your analysis of competitive losses in the residence local exchange markets.

A. Verizon NY data on the gross number of residence customers and lines lost to competitors show that:

?? In total, about **[BEGIN VERIZON NY PROPRIETARY]**

[END VERIZON NY PROPRIETARY] Verizon NY residence customers[158] changed to competitors' local services from 1998 to the beginning of 2001;

- The vast majority of these residence customers **[BEGIN VERIZON NY PROPRIETARY] [END VERIZON NY PROPRIETARY]** who shifted to CLECs shifted all of their lines to a competitor;

- In total, almost **[BEGIN VERIZON NY PROPRIETARY] [END VERIZON NY PROPRIETARY]** residence lines were lost;

- CLECs captured residence customers whose revenues averaged about **[BEGIN VERIZON NY PROPRIETARY] [END VERIZON NY PROPRIETARY]** higher than those of Verizon's remaining residence customers;

- Average CLEC residence revenues are relatively high throughout Verizon NY's service area; and

- CLECs captured customers formerly taking all classes of service including over **[BEGIN VERIZON NY PROPRIETARY] [END VERIZON NY PROPRIETARY]** life line customers. *See* Table 18 below.

[BEGIN VERIZON NY PROPRIETARY]

Table 18: Verizon NY (Gross) Residence Lines Lost

Region	Number of Lines Lost	Number of Customers Who Switched All Lines to a CLEC	Percent[159] of All Residence Lost Lines	Percent of Installed Residence] Base
Manhattan				
Rest of NYC				

[158] A customer is defined as a billing telephone number.

[159] Percentages do not add up to 100percent as a result of rounding errors.

Long Island				
Westchester				
Albany				
Poughkeepsie				
Binghamton				
Buffalo				
Syracuse				
Total NY State				

[END VERIZON NY PROPRIETARY]

Thus, competitors are providing local exchange service to residence customers of all types in every part of the area served by Verizon NY.

(Note that these data include all lines that shifted to another competitor. Some of these have been won back by Verizon NY, as indicated by the data we present on residence lines served by competitors. We report gross losses because net losses are not available by geographic area or service type.)

Q. Please describe the types of residence customers being served by Verizon NY's competitors.

A. Competitors are serving customers who generate low revenues and those who generate high revenues. However, as shown in the following table, they have been able to capture a disproportionately large number of high revenue customers in every area served by

Verizon NY.[160]

[BEGIN VERIZON NY PROPRIETARY]

Table 19: CLECs Capture Residence Customers with Above Average Revenue in Every Verizon NY Geographic			
Region	**Lost Residence Customer Average Revenue[161]**	**Verizon Residence Customer Average Revenue[162]**	**Percent Difference**
Manhattan			
Rest of NYC			
Nassau/Suffolk			
Westchester			
Albany			
Poughkeepsie			
Binghamton			
Buffalo			
Syracuse			
Total NY State			

[END VERIZON NY PROPRIETARY]

3. Assessment Of The Mix Of Competition Based On Verizon NY Data

Q. What do Verizon NY's data show `regarding the types of competition by the class of service in Verizon NY's service area?

A. The data show that, as we expected, facilities-based competition is more prevalent for business customers than for residence

[160] Z-Tel is an example of a carrier without a basic tariff that only offers high-value bundles to residence customers through UNE-P.

[161] Average total billed revenue of lost customers when customer was with Verizon NY.

[162] Calculation based on January 2000 Verizon NY consumer revenue.

customers. CLECs use their own facilities to serve about 1.15 million business lines and over 120,000 residence lines (according to CLEC E911 listings). In contrast, CLECs use UNE-Ps to serve about 1.6 million residential lines, or about 95 percent of the total CLEC lines served using UNE-Ps; thus, a total of about 1.8 residential customers are being served by CLECs using a combination of UNE-Ps, their own facilities and resale.

Table 20: CLEC Residence, Business and Total Lines by Type			
	Business	**Residence**	**Total**
E911 Listings[163]	1,154,087	120,609	1,274,696
UNE-Platforms[164]	108,685	1,618,356	1,727,041
Resale[165]	328,783	74,657	403,440
Total CLEC lines	**1,591,555**	**1,813,622**	**3,405,177**
Percentage of CLEC Residence, Business and Total Lines by Type			
E911 listings	73%	7%	37%
UNE-Platforms	7%	90%	50%
Resale	21%	4%	12%

Q. In your opinion, what accounts for the mix you have just described?

A. This pattern appears to stem from the fact that the higher prices and lower costs of serving business customers have made it more attractive for facilities-based competitors to serve those customers. More specifically:

[163] E911 listings as of April 2001. An E911 listing may represent more than one voice grade equivalent access line. Verizon NY cannot determine the actual number of lines these E911 listings represent.

[164] UNE-Platforms as of December 2000.

[165] Resold lines as of December 2000. Analysis adjusts for two carriers Verizon NY has evidence of no longer providing service as of April 2001.

- Local business rates averaged about $51 per month in New York compared with only $23 per month for local residential service (according to mid 1999 FCC data;[166]

- Businesses cost less to serve because they are generally more concentrated in multi-tenant buildings within narrower geographic areas. In addition serving their local traffic may cost less incrementally because they tend to use PBX and key systems and some types of business customers tend to have higher long distance volumes, making it is less costly to use high capacity facilities to serve all of their needs; and

- CLECs added about 1.4 million of their 1.8 million residence lines since the end of 1999, after Verizon NY received Section 271 approval. Thus, it is obvious that the major IXCs at least put off entering the residence and small business local exchange markets as long as possible to avoid accelerating Verizon NY's entry into in-region long distance service and the resulting losses the IXCs had experienced in other long distance markets where the (non-RBOC) ILEC entered. Once it became clear Verizon NY would be permitted to provide in-region interLATA service, the IXCs quickly entered the local markets using UNE-Ps so they could minimize the risk of long distance losses by offering a bundle of local and long distance services in advance of or simultaneously with Verizon NY's long distance entry.

Competition for large business customers is particularly intense. Notwithstanding this understandable focus, competition for both business and residence customers is robust. As we have discussed,

[166] FCC Reference Book of Rates, Prices Index and Expenditures for Telephone Service, June 1999, Tables 1.4 and 1.11. Business Rate is based upon flat-rate service where available, and measured/message service with 200 five-minute, same-zone business-day calls elsewhere. Rates include touch-tone, surcharges, 911 charges, and taxes. Residential Rate is for flat-rate service where available, and measured/message service with 100 local calls, elsewhere. Rate includes touch-tone service, surcharges, 911 charges and taxes.

CLECs serve business customers of all sizes throughout Verizon NY's service area. Further, competition for residential customers is present in virtually every Verizon NY wire center in the state. And, facilities-based residential competition is present in wire centers accounting for 64 percent of Verizon's residential lines.

4. Analysis Of FCC Data On Type Of Competition

Q. What do the FCC data indicate about the mix of competition in New York?

A. As summarized below, the FCC data show that New York leads the country in facilities-based and overall local competition—*i.e.*, CLEC owned lines accounted for twice as large of a share of total lines in Verizon's territory as they do in other areas, and the CLECs' share of total lines in Verizon NY's service area is about 2.7 times as large as the CLECs' share in other areas. Further, although we cannot be sure, because the FCC does not separate out use of UNE-Ps, Verizon NY's service area probably accounted for at least 32 percent of the UNE-Ps in the entire country.[167] Finally, resale by CLECs

[167] Even if all of the lines served using UNEs in the rest of the states were served using the UNE platform, and none were served using UNE loops—a highly implausible assumption—we would find that Verizon NY's CLEC UNE P lines accounted for about 32.2 percent of the all the CLEC lines served by UNEs in the country.

competing with Verizon NY captured about the same share of total lines as CLECs in other areas. Thus, aside from the fact that New York leads the country in facilities-based local competition, the most striking finding is that Verizon NY's competitors use such a disproportionate share of UNE-Ps.

As of mid 2000, the shares of CLEC lines provided using UNE loops, UNE-Ps, resale and on CLEC-owned facilities were as follows in Verizon NY's area and in other states:

Table 21: CLEC End-User Lines (June 2000)

Type of Competition	Lines		CLEC Share (% of total lines in area)		Ratio of CLEC Share in Verizon NY Area to CLEC Share in Other Areas
	Verizon NY Area	Other Areas [168]	Verizon NY [169]	Other Ar	
CLEC owned	836,160[170]	5,961,325	6.6%	3.1%	2.1
UNE Loops	182,031		1.4	N/a	N/a
UNE-Ps	1,049,682		8.2	N/a	N/a
Total UNE	1,231,713	2,025,287	9.7	1.1	9.2
Resale	385,384	5,276,616	3.0	2.7	1.1
Total	**2,453,257**	**13,263,228**	**19.3**	**6.9**	**2.8**

[168] The estimates for CLECs in other areas were made by adjusting the FCC totals to account for the FCC's underreporting of CLEC lines and then subtracting CLEC data for Verizon NY. The underreporting was estimated by comparing NYPSC data with the FCC's data for New York and assuming that the same degree of underreporting was present in other areas. In particular, the NYPSC reports about 23 percent more lines for CLECs; thus, we adjusted the FCC's reported total number of CLEC lines for the US by multiplying by 1.23. We used the number of ILEC reported UNEs and resale lines from the FCC because the FCC states that there is likely to be less underreporting of ILEC reported data. Finally, we calculated the number of CLEC owned lines for other areas by subtracting the number of CLEC resale and UNE lines from the adjusted total CLEC lines.

[169] The FCC Reports 2,157,618 CLEC lines for the entire state as of June 2000. However, as noted above the FCC data understate the total because they exclude carriers with less than 10,000 lines. Thus, to compare the CLEC share of lines in New York with the CLEC share of lines in the rest of the country, we use the FCC data reported for New York lines to calculate shares rather than Verizon NY's total lines.

[170] To estimate the number of CLEC owned lines in Verizon NY's territory—*i.e.*, the number of lines provided wholly with CLEC facilities—we subtracted the number of UNE loops Verizon was providing to CLECs as of July 2000 from the CLEC E911 listings Verizon reported in their territory as of July 2000 (1,071,848) and adjusted the data for June by accounting for five percent monthly growth. These data were not available for June 2000.

Sources: Verizon NY TIS Volume Report, December 2000; Verizon CLEC E911 Data; Federal Communications Commission, Common Carrier Bureau, Industry Analysis Division, "Local Telephone Competition: Status as of June 30, 2000," December 2000, Tables 3, 4, and 5.

Q. What factors do you believe may account for the differences between the pattern of competition in New York and in the other states?

A. The disproportionate number of UNE-P lines sold in New York suggests at least two hypotheses: (1) New York rates for UNE-Ps are out of line with those in other states; and/or (2) the 271 process greatly accelerated the purchase of UNE-Ps in New York.

III. POLICY IMPLICATIONS OF THE DATA PRESENTED

Q. What policy issues do you address in this section of your testimony?

A. We first discuss the implications of these data in terms of Verizon NY's proposed alternative regulatory plan. Since the testimony of the other panel addresses in substantial detail the significance of competition as it relates to the pricing and service quality components of Verizon NY's proposed plan, we discuss the significance of competition on the Commission's future oversight of Verizon NY generally.

We then respond to the Commission's order that Verizon NY's proposed regulation plan discuss:

> [W]hat else must be done to ensure that meaningful and permanent telecommunications competition flourishes. The assessment of Verizon's future regulatory framework should examine whether or not our current approach to competition is conducive to the growth of facilities based competitive alternatives and should identify what measures are needed to complete the transition to full and effective competition.

A. The Pervasive Competition That Exists Today Justifies, Indeed, Requires Relaxation Of Regulation of Verizon NY's Retail and Carrier Access Services

Q. What are the implications of the evidence of competition you presented in terms of how the Commission should regulate Verizon NY over the course of its new plan?

A. The evidence we have just presented suggests that far less regulation of Verizon NY's retail services would be appropriate, consistent with its proposed new Plan.

Q. Does the continued regulation of wholesale rates (for UNEs and resale) reinforce the ability of competition to protect customers and, thus, support granting pricing flexibility for retail rates?

A. Yes. Regulation of Verizon NY's wholesale services under the terms of the 1996 Act and under the jurisdiction of this Commission has greatly reduced barriers to entry into the provision of retail services. This means it is appropriate to relax regulation of the latter services. That barriers to entry have been effectively removed is demonstrated

by the effective and irreversible local competitive entry we have discussed at length earlier in this testimony.

The level and type of competition that already exists in Verizon NY's service area, together with the requirements of the 1996 Act,[171] have eliminated any underlying market power that Verizon NY might once have had over retail services and will require Verizon NY to provide high quality service at competitive prices for the following reasons: First, competitors have successfully established facilities-based competition in every region served by Verizon NY.[172] Indeed, as shown in Exhibit Part I customers have ported numbers to CLECs in 405 wire centers accounting for about 97 percent of Verizon's lines; thus, competitors already have, and use facilities in wire centers that account for the vast majority of Verizon NY's customers. To the extent these competitors can operate their facilities more efficiently and effectively than Verizon NY can, they can provide better service

[171] Which, as we described earlier, have been effectively implemented as demonstrated by both this Commission and the FCC approving Verizon's 271 application.

[172] Frontier data are not included in this or other analysis that rely on Verizon records, except to the extent such data may be included to reflect possible activity by Frontier acting as a CLEC serving regions served by Verizon NY.

at lower prices and, thus, lure customers away from Verizon NY, if Verizon NY were to try to price above cost-based levels.[173]

Second, even though CLECs may not be serving business and residence customers using their own facilities in every single wire center, they are already serving residential and business customers in virtually every single wire center using UNE-Ps and/or resale; thus, they are clearly able to perform all retailing functions for every customer *today*.

Third, as shown in Figure 1, collocation can be accomplished extremely rapidly. Thus, CLECs can rapidly use a combination of their own switches and Verizon NY UNE loops to serve customers virtually any place.

Fourth, under the 1996 Act CLECs would continue to be able to buy UNEs at rates set by the Commission based on Verizon's own costs. Taken together, this means that any effort by Verizon NY to set rates above competitive levels would be defeated by its competitors.

[173] Of course, to the extent that regulation prevents setting of cost-based rates—*e.g.*, by requiring residence subsidies—such market mechanisms may be frustrated.

B. The Commission's Concern About Whether Changes Are Required So That "Meaningful And Permanent Competition Flourishes" Is Unfounded.

Q. In its Order, the Commission expressed concern about ensuring that "meaningful and permanent telecommunications competition flourishes." Do you believe that this concern requires any additional policy changes?

A. Yes and no. While the Commission evidently seeks to stimulate further growth of facilities-based competition, it is clear that the competition faced by Verizon NY is already both meaningful and permanent. It is meaningful (and effective) in the sense that it constrains Verizon NY's pricing decisions and eliminates any market power Verizon NY may have had in providing retail services before the onset of competition and absent regulation that prevented it from exercising market power.

The competition is also permanent. There is virtually no chance that competition will recede in Verizon NY's territory. The data we present here show substantial and rapidly expanding competition. They also reveal substantial sunk investment worth hundreds of millions of dollars. According to the Association for Local Telecommunications Services (ALTS), CLECs invested over $55

billion in infrastructure nationally between 1997 and 2000.[174] Assuming that these investments are proportion to the number of lines they own in each state implies that they invested about $8.8 billion in New York facilities.[175]

The substantial sunk investment clearly demonstrates that competition is permanent—or, to use the Commission's own term, "irreversible."[176]

By the same token, if the Commission were to raise basic residence rates to cost based levels and set higher UNE rates, it would help drive even more facilities based competition than the substantial amount that exists today.

Q. Are there other reasons for concluding that competition is permanent?

A. Yes. With the granting of Section 271 relief to Verizon NY, the major

[174] ALTS reports that "between 1997 and 2000, CLECs spent in excess of $55 billion on capital investments – infrastructure that will serve the booming demand for voice and data telecommunications services." David A. Wolcott, Director, Public Policy Research, ALTS, "An ALTS Analysis: Local Competition Policy & The New Economy," February 2, 2001:4; available at www.alts.org, retrieved May 10, 2001. A similar figure ($56 billion) was cited in another ALTS report, entitled "The State of Local Competition 2001," February 2001:4. The Association for Local Telecommunications Services, "The State of Local Competition 2001," February 2001: 9.

[175] As explained earlier in the testimony, New York CLECs serve about 16 percent of CLEC-owned lines in the country as reported by the FCC.

[176] Statement from Chairman Maureen O. Helmer, issued December 22, 1999,.

IXCs have demonstrated that they will compete vigorously for local services so they can provide the full bundle of services to compete with Verizon NY. Despite their protestations concerning the difficulties of competing in the local markets, the IXCs will not abandon their efforts. They may shift to other forms of competition—*e.g.*, from resale to UNE-Ps and from UNE-Ps to collocation and provision of bundles of DSL and voice services; however, they clearly are committed to providing the bundle of services. For example, although Sprint decided to discontinue serving local customers using UNE-Ps, it has already deployed ION switches capable of providing voice channels and DSL to customers using UNE loops and/or other local facilities.[177]

Q. Do the recent financial woes faced by newer CLECs suggest that competition may not be permanent?

A. No. Although a few competitors are struggling and might even go out of business, there is no chance that the competition faced by Verizon NY will become ineffective or is anything less than permanent. First, as we have shown repeatedly, competition is thriving – Verizon NY continues to lose access lines to its

[177] LERG, January 2001.

competitors every day. Second, the current travails of some CLECs are a normal part of the competitive process. Third, and most important, even if some individual CLECs exit the local market, the remaining CLECs will likely purchase their assets (in the case of a facility-based CLEC) and/or take over their customer bases. This will strengthen the purchaser's network and product mix and, ultimately strengthen competition.

Q. Please elaborate on your assertion that the CLEC industry in New York is strong and will remain strong.

A. As illustrated throughout this panel testimony, CLECs in New York are continuing to thrive in the market. First, many substantial firms compete in New York—including AT&T (and its Teleport subsidiary), WorldCom (and its MCI Metro and MFS subsidiaries), Time Warner, and Cablevision. Second, as of April 2001, NY CLECs were serving over three million lines in Verizon NY's service area, including more than one million lines using at least their own switches and about one million lines using only their own facilities.[178] Third, as discussed above, competitors have invested billions of dollars in

[178] We estimated the number of lines CLECs serve without inputs from Verizon by subtracting the number of UNE loops Verizon NY provides to CLECs from total CLEC E911 listings.

local voice switches, collocation, and local fiber transmission facilities. Fourth, the number of competitors as well as the number of lines they serve has been continually growing.

Q. Please summarize evidence that the local competition in New York is growing robustly.

A. As we have discussed, every measure of competition tracked by Verizon NY shows evidence of a strong and thriving CLEC market. In addition, an analysis of annual growth in the CLEC industry, based on publicly available market research data, shows that the number of CLECs is growing steadily. Specifically, at the end of 1997, there were reportedly 25 planned and operational CLECs in New York.[179] Twelve months later, this number nearly doubled to 49 CLECs.[180] At the end of 1999, this number increased another 16 percent to 57 CLECs.[181] Finally, Verizon NY data show that by April 2001, 91 local competitors were serving customers in New York. Thus, the data clearly illustrate that a growing number of CLECs have found it attractive to enter the market for local telephone

[179] 1998 Annual CLEC Report, New Paradigm Resources Group, Inc, Chapter 8: 38

[180] 1999 Annual CLEC Report, New Paradigm Resources Group, Inc, Chapter 8: 87

[181] 2000 Annual CLEC Report, New Paradigm Resources Group, Inc, Chapter 8:.

service in New York. Assuming that start-ups as well as venture capitalists and private investors carefully analyze the business cases of such risky undertakings *before* entering, it is reasonable to conclude that the CLEC industry will be stronger still.

Q. Why you believe that the CLEC industry in New York will be stronger (or, at least, will continue to grow at this rate)?

A. We would not be surprised if the CLEC growth rate in the upcoming years outpaces its historical growth. Newly deployable technology available to the industry will support entry by new CLECs and/or increased penetration by existing CLECs. For instance, we expect that wireless local loop and packetized voice services will have a significant impact on local competition in the next two to three years.

Q. Please explain how wireless local loop technology will affect local competition in New York.

A. Technological and regulatory developments since the mid-1990s have set the stage for greater use of wireless links to meet the “last mile” telecommunications needs of smaller and medium sized enterprises (SME) and multi-dwelling residential units. The FCC has authorized spectrum blocks in the 24 GHz, and 38 GHz bands on a metropolitan area basis and has auctioned large blocks for Local Multipoint Distribution Service operations at frequencies around 29

and 31 GHz. Because of their higher frequency, only small antennas are required, and area-wide FCC-authorization permits operators to engineer service locations without the need for regulatory "frequency coordination" with other licensees.

Because of the current economics of these systems, services are currently provided mainly to businesses located in larger buildings in which tenants can effectively share the cost of an on-premises radio terminal. However, it is expected that with increased competition in the equipment industry, further technological improvements, and production efficiency gains, equipment costs will fall to a point where smaller businesses and multi-dwelling residential customers can also be served cost effectively as well. This process will further increase competition as existing wireless local loop providers increase their customer base and new carriers enter.

Q. Please explain how packetized voice technology will impact local competition in New York.

A. Traditionally, voice services have been provided over circuits, usually of 64 kbps bandwidth, that are established by switches and connect end users for the duration of their conversation. Recent improvements in packet switching technology disassemble traffic into

packets and use bandwidth only in bursts, when necessary to transmit information from the conversation. Further improvements in these technologies will facilitate additional deployment of voice over the Internet, over coaxial cable, and over DSL loops. The implication of this development is that a CLEC could potentially provide all voice and data service with little or no use of unbundled network elements. Packetized voice could have a significant impact on local competition and provides further evidence that local competition is permanent and likely to increase.

Q. In view of your previous testimony, what is the significance of the fact that a number of CLECs have recently gone out of business or have filed for Chapter 11 protection?

A. As we would expect in any emerging market, the CLEC industry in New York has undergone dramatic changes since the inception of the 1996 Act. New firms have entered the market, existing firms have merged, others have been acquired, and a subset of CLECs have filed for protection with bankruptcy courts. Although we are not privy to any of these firms' business plans and have not studied their financial structure, the particular problems of these firms are most likely a complex function of the firms' management capital funding and overall strategy. As we will discuss in more detail later, this

"telecom shakeout" is not an indication that local competition in New York is flagging in any way. Indeed, markets in other industries have experienced similar shakeouts from time to time. Rather, it is part of the normal working of a market and a sign of the changing economic environment.

Q. Are you aware of the fact that several CLECs are scaling back their operations?

A. Yes, some CLECs are scaling back their operations just as corporations in other industries are scaling back theirs. Specifically, we are aware of media reports that seven of the at least 60 CLECs in New York have announced changes in their business plans and operations. For example, according to the media:

- Covad Communications Company is making staff reductions;
- Onvoy handed off all its DSL customers to Earthlink;
- DSLnet, Inc. has laid off 50 percent of its staff and closed down all its offices except for its San Francisco headquarters;
- Harvard Net gave up DSL service;
- Rhythms Inc. has made cost reductions and lay-offs;
- Network Access Solutions, Inc. (like many other corporations in the telecommunications sector) has experienced a stock decline; and
- Winstar has scaled back its growth plans and filed for protection with the bankruptcy courts.

Q. Do these changes in operations signal a failure of local competition in New York?

A. No. As in any developing market, growing pains and shakeouts are to be expected. We have witnessed shakeouts in the Internet and the so-called "dot.com" industries, and we are experiencing them among some of the newer CLECs. This is part of the normal working of a market. For instance, it is known that sixty percent of high-tech start-ups, such as CLECs and dot.com firms, go bankrupt.[182] Thus, the fact that some of the companies that have been competing with Verizon NY are scaling back their operations or are in Chapter 11, or even that a few have folded is not an indication that the market is failing. To the contrary, the experiences of these firms are more a sign that the market is working and in the process of sorting through potential players.

Indeed, all local exchange companies, including Verizon NY, are working hard to reduce costs by, among other things, cutting back their workforce. Cost containment and reductions achieved through these means are imperative in competitive markets, particularly

[182] John L. Nesheim, "High Tech Startups: The Complete Handbook For Creating Successful New High Tech Companies," Free Press, Revised and Updated Version, March 2000.

during times of economic down turns. Thus, the adjustment process is not by itself an indicator of the overall health of the CLEC market. Rather, it is an indication of changed market conditions affecting particular players.

Q. What particular type of CLECs seem to be facing the most severe financial difficulties?

A. Covad, NorthPoint, HarvardNet, Rhythms, DSL.net, Digital Broadband Communications, and other DSL service providers – a.k.a. data LECs – have experienced financial difficulties recently and have either curtailed or abandoned their DSL operations. This does not indicate an underlying weakness in competition for the services on which the current case focuses. Instead, data LECs were part of the dot-com bubble that has finally burst. Technology shares in general have plummeted. For instance, since March 2000 the NASDAQ index has fallen over 50 percent; and data LEC shares have fallen over 90 percent. The burst technology bubble has reduced the ability of companies to obtain venture capital if they cannot show immediate profits. And these companies adopted business models that depended on the ability to raise such capital for their continued viability.

As NorthPoint's CEO, Elizabeth Fetter, put it, "We were highly

incented by Wall Street to spend money like drunken sailors,"[183] leaving data LECs ill-prepared for a financial downturn. As the CEO and a founder of the data CLEC Jato Communications, has noted, "in hindsight, (there were) a lot of naïve assumptions that capital would always be there to fund the business plan."[184] As a spokesman for one data LEC, Vitts Networks, has explained, companies tried for "success by growth, instead of growing by success. Some of these guys overbuilt and got way out ahead of their funding."[185]

Covad's chairman, Charles McMinn, observed, "There has been a dramatic shift in focus that has occurred in our industry, turning us from growth to profitability as the metric."[186] He also said, "The market has changed what it's rewarding. It is no longer rewarding gross of lines as the number one metric – it is rewarding a path to

[183] Scott Woolley, "Highway to Hell," *Forbes Magazine* (February 19, 2001).

[184] K. Hudson, "Jato's Fall Reflects Industry Problems," *Denver Post* (December 30, 2000) at C1.

[185] P. Howe, "DSL Start-Ups Begin to Fold Before Turning a Profit, While Bells Sit Pretty," *Boston Globe* (December 17, 2000) at F1.

[186] J. Johnson, "DSL Forecast: Foggy, But Clear Road Beckons," http://www.clec.com (January 4, 2001). *See also* J. McKay, "Just a Stumble – DSL Companies See Hard Financial Times But Resist the Final Fall," http://tele.com (January 8, 2001).

profitability."[187] HarvardNet's President, Mark Washburn, likewise announced that "[t]he markets have gone from a position of, 'What will you do for me next year?' to 'What will you do for me this quarter?'"[188]

Similar financial difficulties are affecting data LECs' main customers – Internet service providers ("ISPs") – many of whom are not paying their bills, which has become a major contributing factor to the financial difficulties of the data LECs themselves. It is generally ISPs who are the sales channel for the data LECs. ISPs' failure to pay their bills has therefore contributed significantly to the data LECs' financial problems.[189] "Delinquent and 'at-risk' ISPs account for 58% of [Covad's] total lines."[190] As one DSL analyst has noted, "Having too many ISP partners resell DSL may have been one of the key mistakes of the data competitive local exchange carriers (CLECs) … They didn't have stringent enough requirements for the financial

[187] *Id.*

[188] P. J. Howe, "DSL Providers Fail Without Deep Pockets," *The Deseret News* (December 20, 2000) at C03.

[189] "Covad Restructuring More Drastic Than Expected, Journal Reports," http://www.clec.com (February 21, 2001).

[190] J. Camp, *et al*., Morgan Stanley, Dean Witter, *Investext Company Report* No. 2394704, Covad Communications Group (December 14, 2000).

health of their business partners."[191]

Q. What must a CLEC do in order to operate successfully in New York?

A. Any local exchange company's success in New York (or elsewhere for that matter) depends on a number of factors: time to market, quality of the management team, quality of the sales force, and, perhaps most important, the ability to obtain financing. Contrary to popular belief, technological differentiation is not likely to provide a long-term competitive edge, as incumbent firms are likely to catch up quickly. Telecommunications is a capital intensive business and requires a substantial amount of upfront capital investment before free cash flow breakeven occurs. This is particularly true for facilities-based competitors. If a company does not have adequate financing, and the capital markets become inaccessible, even a company with good business plans and strong management can still find itself filing for bankruptcy.

Q. How will the shakeout lead to stronger competition?

A. The current shakeout, including consolidations and acquisitions should result in a CLEC industry that will be more robust and viable

[191] V. Ryan, "Headed for a Fall?," *Telephony* (December 18, 2000) (quoting Patrick Hurley, DSL analyst at TeleChoice).

in the long term. We expect that the next generation of CLECs will be:

- Larger in terms of revenue, geographic reach, and service lines;
- Better capitalized;
- Able to take advantage of economies of scale and scope; and
- More credible with customers (such that they will enjoy a lower churn rate).

Consider the case of NorthPoint Communications, Inc, a DSL service provider in New York and elsewhere. NorthPoint went bankrupt in March 2001, after failure to obtain additional financing. Shortly thereafter, AT&T purchased NorthPoint's assets, including its collocation arrangements, Operations Support Systems, and related assets through a bankruptcy auction, for $135 million. [192] AT&T's purchase was widely seen as a serious move into providing high-speed data services over existing copper phone lines. In a public statement, AT&T Consumers' co-president announced that "[t]hey will help us in our efforts to move aggressively to bring the full benefits of DSL to consumers and businesses."[193] Although AT&T

[192] NorthPoint website, http://www.northpoint.net, accessed May 10, 2001.

[193] Brian Ploskina, "AT&T Buys NorthPoint Assets," Interactive Week, March 26, 2001.

did not purchase the customer base, NorthPoint successfully referred its former customers to some 30 other ISPs.[194] Thus, NorthPoint's failure transferred NorthPoint's assets to a competitor in a better position to utilize them fully, thereby strengthening competition in the state.

The history of AT&T's acquiring TCG and WorldCom's acquiring MFS and Brooks makes a similar point. It shows that AT&T and WorldCom believe the local market is worth substantial investments and that, although the number of independent firms may decline, their facilities will be used to compete more effectively against the incumbent local carrier. More recently, Metropolitan Telecommunications ("MetTel"), based in New York City, announced that it signed an agreement to acquire certain assets of North American Telecommunications ("Natelco") based in Westbury, New York. Natelco filed for Chapter 11 bankruptcy earlier this month. MetTel will acquire more than 20,000 lines in the transaction.

Q. What happens to customers if a poorly performing CLEC exits the market?

[194] http://www.northpoint.net/, accessed May 14, 2001.

A. Nationwide, a number of CLECs have exited the market for a variety of reasons. Most often this has little or no impact on the retail market, because the existing infrastructure, including customer accounts, are usually sold to other competitors. Thus, as illustrated by the case of NorthPoint, consumers are apt to benefit in the long run.

Q. Do experts and financial analysts in telecommunications agree with your view on the CLEC market?

A. Yes. For example, *Communications Today* accurately summarized the situation this way:

> Expect the strong CLECs to bulk up this year, while the weaker ones turn into road kill on the Information Superhighway. Although many carriers are facing slowing sales, plummeting stock prices and possible bankruptcy, many CLECs have found their niche and will survive the economic storm.[195]

Similarly, the CEO of US LEC Corporation, a CLEC with licenses to operate in New York, is optimistic about the CLEC industry. He recently announced strong year-end 2000 results and vowed that his company has "what we believe to be all the elements necessary not

[195] R. Pringle, *CLEC Shopping Days?*, Communications Today, Vol. 7 Iss. 36 (February 26, 2001).

just to survive, but to prosper in this sector."[196]

Likewise, Alan Pierce, President of Information Age Economics, states, "Don't Count the CLECs Out Yet":

> "Now the naysayers are beginning to write off the CLECs and D (for data) LECs. Today's muffled bell, they say, is tolling ominously for the CLECs. But not so fast. Don't count the CLECs out just yet!"
>
> "Perhaps the days are coming to an end when the CLECs merely asserted their rights to be local competitors. Now they must be true carriers, offering new, cost-effective services, increasingly over their own facilities. CLECs that adapt and innovate will survive; those that do not will be bought by competitors, including the ILECs, or will belly up. That's Darwinian capitalism at work—the survival of the fittest!" [197]
>
> "What the CLEC critics ignore is a fundamental, and obvious, public policy axiom: Regulations, be they from the FCC or the States, never consistently support the interests of just one competitive group. Conventional public policy wisdom says you win some, you lose some—and that's the case for the CLECs, with an FCC win-loss record better than their major competitors, the ILECs."
>
> "In terms of a lifespan, the CLECs are in their preteens, so perhaps the best is yet to come."[198]

[196] "US LEC Corporation announces strong fourth quarter and year-end 2000 results," available at www.uslec.com/press/022201.htm, retrieved May 7, 2001.

[197] A. Pearce, "The Bell Isn't Tolling for CLECs: Premature Talk of The CLEC Industry's demise has clouded minds. Don't write off the CLECs just yet, America's Network, (July 1, 2000).

[198] Ibid.

Finally, even AT&T vows to stay committed to the CLEC market:

> "Q[uestion:] Didn't AT&T say it had stopped offering business local switched service? A[nswer:] AT&T said it would not provide local service by reselling local phone companies service. AT&T remains committed to providing customers a choice in local service. Our 11 billion dollar merger with TCG is indicative of our commitment to provide local service."[199]

Q. Do you believe that this Commission must implement additional regulation or safeguards to protect CLECs from failing in the market?

A. Absolutely not. Under the Telecom Act, CLECs will continue to be able to avail themselves of UNE's and resale. Those policies will continue in place. Beyond that, regulation should focus on fostering innovation and preventing consumer harm, not protecting young telecommunications companies from their more powerful and established competitors. In this sense, accepting some market exit along with the new entry is normal and points to a healthy CLEC market.

[199] *AT&T Local Service FAQ*, http://www.att.com/local/faq/faq.html, accessed March 8, 2001.

C. Competition Is Effective; However, The Commission Can Modify Its Policies To Change the Pattern Of Competition

Q. What does the Commission appear to mean when it refers to "full" competition?

A. Although the Commission refers to "full" competition in its Instituting Order, it does not define that term. For purposes of discussion here, we assume that the Commission's interest in "full" competition relates to its apparent interest in implementing policies that will facilitate facilities-based competition—*e.g.,* to encourage competitors to serve more residence and small business customers, in more geographic areas, without using any ILEC network elements or resale.

From our perspective, and as discussed above, however, competition in Verizon NY's service area is already "full and effective" in the sense that Verizon NY no longer possesses market power over retail services. The combination of existing competition and the threat of potential, further competition are already sufficient to require Verizon NY to provide high quality service at competitive prices.

Q. Has regulation affected the pattern of competition in New York?

A. Yes. Regulatory policies have played a major role in shaping the

competitive markets in the State. As shown above in Section II, substantial facilities-based competition has already developed; however, the Commission can, of course, reexamine policies that have contributed to the pattern of competition that exists today if it somehow finds that pattern unsatisfactory. In that connection, we would point out that the structure of the retail rates imposed by the Commission and policies it adopted to encourage local competition have evidently tended to discourage facilities-based, as contrasted with non-facilities-based, entry in certain residential areas.

Q. How could regulatory policies have limited facilities-based competition?

A. There are at least two possible explanations that the Commission should examine. First, excessively low rates for resale, UNEs and UNE-Ps are likely to be associated with lower levels of facilities-based competition. As described above, over 1.6 million of the 1.8 million residence lines served by CLECs in areas served by Verizon NY are served using UNE-Ps. This may be due, at least in part, to the TELRIC-based approach to pricing UNE-Ps that the Commission has applied over the last several years. We address other factors that have contributed to this mix of competition earlier in the testimony.

Second, prior research implies that there is an inverse relationship between the degree of facilities-based competition and the extent to which the incumbent's services are priced below competitive levels—*e.g.,* excessive subsidies to residence customers or to low density areas. For example, Agustin Ros and Karl McDermott recently found that failure to rebalance residential rates toward cost has had a significant negative influence on the level of residential competition; and a positive effect on the level of business competition.[200] Where rates have been rebalanced they find evidence of more residential competitors.

Q. How have regulatory policies concerning UNEs and resale affected facilities-based competition?

A. Where entrants can simply rent the incumbent's network elements without having to incur the risks and costs of placing their own network equipment, we should expect to see less investment in facilities than we would otherwise. Said differently, where unbundling and resale are not required, there will be more facilities-

[200] Agustin J. Ros and Karl McDermott, "Are Residential Local Exchange Prices Too Low? Drivers to Competition in the Local Exchange Market and the Impact of Inefficient Prices," in *Expanding Competition in Regulated Industries*, edited by Mike Crew, Kluwer Academic Publishers (2000)."

based competition. In the UK, where unbundling was not required, cable TV firms provide far higher percentages of telephone service using their own facilities than they do in the US. By 1999, UK cable TV firms were serving about 15 percent of all residential telephone lines, although their cable TV penetration was far lower there than in the US.

Furthermore, when UNEs must be sold at TELRIC rates, facilities-based competition will suffer. That is true because such rates are based on a construct that would never exist in the competitive market-place—that is, hypothetical costs cobbled together using regulatorily-prescribed rates of return and depreciation rates relating to a network that bears no resemblance to the type of network that is actually used to provide the service. Indeed, misguided regulatory policies may also be associated with lower network investments by incumbents as well as entrants (albeit for somewhat different reasons).

Q. How would you recommend the Commission modify its policies?

A. Given the massive, irreversible competition that has already been achieved (and assuming that completing the “transition to full and effective competition” means moving to increased facilities-based competition), we believe that only the following policies are

appropriate:

1. Move to efficient cost-based rates that reduce unwarranted subsidies to residence customers. The Commission can start by increasing retail residence basic rates to bring them closer to cost-based levels—as proposed by Verizon NY in this case. Doing so will stimulate more competition for residence customers; and as shown by the pricing panel testimony, is unlikely to adversely affect universal service. Competitors will find it more attractive to compete for a wider cross section of residence customers as basic rates move to more cost-based levels since even customers with lower amounts of usage and purchasing fewer vertical features than those already being served by competitors will become more profitable to serve.
2. Resist efforts to lower UNE rates to artificially low levels. Obviously if UNE rates are set too low, facilities-based competition will be reduced, as competitors will get free rides on Verizon's network. Why risk your own capital, if you can use some one else's network?

Q. How are your recommended policies consistent with economists' views concerning the proper role of regulatory policy in ensuring "full and effective competition"?

A. Regulatory policy should serve to remove artificial disincentives to facilities-based entry. At this point, there is no need to provide additional incentives for facilities-based entry beyond those already provided by the market itself. The Commission should not make it artificially more attractive for competitors to use the incumbent's facilities rather than building their own. That is to say, the Commission must establish policies of genuine neutrality—as between incumbents, competitors and would-be competitors, and between facilities-based as opposed to non-facilities-based entry. In the last analysis, the only long-term policy consistent with deregulation is: ensuring that markets are *open* to entry, not that competitors actually enter; removing barriers rather than introducing artificial stimuli; removing rules that distort the competitive process rather than introducing new preferences.

Q. Does this conclude your testimony?

A. Yes.