

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

In the Matter of)
)
Application by New York Telephone)
Company (d/b/a/ Bell Atlantic - New York),)
Bell Atlantic Communications, Inc., NYNEX)
Long Distance Company, and Bell Atlantic) CC Docket No. 99-295
Global Networks, Inc., for Authorization)
to Provide In-Region, InterLATA)
Services in New York)

EVALUATION OF THE
UNITED STATES DEPARTMENT OF JUSTICE

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DOJ South Carolina Evaluation	Evaluation of the United States Department of Justice, <i>In re: Application of BellSouth Corporation, BellSouth Telecommunications, Inc., and BellSouth Long Distance, Inc., for Provision of In-Region, InterLATA Services in South Carolina</i> , CC Docket No. 97-208 (Nov. 4, 1997).
<i>FCC Louisiana II Order</i>	Memorandum Opinion and Order, <i>In re: Second Application of BellSouth Corporation, et al. Pursuant to Section 271 of the Communications Act of 1934, as amended, To Provide In-Region, InterLATA Services in Louisiana</i> , 13 FCC Rcd 6245 (1998).
<i>FCC South Carolina Order</i>	Memorandum Opinion and Order, <i>In re: Application of BellSouth Corporation, et al. Pursuant to Section 271 of the Communications Act of 1934, as amended, To Provide In-Region, InterLATA Services In South Carolina</i> , 13 FCC Rcd 539 (1997).
Filings Related to Bell Atlantic's Application	
Allegiance Comments	Comments of Allegiance Telecom, Inc., <i>In re: Application by New York Telephone Company (d/b/a Bell Atlantic - New York), Bell Atlantic Communications, Inc., NYNEX Long Distance Company, and Bell Atlantic Global Networks, Inc., for Authorization to Provide In-Region, InterLATA Services in New York</i> , CC Docket No. 99-295 (Oct. 19, 1999).
ALTS Comments	Comments of the Association for Local Telecommunications Services, <i>In re: Application by New York Telephone Company (d/b/a Bell Atlantic - New York), Bell Atlantic Communications, Inc., NYNEX Long Distance Company, and Bell Atlantic Global Networks, Inc., for Authorization to Provide In-Region, InterLATA Services in New York</i> , CC Docket No. 99-295 (Oct. 19, 1999).

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AT&T Comments	Comments of AT&T Corp., <i>In re: Application by New York Telephone Company (d/b/a Bell Atlantic - New York), Bell Atlantic Communications, Inc., NYNEX Long Distance Company, and Bell Atlantic Global Networks, Inc., for Authorization to Provide In-Region, InterLATA Services in New York</i> , CC Docket No. 99-295 (Oct. 19, 1999).
Bell Atlantic Brief	Brief in Support of Application by New York Telephone Company for Provision of In-Region InterLATA Services in New York, <i>In re: Application by New York Telephone Company (d/b/a Bell Atlantic - New York), Bell Atlantic Communications, Inc., NYNEX Long Distance Company, and Bell Atlantic Global Networks, Inc., for Authorization to Provide In-Region, InterLATA Services in New York</i> , CC Docket No. 99-295 (Oct. 19, 1999).
Bell Atlantic <i>Ex Parte</i> Filing on PAP	<i>Ex Parte</i> Filing on the Performance Assurance Plan by Bell Atlantic to the Federal Communications Commission, <i>In re: Application by New York Telephone Company (d/b/a Bell Atlantic - New York), Bell Atlantic Communications, Inc., NYNEX Long Distance Company, and Bell Atlantic Global Networks, Inc., for Authorization to Provide In-Region, InterLATA Services in New York</i> , CC Docket No. 99-295 (Oct. 19, 1999).
Bell Atlantic Pre-Filing Statement	Pre-Filing Statement of Bell Atlantic-New York, <i>In re: Petition of New York Telephone Company for Approval of Its Statement of Generally Available Terms and Conditions pursuant to Section 252 of the Telecommunications Act of 1996 and Draft Filing of Petition for InterLATA Entry pursuant to Section 271 of the Telecommunications Act of 1996</i> , New York Public Service Commission, Case 97-C-0271 (Apr. 6, 1998), attached to Bell Atlantic Brief, App. C. as Vol. 28, Tab 403.
Choice One Comments	Comments of Choice One Communications, Inc., <i>In re: Application by New York Telephone Company (d/b/a Bell Atlantic - New York), Bell Atlantic Communications, Inc., NYNEX Long Distance Company, and Bell Atlantic Global Networks, Inc., for Authorization to Provide In-Region, InterLATA Services in New York</i> , CC Docket No. 99-295 (Oct. 19, 1999).

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CPI Comments	Comments of the Competition Policy Institute, <i>In re: Application by New York Telephone Company (d/b/a Bell Atlantic - New York), Bell Atlantic Communications, Inc., NYNEX Long Distance Company, and Bell Atlantic Global Networks, Inc., for Authorization to Provide In-Region, InterLATA Services in New York</i> , CC Docket No. 99-295 (Oct. 19, 1999).
e.spire/Net2000 Comments	Comments of e.spire Communications, Inc. and Net2000 Communications Services, Inc., <i>In re: Application by New York Telephone Company (d/b/a Bell Atlantic - New York), Bell Atlantic Communications, Inc., NYNEX Long Distance Company, and Bell Atlantic Global Networks, Inc., for Authorization to Provide In-Region, InterLATA Services in New York</i> , CC Docket No. 99-295 (Oct. 19, 1999).
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MCIWC Comments	Comments of MCI WorldCom, Inc., <i>In re: Application by New York Telephone Company (d/b/a Bell Atlantic - New York), Bell Atlantic Communications, Inc., NYNEX Long Distance Company, and Bell Atlantic Global Networks, Inc., for Authorization to Provide In-Region, InterLATA Services in New York</i> , CC Docket No. 99-295 (Oct. 19, 1999).

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NEXTLINK Comments	Comments of NEXTLINK New York, Inc., <i>In re: Application by New York Telephone Company (d/b/a Bell Atlantic - New York), Bell Atlantic Communications, Inc., NYNEX Long Distance Company, and Bell Atlantic Global Networks, Inc., for Authorization to Provide In-Region, InterLATA Services in New York</i> , CC Docket No. 99-295 (Oct. 19, 1999).
NorthPoint Comments	Comments of NorthPoint Communications, Inc., <i>In re: Application by New York Telephone Company (d/b/a Bell Atlantic - New York), Bell Atlantic Communications, Inc., NYNEX Long Distance Company, and Bell Atlantic Global Networks, Inc., for Authorization to Provide In-Region, InterLATA Services in New York</i> , CC Docket No. 99-295 (Oct. 19, 1999).
NYAG Comments	Comments of the New York Attorney General, <i>In re: Application by New York Telephone Company (d/b/a Bell Atlantic - New York), Bell Atlantic Communications, Inc., NYNEX Long Distance Company, and Bell Atlantic Global Networks, Inc., for Authorization to Provide In-Region, InterLATA Services in New York</i> , CC Docket No. 99-295 (Oct. 19, 1999).
NYPSC Eval.	Evaluation of the New York Public Service Commission, <i>In re: Application by New York Telephone Company (d/b/a Bell Atlantic - New York), Bell Atlantic Communications, Inc., NYNEX Long Distance Company, and Bell Atlantic Global Networks, Inc., for Authorization to Provide In-Region, InterLATA Services in New York</i> , CC Docket No. 99-295 (Oct. 19, 1999).
Omnipoint Comments	Comments of Omnipoint Communications, Inc., <i>In re: Application by New York Telephone Company (d/b/a Bell Atlantic - New York), Bell Atlantic Communications, Inc., NYNEX Long Distance Company, and Bell Atlantic Global Networks, Inc., for Authorization to Provide In-Region, InterLATA Services in New York</i> , CC Docket No. 99-295 (Oct. 19, 1999).

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Prism Comments	Comments of Prism Communication Services, Inc., <i>In re: Application by New York Telephone Company (d/b/a Bell Atlantic - New York), Bell Atlantic Communications, Inc., NYNEX Long Distance Company, and Bell Atlantic Global Networks, Inc., for Authorization to Provide In-Region, InterLATA Services in New York</i> , CC Docket No. 99-295 (Oct. 19, 1999).
Rhythms Comments	Comments of Rhythms NetConnections, Inc., <i>In re: Application by New York Telephone Company (d/b/a Bell Atlantic - New York), Bell Atlantic Communications, Inc., NYNEX Long Distance Company, and Bell Atlantic Global Networks, Inc., for Authorization to Provide In-Region, InterLATA Services in New York</i> , CC Docket No. 99-295 (Oct. 19, 1999).
Teligent Comments	Comments of Teligent, Inc., <i>In re: Application by New York Telephone Company (d/b/a Bell Atlantic - New York), Bell Atlantic Communications, Inc., NYNEX Long Distance Company, and Bell Atlantic Global Networks, Inc., for Authorization to Provide In-Region, InterLATA Services in New York</i> , CC Docket No. 99-295 (Oct. 19, 1999).
Z-Tel Comments	Comments of Z-Tel Communications, Inc., <i>In re: Application by New York Telephone Company (d/b/a Bell Atlantic - New York), Bell Atlantic Communications, Inc., NYNEX Long Distance Company, and Bell Atlantic Global Networks, Inc., for Authorization to Provide In-Region, InterLATA Services in New York</i> , CC Docket No. 99-295 (Oct. 19, 1999).
Affidavits/Declarations	
Aquilina Aff.	Affidavit of Robert Aquilina, attached to AT&T Comments as Vol. I, Ex. A.
Callahan/Connolly Aff.	Affidavit of Robert L. Callahan and Timothy M. Connolly, attached to AT&T Comments as Vol. I, Ex. C.
Crafton/Connolly Aff.	Affidavit of Raymond Crafton and Timothy M. Connolly, attached to AT&T Comments as Vol. III, Ex. E.
Cutcher/McChesney/Clancy Decl.	Declaration of Minda Cutcher, Morgan McChesney and Michael Clancy, attached to Covad Comments at Vol. 2.

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Dowell/Canny Decl.	Joint Declaration of George S. Dowell and Julie A. Canny, attached to Bell Atlantic Brief, Appendix A as Tab 3.
Geis/Williams Aff.	Joint Affidavit of Eric H. Geis and Robert Williams, attached to Rhythms Comments.
Gertner/Bamberger Decl.	Joint Declaration of Robert H. Gertner and Gustavo E. Bamberger, attached to Bell Atlantic Brief, Appendix A as Tab 4.
Lacouture/Troy Decl.	Joint Declaration of Paul A. Lacouture and Arthur J. Troy, attached to Bell Atlantic Brief, Appendix A as Tab 1.
Lichtenberg/Sivori Decl.	Joint Declaration of Sherry Lichtenberg and John Sivori, attached to MCIWC Comments as Vol. I, Tab A.
Meek Aff.	Affidavit of Jack Meek, attached to AT&T Comments as Vol. VI, Ex. J.
Miller/Jordan Decl.	Joint Declaration of Stuart Miller and Marion C. Jordan, attached to Bell Atlantic Brief, Appendix A as Tab 2.
Mulligan Aff.	Affidavit of Edward Mulligan, attached to AT&T Comments as Vol. VI, Ex. K.
Pfau/Kalb Aff.	Affidavit of C. Michael Pfau and Michael Kalb, attached to AT&T Comments as Vol. VII, Ex. L.
Taylor Decl.	Declaration of William E. Taylor, attached to Bell Atlantic Brief, Appendix A as Tab 8.
Attachments to Affidavits/Declarations	
7/29/99 Technical Conference Transcript	Minutes of a Technical Conference, <i>In re: Petition of New York Telephone Company for Approval of Its Statement of Generally Applicable Terms and Conditions pursuant to Section 252 of the Telecommunications Act of 1996 and Draft Filing of Petition for InterLATA Entry pursuant to Section 271 of the Telecommunications Act of 1996</i> , New York Public Service Commission, Case No. 97-C-0271 (July 29, 1999), attached to Bell Atlantic Brief as App. C, Vol. 58, Tab 887.

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Bell Atlantic Performance Measures Compliance Filing	Compliance Filing, <i>Proceeding on Motion of the Commission to Review Service Quality Standards for Telephone Companies</i> , New York Public Service Commission, Case No. 97-C-0139 (July 12, 1999), attached to Dowell/Canny Decl. as Tab 3B.
Third Party OSS Report	
KPMG Final Report	KPMG, <i>Final Report</i> , Bell Atlantic OSS Evaluation Project (Aug. 6, 1999), attached to Bell Atlantic Brief, App. C as Tab 916 and available at < http://www.dps.state.ny.us/tel271.htm#KPMG >.
Amended Performance Plans	
ACCAP	Amended Change Control Assurance Plan, Bell Atlantic - New York, <i>In re: Petition of New York Telephone Company for Approval of Its Statement of Generally Applicable Terms and Conditions pursuant to Section 252 of the Telecommunications Act of 1996 and Draft Filing of Petition for InterLATA Entry pursuant to Section 271 of the Telecommunications Act of 1996</i> , New York Public Service Commission, Case No. 97-C-0271, and <i>In re: Petition Filed by Bell Atlantic - New York for Approval of a Performance Assurance Plan and Change Control Assurance Plan</i> , New York Public Service Commission, Case No. 99-C-0949 (Sept. 24, 1999), attached to Dowell/Canny Decl. as Tab 3C, Ex. 2.
APAP	Amended Performance Assurance Plan, Bell Atlantic - New York, <i>In re: Petition of New York Telephone Company for Approval of Its Statement of Generally Applicable Terms and Conditions pursuant to Section 252 of the Telecommunications Act of 1996 and Draft Filing of Petition for InterLATA Entry pursuant to Section 271 of the Telecommunications Act of 1996</i> , New York Public Service Commission, Case No. 97-C-0271, and <i>In re: Petition Filed by Bell Atlantic - New York for Approval of a Performance Assurance Plan and Change Control Assurance Plan</i> , New York Public Service Commission, Case No. 99-C-0949 (Sept. 24, 1999), attached to Dowell/Canny Decl. as Tab 3C, Ex. 1.

Attachments to this Evaluation	
Short Citation	Full Citation
DOJ Ex. 1: Schwartz Aff.	Affidavit of Dr. Marius Schwartz on behalf of the U.S. Department of Justice (May 14, 1997), attached to this Evaluation as Ex. 1.
DOJ Ex. 2: Schwartz Supp. Aff.	Supplemental Affidavit of Dr. Marius Schwartz on behalf of the U.S. Department of Justice (Nov. 3, 1997), attached to this Evaluation as Ex. 2.
DOJ Ex. 3: UNE-L Disaggregated Data	Bell Atlantic, Disaggregated UNE-Loop Data for May through September 1999, produced to DOJ by Bell Atlantic via electronic mail on October 11, 1999, and October 25, 1999, attached to this Evaluation as Ex. 3.
DOJ Ex. 4: UNE-P Disaggregated Data	Bell Atlantic, Disaggregated UNE-Platform Data for May through September 1999, produced to DOJ by Bell Atlantic via electronic mail on October 11, 1999, and October 25, 1999, attached to this Evaluation as Ex. 4.
DOJ Ex. 5: DOJ Table of Processing Times	Department of Justice, Table of Bell Atlantic Electronically and Manually Processed Order Confirmation and Rejection Times for June through August 1999, attached to this Evaluation as Ex. 5.
DOJ Ex. 6: Aggregate September Performance Data	Bell Atlantic, CLEC Aggregate Performance Data for September 1999, attached to this Evaluation as Ex. 6.
DOJ Ex. 7: Excerpt from Bell Atlantic DSL Panel Testimony	Excerpt from Panel Testimony of Bell Atlantic-New York on Costs and Rates for ADSL/HDSL-Compatible Loops and Digital-Designed Loops, <i>In re: Proceeding on Motion of the Commission to Examine New York Telephone Company's Rates for Unbundled Network Elements</i> , New York Public Service Commission, Case 98-C-1357 (Oct. 18, 1999), attached to this Evaluation as Ex. 7.
DOJ Ex. 8: ISDN/ADSL Performance Data	Bell Atlantic, CLEC Aggregate Performance Data on UNE Complex Services for June through September 1999, disaggregated according to 2-Wire Digital (ISDN) and ADSL services, attached to this Evaluation as Ex. 8.

DOJ Ex. 9: Excerpt from Bell Atlantic Presentation to Assistant Attorney General Joel I. Klein	Excerpt from Bell Atlantic Presentation to Assistant Attorney General Joel I. Klein (Oct. 15, 1999), attached to this Evaluation as Ex. 9.
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Introduction and Summary

The record in this proceeding convincingly demonstrates two facts. First, local telecommunications competition can and will develop when the requirements of the Telecommunications Act of 1996¹ and the Commission's rules are fully implemented, bringing substantial benefits to consumers in the form of lower prices, innovative services, and bundled products that consumers desire. Second, Bell Atlantic has completed most -- but not all -- of the actions needed to achieve a fully and irreversibly open market in New York.

Because of the vigorous leadership of the New York Public Service Commission ("NYPSC") and the extensive efforts of Bell Atlantic and numerous competing carriers, most of the necessary preconditions for local competition are in place in New York. The terms on which

¹ Pub. L. No. 104-104, 110 Stat. 56 (1996) (codified as amended in various sections of 47 U.S.C.) ("1996 Act").

competitive local exchange carriers (“CLECs”) can obtain interconnection with and access to Bell Atlantic facilities and services have been largely resolved, in a manner that appears to permit efficient CLEC entry. In addition, all parties have worked hard to resolve the critical operational details of implementing the agreed-upon arrangements. As a result of those efforts, the Department of Justice (“Department” or “DOJ”) does not have substantial concerns about the ability of facilities-based carriers² and firms that wish to resell Bell Atlantic’s retail services to enter the local telecommunications markets in New York.

There has also been great progress in opening the market to competition through the use of unbundled network elements, but in this area, a few significant problems remain. Bell Atlantic has not yet demonstrated that it can adequately provide access to unbundled local loops, either for traditional voice services or for digital subscriber line (“DSL”) technology used to provide a variety of advanced services. Moreover, Bell Atlantic’s systems for handling orders for the unbundled network element “platform” (“UNE-platform” or “UNE-P”) rely to a disturbing extent on manual processes that are prone to error and delay. There remains significant doubt that Bell Atlantic has provided the stable and efficient electronic systems that will be needed to support a competitive market. These remaining problems are few in number, but they will impose a significant constraint on competition if they are not adequately resolved.

There is reason to believe that these remaining problems can be solved in a short time, and Bell Atlantic, commendably, appears to have taken or committed to take action to do so. But

² *But see infra* note 20.

Bell Atlantic filed this application before those actions were completed and therefore before their hoped-for success can be demonstrated. The Department has worked extensively with Bell Atlantic and other participants in the Section 271 process to define the conditions that must be in place for us to conclude that markets are fully and irreversibly open to competition. We have done so because of our belief that there should not be an ever-receding finish line for meeting the requirements for entry into the long distance market. By the same token, it is important for Section 271 applicants to cross the finish line, not merely come within sight of it. Bell Atlantic should be required to remove the few but important obstacles to local competition that remain in New York before it enters the long distance market.

Because of these remaining problems, we conclude that the Commission properly could deny this application, but as we discuss further in Section VII of this Evaluation, we do not foreclose the possibility that the Commission may be able to approve Bell Atlantic's application at the culmination of these proceedings.

I. Laying The Foundation For Competition

Over the past three years, the NYPSC has worked tirelessly to create an environment in which local telecommunications competition can develop in New York. It has established rates and other terms and conditions for interconnection agreements for resale, unbundled network elements, and interconnection. It has developed and implemented wholesale performance

measures³ and pursued with vigor its examination of Bell Atlantic's draft application under Section 271 under the capable eyes of its administrative law judges.⁴ Midway through this review, the NYPSA negotiated a "Pre-Filing Statement" in which Bell Atlantic committed, *inter alia*, to pay for a comprehensive third-party test of its wholesale support systems and to develop a plan to ensure adequate continuing wholesale performance.⁵ NYPSA staff subsequently oversaw a third-party wholesale support systems test of unprecedented scale, undertook an extensive validation of Bell Atlantic's performance measures, developed two performance assurance plans with Bell Atlantic and established several series of collaborative meetings between Bell Atlantic and CLECs to address specific problems.

The third-party test of Bell Atlantic's wholesale support systems has been particularly valuable in opening the New York market. Under the supervision of the NYPSA, KPMG LLP ("KPMG") and Hewlett-Packard ("HP") conducted a broad, independent and robust test of Bell

³ *Proceeding on Motion of the Commission to Review Service Quality Standards for Telephone Companies*, NYPSA, Case No. 97-C-0139 ("carrier-to-carrier proceeding"). *See, e.g.*, Bell Atlantic Performance Measures Compliance Filing. For complete citations to prior DOJ Evaluations and FCC Orders, filings related to this application, affidavits and declarations and attachments thereto, KPMG's report on systems testing, and attachments to this Evaluation, *see* the citation index at iv-x.

⁴ Petition of New York Telephone Company for Approval of Its Statement of Generally Applicable Terms and Conditions Pursuant to Section 252 of the Telecommunications Act of 1996, NYPSA, Docket No. 97-C-0271 (Feb. 13, 1997), attached to Bell Atlantic Brief as App. C, Vol. 1, Tab 1; Supplemental Petition of Bell Atlantic-New York, *In re: Petition of New York Telephone Company for Approval of Its Statement of Generally Applicable Terms and Conditions Pursuant to Section 252 of the Telecommunications Act of 1996*, NYPSA Docket No. 97-C-0271 (Nov. 6, 1997), attached to Bell Atlantic Brief as App. C, Vol. 10a-c, Tab 122.

⁵ Bell Atlantic Pre-Filing Statement at 34.

Atlantic's wholesale support systems. Placing themselves in the position of a market entrant, KPMG and HP reviewed the processes by which CLECs establish and maintain a wholesale relationship with Bell Atlantic, independently developed interfaces to Bell Atlantic's operations support systems ("OSS"), prepared test data, and submitted test transactions. KPMG's review of Bell Atlantic's documentation, software testing and change-management processes identified serious problems, which were addressed by Bell Atlantic through process improvements during the test period. Together, the NYPSC and KPMG created an open testing environment -- consulting with all interested parties, disclosing contacts with Bell Atlantic, issuing draft plans and reports, and reporting in detail on issues of serious concern. As a result of these factors, KPMG's test itself had a substantial and valuable market-opening effect in New York.

KPMG's exhaustively detailed final written report is an important part of the documentary record of this application. The KPMG test, however, was not designed to address all significant aspects of Section 271 compliance. Most significantly, the transactional aspects of KPMG's test focused primarily on Bell Atlantic's computer systems and did not comprehensively assess the manual processing and provisioning of orders, areas that are critical to our evaluation. Further, KPMG's test could not exactly replicate commercial use of Bell Atlantic's systems; for this reason, concurrent commercial use of these systems significantly enhances our knowledge about their strengths and capabilities.⁶ Additionally, KPMG did not

⁶ For example, while KPMG's orders flowed through Bell Atlantic's order processing systems at very high rates, the actual commercial flow-through rate is much lower. *Compare* Dowell/Canny Decl., Tab 3D (OR-5-01) *with* KPMG Final Report, POP7, IV-160 to IV-161, Table 4-7.10: POP-7 Flow-Through, Test Cross References P7-2 and P7-3. *See also*

examine the CLECs' ability to order DSL-capable loops or Bell Atlantic's ability to provision such loops, important issues that are discussed later in this evaluation.⁷

The NYPSC's development of comprehensive performance measures has also helped enormously to identify possible performance problems in some areas and to provide convincing evidence of adequate performance in others. The real-world experience of implementing and using these performance measures has revealed several limitations, as might be expected. Some metrics do not appear to be appropriately disaggregated.⁸ There are disputes about whether certain measures are appropriately defined and accurately measured.⁹ At the time of Bell Atlantic's application, data for a number of measures covered only one month or were not available because the measure was "under development." The NYPSC is continuing its efforts to refine these performance measures; but that process is still underway, and the measures currently provide only a starting point for analysis. Standing alone, the performance data may indicate both false positives and false negatives; that is, the measures in some cases may suggest

Miller/Jordan Decl. ¶ 61. *See also infra* notes 35 & 81 and accompanying text.

⁷ At the NYPSC's request, KPMG participated in a one-day observation at a DSL CLEC. DSL was not a component of the formal test plan, and KPMG's informal observations do not appear in the final report. 7/29/99 Technical Conference Transcript at 3669-3672.

⁸ It would be useful for Bell Atlantic to report disaggregated UNE-loop and UNE-platform ordering data. Currently, the statistics for the smaller volume of UNE-loop orders are obscured when combined with UNE-platform orders. *See* DOJ Ex. 5: DOJ Table of Processing Times at 1-2.

⁹ CLECs have raised concerns about the hot cut and DSL measures, discussed more fully below at notes 27 and 72 and accompanying text, while Bell Atlantic has raised concerns about the usefulness of the average provisioning intervals.

problems when in fact the underlying performance is acceptable and in other cases may suggest acceptable performance when, on closer examination, there are significant performance problems.¹⁰

II. Competition In Local Telecommunications Markets In The State of New York

The extensive efforts of the NYPS&C and all carriers operating in New York have produced impressive results in creating an environment in which local competition has begun to develop. As the Department has previously explained, in-region interLATA entry by a Bell Operating Company (“BOC”) should be permitted only when the local markets in a state have been fully and irreversibly opened to competition.¹¹ This standard seeks to determine whether barriers to competition that Congress sought to eliminate in the 1996 Act have in fact been fully eliminated and whether there are objective criteria to ensure that competing carriers will continue to have nondiscriminatory access to the facilities and services that they will need from the incumbent BOC.

In applying this standard, the Department determines whether all three entry paths contemplated by the 1996 Act -- facilities-based entry involving construction of new networks, the use of unbundled elements of the BOC’s network, and resale of the BOC’s services -- are fully and irreversibly open to competitive entry to serve both business and residential consumers.

¹⁰ See Dowell/Canny Decl., Tab 3D.

¹¹ This open market standard is explained more fully in the Affidavit and Supplemental Affidavit of Marius Schwartz and in our evaluation of SBC’s Section 271 application in Oklahoma. See DOJ Ex. 1: Schwartz Aff. ¶¶ 149-192; DOJ Ex. 2: Schwartz Supp. Aff. ¶¶ 26-60; DOJ Oklahoma Evaluation at vi-vii, 36-51.

To do so, the Department looks first to the extent of actual local competition as the best evidence that local markets are open. The degree to which such existing competition is broad-based determines the weight the Department places on it as evidence.

In the absence of broad-based commercial entry involving all three entry paths, the Department examines whether new technical and operational arrangements are available and shown to be working to support all three entry modes and whether benchmarks to prevent backsliding by the incumbent have been established. The actual experience of competitors seeking to enter a market can provide highly probative evidence concerning the presence, or absence, of artificial barriers to entry.¹²

The state of New York provides unique competitive opportunities for carriers seeking to provide local telecommunications services. With more than 18 million inhabitants,¹³ the nation's third most populous state encompasses New York City, the largest, most densely concentrated metropolitan area in the United States.¹⁴ The state has seven Local Access Transport Areas

¹² As we have stated previously, the Department does not regard small market shares held by competitors, or even the absence of entry (either altogether or using a particular entry path), standing alone, as conclusive evidence that a market remains closed to competition or as a basis for denying an application under Section 271. *See, e.g.,* Evaluation of the United States Department of Justice, *In re: Second Application of BellSouth Corporation, BellSouth Telecommunications, Inc., and BellSouth Long Distance, Inc., for Provision of In-Region, InterLATA Services in Louisiana*, CC Docket No. 98-121, at 2-3 (Aug. 19, 1998).

¹³ U.S. Census Bureau, State Rankings of Resident Population (July 1, 1998) <<http://www.census.gov/statab/ranks/pg01.txt>>.

¹⁴ More than 7.4 million people are city residents, <<http://www.census.gov/population/estimates/metro-city/SC100K98-T1-DR.txt>>, and more than 8.6 million people live in the immediate in-state metropolitan area. The greater metropolitan area -- which includes northern New Jersey and parts of Connecticut and Pennsylvania and is not considered for purposes of this

("LATAs"): metropolitan New York City, Albany, Syracuse, Rochester, Buffalo, Binghamton and Poughkeepsie.¹⁵ As of December 31, 1998, there were 16.4 million access lines statewide, including 12.7 million switched lines.¹⁶ Bell Atlantic served 90.4 percent, or nearly 11.5 million of these switched lines. As of the end of June 1999, CLECs served more than 1,100,000 access lines in New York,¹⁷ approximately 8.9 percent of the total, which is significantly larger than the national average of less than five percent.¹⁸

While an 8.9 percent share of total switched access lines represents significant CLEC entry, it is important to recognize differences in the particular modes and extent of entry among various segments of the state. By entry mode, approximately 59 percent of all CLEC access lines

section -- contains almost 20 million people <www.census.gov/population/estimates/metro-city/ma96-08.txt>.

¹⁵ New York was the nation's fourth-largest state in long distance traffic in 1998, with 43,115,409 interLATA billed access minutes -- 6.3% of the nation's total. See Federal Communications Commission, *Preliminary Statistics of Communications Common Carriers*, at Table 2.6 (1998). Only California, Florida, and Texas had more billed access minutes than New York.

¹⁶ There were slightly more than 16 million total access lines in New York served by reporting LECs, including 12.3 million switched lines, *id.* at Table 2.5, and an additional 389,194 lines presubscribed to non-reporting LECs as of December 31, 1997. *Id.* at Table 2.3.

¹⁷ Taylor Decl., Attach A. ¶ 1 at Table 1 & Ex. 2.

¹⁸ President's Council of Economic Advisers, *Progress Report on Growth and Competition in U.S. Telecommunications* (1993-1998) <<http://www.ntia.doc.gov/ntiahome/press/ceafinalrpt.htm>> (CLECs "have captured between two and three percent of the local services market measured by lines."). See also Federal Communications Commission, *FCC Local Competition: August 1999 Report*, Press Release, at 2 (Aug. 1999) <http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/IAD/lcomp99-1.PDF>, (CLECs' presence remains less than 5% of the local market in most areas.).

were facilities based; 28 percent were resold; and about 13 percent were provided as unbundled network elements. By state region, approximately 90 percent of CLEC access lines served customers in the New York metropolitan area while the rest served upstate customers. By customer type, 70 percent of CLEC access lines served business customers while the balance served residential customers.

A. Facilities-Based Entry

Clearly, serving metropolitan New York business customers with facilities-based access lines represents the most common form of CLEC entry. Indeed, even before the 1996 Act, competitive access providers had built significant facilities to link large customers in New York directly to long distance carriers. Competitive entry has been concentrated in metropolitan areas, and in the New York City metropolitan area in particular, for two main reasons. First, business customers have typically been charged higher rates than residential customers so the average revenue per customer will typically be higher in business districts. Second, CLECs that provide, or plan to provide, facilities-based service can serve densely populated areas at a lower cost per customer because a denser concentration of customers reduces the network buildout necessary to serve those customers.¹⁹ Given the extent of facilities-based entry in metropolitan New York and other cities in upstate New York, we have no substantial concerns about the ability of facilities-

¹⁹ See, e.g., Taylor Decl., Attach. A. ¶ 8 (“Manhattan is especially attractive to competitors” because “[b]usiness loops in Manhattan are ... over 2,000 times more dense than in upstate New York” and “[a] competitive switch in Manhattan can reach more potential customers than one placed anywhere else in the country.”)

based carriers to enter the market.²⁰

B. Resale Entry

Actual entry through resale has occurred to a more limited extent than facilities-based entry. Statutory resale discounts²¹ limit resellers' profit margins, and, as Bell Atlantic recognizes, it appears that resale may principally serve as "a transitional tool on the way to facilities-based competition."²² Specifically, resale allows CLECs -- especially those that serve the more lucrative business market -- to build a customer base with minimal investment while they

²⁰ We note, however, that a number of cementers have raised complaints that Bell Atlantic has failed adequately to provision interconnection trunks on a timely basis. According to the cementers, Bell Atlantic often delays CLECs for weeks or months before installing interconnection trunks. *See, e.g.*, Teligent Comments at 6-7, 8-10; Allegiance Comments at 11-12; e.spire/Net 2000 Comments at 16-22; Prism Comments at 20-21; Focal Comments at 5-6; Omnipoint Comments at 7-13; NEXTLINK Comments at 3; ALTS Comments at 44-45. These allegations, if true, would be cause for serious concern. However, the allegations here were not raised or considered in the final phase of the New York state 271 proceedings, apparently because the cementers chose not to raise them at that stage. *See* NYPSC Eval. at 17-18 and n.1. We therefore have very little record evidence before us and have not had the opportunity to evaluate fully the facts or circumstances surrounding the allegations. Because the ability to obtain interconnection trunks on a reasonable and timely basis is critically important to CLECs that have their own network facilities, the Commission should consider these allegations carefully before reaching any final conclusion.

²¹ In New York, a reseller may purchase wholesale telephone service from Bell Atlantic at a 19.1% discount if a CLEC uses Bell Atlantic's operator services, and a 21.7% discount if a CLEC provides its own operator services. *See* Opinion and Order Determining Wholesale Discount, Opinion 96-30, *In re: Petition of New York Telephone Company for Approval of Its Statement of Generally Available Terms and Conditions Pursuant to Section 252 of the Telecommunications Act of 1996 and Draft Filing of Petition for InterLATA Entry Pursuant to Section 271 of the Telecommunications Act of 1996*, NYPSC, Case No. 97-C-0271, at 3-4 (Nov. 27, 1996), attached to Bell Atlantic Brief as App. G, Vol. 1, Tab 7, App. B.

²² Taylor Decl., Attach A. ¶ 43.

construct their own network facilities. Resale also allows those CLECs that cannot justify the cost of investing in their own network facilities, such as those serving the less lucrative residential market, the ability to offer local exchange service as part of a bundled package of telecommunications services that “one-stop shopping” customers demand. Thus, although resale alone is not likely to be a major avenue for competitive entry, particularly for serving the residential market, the number of resale lines in service in New York continues to grow.²³

For this reason, it remains important that resale be accessible to those competitors that rely on it. In New York, it appears that the principal barriers to resale competition (other than the limits inherent in the size of the resale discount) have been removed. While Bell Atlantic’s wholesale performance to resellers has not been perfect, the Department does not believe that there are performance deficiencies that are significantly impeding entry by resellers.

C. Unbundled Element Entry

To date, the least common path of entry in New York is entry through unbundled network elements. The use of unbundled network elements was viewed by Congress as one of the principal options for competitors created by the 1996 Act.²⁴ The availability of unbundled elements leased from Bell Atlantic is critical to fostering competition to serve three important

²³ New York resellers served 121,000 lines in December 1997 and now exceed 310,000 lines. *See* Federal Communications Commission, *FCC February 1999 Trends Report*, at Table 9.2 (Feb. 1999) <http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/IAD/trend299.pdf>. UniDial and CTC have recently signed multiyear contracts to resell large blocks of lines throughout Bell Atlantic’s service region at a significant additional discount. *See* 19 Communications Daily, Issue 92 (UniDial), May 13, 1999, *available in* 1999 WL 7579433; 19 Communications Daily, Issue 130 (CTC), July 8, 1999, *available in* 1999 WL 7579879.

²⁴ 47 U.S.C. § 251(c)(3).

classes of customers: small and medium-sized businesses using unbundled loops; residential customers using the UNE-platform; and data services customers using DSL capable UNE-loops. Currently, however, somewhere around 200,000 local lines, approximately 1.7 percent of total access lines, are provided through these forms of unbundled network element entry, but we expect growth in this mode of entry to increase significantly as competition expands in the residential and small-to-medium business market segments.

Consistent with the Department's standard for approval, limited actual entry based on the use of unbundled elements requires closer examination to determine whether Bell Atlantic has developed the technical and operational arrangements to support this mode of entry and whether benchmarks to prevent backsliding by Bell Atlantic have been established. Based on the current record, Bell Atlantic has not yet demonstrated that it provides wholesale services sufficient to support fully open competition based on the unbundled element mode of entry. In the remainder of this evaluation we will focus on our specific concerns about Bell Atlantic's current wholesale support services and the reasons they continue to pose barriers to entry for Bell Atlantic's competitors.

The NYPSC, of course, has examined these issues with considerable care and has concluded that Bell Atlantic has satisfied the competitive checklist requirements of Section 271. Our assessment of the facts regarding Bell Atlantic's wholesale performance is substantially consistent with the NYPSC's assessment.²⁵ There is also substantial agreement between the

²⁵ We have examined these facts to assess their impact on the development of competition in New York and have not, however, attempted to determine whether they establish

Department and the NYPSC on the need for Bell Atlantic to continue to improve its performance in the areas we discuss below. To the extent there is a difference between the Department's judgment and that of the NYPSC, it arises largely from the Department's conclusion that needed improvements should be achieved before Bell Atlantic is authorized to provide interLATA services in New York, rather than relying on post-271 approval regulatory mechanisms to attempt to ensure such improvements. We address this issue in more detail in Section VI of this Evaluation.

III. Bell Atlantic's Wholesale Performance In Providing Competitors With Unbundled Local Loops

Unbundled local loops ("UNE-L") can be purchased by a CLEC from the incumbent either as a newly provisioned loop or by physically disconnecting the customer's existing in-service loop from the incumbent's switch and reconnecting the loop to the CLEC's switch. The latter process is called a coordinated loop cutover, or "hot cut." The vast majority of current UNE-L orders require a hot cut, and the Commission has recognized that a BOC "must demonstrate that it can coordinate number portability with loop cutovers in a reasonable amount of time and with minimum service disruption."²⁶

Bell Atlantic's performance in processing orders for hot cuts of unbundled loops appears to suffer from a number of deficiencies which, collectively, impose significant costs on CLECs

compliance with the legal requirements of the competitive checklist or the Commission's rules, matters which we leave for the Commission's judgment.

²⁶ *FCC Louisiana II Order* at 164.

and degrade the quality of service they can offer to their customers. Because of these deficiencies, competition through this important mode of entry is seriously constrained. Bell Atlantic's application provides limited data concerning its hot-cut performance, and much of that information is disputed by other parties.²⁷ However, even relying principally on information provided by Bell Atlantic²⁸ and the NYPSC, there appear to be serious deficiencies in a number of the key performance measures relating to unbundled loops.

First, Bell Atlantic has had substantial problems in providing timely confirmations and rejections of hot-cut orders. Information provided to the Department by Bell Atlantic indicates that approximately 30 percent of both order confirmations and order rejections are late -- *i.e.*, beyond the 24-hour standard established by the NYPSC.²⁹

²⁷ In June 1999, Bell Atlantic withdrew all hot-cut data submitted prior to June 18, 1999, from the New York state 271 process in the face of concerns and questions regarding these data. *See* AT&T Comments at 39 n.9; Meek Aff. ¶¶ 16, 107-08; Letter from Randal Milch, Associate General Counsel, Bell Atlantic-State Regulatory North, to Andrew Klein, Assistant Counsel, New York Public Service Commission (June 18, 1999), attached to Bell Atlantic Brief as App. C, Vol. 51, Tab 789. As a result, there are only thirteen weeks of hot-cut data on the basis of which to evaluate Bell Atlantic's performance.

²⁸ In October 1999, after filing its 271 application to the Commission, Bell Atlantic provided the Department with supplemental data disaggregating its UNE-L and UNE-P performance. To the Department's knowledge, these data have not been provided to the Commission, the NYPSC or the CLEC community for review. We have attached these disaggregated Bell Atlantic data to our Evaluation as Ex. 3 ("UNE-L Disaggregated Data") and Ex. 4 ("UNE-P Disaggregated Data").

²⁹ In August 1999, Bell Atlantic returned only 72% of order confirmations (Local Service Request Confirmations or "LSRCs") and 68% of rejects within 24 hours, far below New York's 95% standard, and performance in June and July was even worse. DOJ Ex. 3: UNE-L Disaggregated Data at 4. Even using combined UNE-L/UNE-P carrier-to-carrier data, Bell Atlantic has still consistently fallen well below the New York standards for timely return of LSRCs and rejects. *See* DOJ Ex. 5: Table of Processing Times at 1-2; Dowell/Canny Decl., Tab

Second, when Bell Atlantic does return order confirmations, a substantial portion of those confirmations are inaccurate. Bell Atlantic has acknowledged in NYPSC proceedings that as many as 30 to 40 percent of confirmations are inaccurate,³⁰ and CLECs have alleged that levels of inaccurate confirmations are in that range or even greater.³¹ Moreover, it appears that as Bell Atlantic struggles to improve its performance in returning manually processed order confirmations and rejections more quickly, its accuracy suffers significantly. In September, Bell Atlantic improved its combined UNE-P/UNE-L on-time performance for confirmations and rejections,³² but only 42 percent of manually processed orders were correctly submitted by Bell

3D at 78 (OR-1-04, OR-2-04); Pfau/Kalb Aff. ¶ 103. Bell Atlantic's explanation that it meets the New York standard "on average," Bell Atlantic Brief at 41, only underscores the need for appropriate disaggregation so that poor performance in one area is not masked by aggregation.

³⁰ NYPSC Eval. at 81 (*citing* Minutes of a Technical Conference, *In re: Petition of New York Telephone Company for Approval of Its Statement of Generally Available Terms and Conditions Pursuant to Section 252 of the Telecommunications Act of 1996 and Draft Filing of Petition for InterLATA Entry Pursuant to Section 271 of the Telecommunications Act of 1996*, NYPSC, Case 97-C-0271, at 3956 (July 30, 1999), attached to Bell Atlantic Brief as App. C, Vol. 59, Tab 890). Although not directly a measure of LSRC accuracy, Bell Atlantic incorrectly input a significant number of manually processed CLEC orders into its service order systems. *See* Dowell/Canny Decl. ¶ 53 and Tab 3D at 102 (OR-6-01) and *infra* n.33. These data support CLEC accuracy complaints and cast doubt on Bell Atlantic's claim of more than 98% LSRC accuracy for the last several months. Dowell/Canny, Tab 3D at 102 (OR-6-03).

³¹ *See, e.g.*, NYPSC Eval. at 81 & n.3 (CLECs estimate LSRC inaccuracies of over 50%).

³² Although Bell Atlantic fell short of the New York standard for the sixth straight month, it finally exceeded 90% for September. DOJ Ex. 6: Aggregate September Performance Data at 7 (OR-1-04 = 92% LSRCs within 24 hours; OR-2-04 = 91% rejects within 24 hours). These data, of course, only became available after Bell Atlantic filed its application. The Department received these September performance data shortly before filing this Evaluation and has thus been able to undertake only a cursory review of them.

Atlantic personnel to Bell Atlantic's provisioning systems (significantly down from only 64 percent for August).³³

These problems with late and inaccurate order confirmations appear to be the result of a high degree of manual processing of hot-cut orders at the ordering stage.³⁴ In August, more than 83 percent of unbundled loop orders required manual processing of some kind by Bell Atlantic employees, and the problems with late or inaccurate confirmations and rejections appear to arise almost exclusively in connection with these manually processed orders.³⁵ In contrast, almost all of the small number of order rejections and confirmations that flowed through electronically appear to have been reasonably timely and accurate.³⁶

The high level of slow and inaccurate manual order processing imposes significant costs

³³ See *id.* (OR-6-01, September Completed Service Order Accuracy = 42%); Dowell/Canny Decl. ¶ 53 and Tab 3D at 102 (OR-6-01, August Completed Service Order Accuracy = 64%).

³⁴ Hot cut loop *provisioning* inevitably is a heavily manual process, but Bell Atlantic processes orders into its back end provisioning systems in two ways: either on a fully mechanized, "flow-through" basis or through manual input by Bell Atlantic employees.

³⁵ DOJ Ex. 3: UNE-L Disaggregated Data at 4 (UNE-L flow-through for August only 17%). Actual commercial experience is vastly different from that of KPMG, which found that 85% of loop orders were capable of flowing through electronically. KPMG Report at POP7, IV-160, Table IV-7.10: POP-7 Flow-Through, Test Cross Reference P7-3.

³⁶ Based on Bell Atlantic's disaggregated UNE-L performance data, Bell Atlantic on average returned mechanized order confirmations ("LSRCs") and rejects within the New York two-hour standard more than 98% of the time. DOJ Ex. 3: UNE-L Disaggregated Data at 1-5. Even under aggregated carrier-to-carrier data, Bell Atlantic exceeded New York's standard (95% within two hours) for timely return of mechanized LSRCs for June, July and August (OR-1-02) but fell slightly below the New York standard for timely return of mechanized rejects (OR-2-02). DOJ Ex. 5: Table of Processing Times at 1-2; Dowell/Canny Decl., Tab 3D at 78, 90, 102.

on CLECs, which must devote time, effort and expense to identifying and rectifying problems in order to ensure that orders ultimately are processed correctly.³⁷ Moreover, these problems may require the CLEC to reschedule the cutover of customers' service from Bell Atlantic to the CLEC, imposing inconvenience and delays on customers that choose to switch service providers.³⁸

Third, Bell Atlantic fails to complete scheduled hot cuts on time in a significant number of cases -- around 10 percent of orders, even under statistics most favorable to Bell Atlantic. Reliable performance in completing hot cuts correctly and at the time scheduled is extremely important because of the risk to the customer of losing dial tone for more than a brief period.³⁹ Bell Atlantic reported to the NYPSC that it completed 94 percent of hot cut orders in July,⁴⁰ but a

³⁷ See, e.g., AT&T Comments at 35-37; Meek Aff. ¶¶ 36-41, 61; Aquilina Aff. ¶¶ 36-38.

³⁸ See, e.g., AT&T Comments at 37; Meek Aff. ¶¶ 34, 61.

³⁹ See AT&T Comments at 31-32; Mulligan Aff. ¶¶ 5, 28; Allegiance Comments at 10; Choice One Comments at 5. According to a survey conducted by the Competition Policy Institute, "[t]he strongest impediment to switching [LECs] comes from concern about service interruptions during the change over." CPI Comments, Att A at 11.

⁴⁰ Bell Atlantic Brief at 18; Lacouture/Troy Decl. ¶ 72. Bell Atlantic also relies on KPMG's "test" of its hot-cut procedures, which found that Bell Atlantic's technicians followed the hot-cut procedures 97% of the time. Bell Atlantic Brief at 19; KPMG Final Report, POP3, IV-60 to IV-62, Test Cross References P3-22 and P3-24; Lacouture/Troy Decl. ¶ 73; Meek ¶¶ 121-122. However, KPMG had previously found significant problems with Bell Atlantic's ability to follow its hot-cut procedures and issued an "exception." See NYPSC Eval. at 89; Meek Aff. ¶¶ 121-122; KPMG, Exception ID 54 <www.dps.state.ny.us/x54.pdf>. KPMG closed the exception following a limited two-week "retest" in June 1999 during which KPMG observed the technicians performing their work on the due date. Bell Atlantic Brief at 19; Lacouture/Troy Decl. ¶ 73. KPMG did not check whether Bell Atlantic performed any of the required steps prior to the due date, such as the dialtone check on due-date minus-two, and KPMG did not test whether the hot cut was successful (*i.e.*, working post-cutover). 7/29/99 Technical Conference

detailed, order-by-order review conducted by the NYPSC indicated that Bell Atlantic actually provisioned only 88 percent of AT&T orders on time.⁴¹ But that number appears to overstate Bell Atlantic's on-time performance in large part because it reflects a definition of "on time" under which an order not completed at the initially scheduled time, but within a subsequently *rescheduled* time, is considered "on time," even if Bell Atlantic failures caused it to be rescheduled.⁴²

Fourth, when hot cuts are provisioned, there are a substantial number of instances, perhaps more than 10 percent, in which the customer's directory listings are dropped or

Transcript at 3861-3866, 3889.

⁴¹ See Meek Aff. ¶¶ 124-125; *see generally* NYPSC Eval. at 85-87. The NYPSC did not conduct a review of non-AT&T UNE-L orders during this time period. AT&T Comments at 39; Meek Aff. ¶¶ 132-35. CLECs contended that Bell Atlantic's on-time hot-cut performance was significantly worse than reported. Choice One Comments at 4; AT&T Comments at 38. If Bell Atlantic reported *all* non-AT&T orders (accounting for slightly less than half of the total hot-cut orders) correctly, then Bell Atlantic provided on-time provisioning in this period for approximately 91% of hot cuts. See NYPSC Eval. at 85-87; AT&T Comments at 38-39; Meek Aff. ¶¶ 132-135.

⁴² See Meek Aff. ¶¶ 127-130. In this regard, the NYPSC's July 1999 data reconciliation used on-time "miss/make" definitions that were more favorable to Bell Atlantic than it will use in the future under the Amended Performance Assurance Plan. See NYPSC Eval. at 88-89; Meek Aff. ¶¶ 127-130. Even Bell Atlantic admits that it is at fault on 11% of hot cut delays, a factor not considered in current on-time performance metrics. See Bell Atlantic Brief at 19; Lacouture/Troy Decl. ¶ 73. CLECs allege that the percentage of hot-cut delays that are Bell Atlantic's fault is much higher. See, e.g., Allegiance Comments at 11 (20% caused by Bell Atlantic); AT&T Comments at 38; Choice One Comments at 5. It is noteworthy, also, that it appears to take Bell Atlantic significantly longer -- as many as two to three days longer -- to provision service for CLEC UNE-loop orders involving a dispatch than for its own retail service. Dowell/Canny Decl., Tab 3D at 80, 92, 104 (PR-2-03, PR-2-04, PR-2-05).

delayed.⁴³ This problem is a particular concern for business customers that depend on directory listings so that their customers can reach them.⁴⁴ After the KPMG test identified these problems with directory listings, Bell Atlantic implemented a process improvement plan that was highly reliant on manual review.⁴⁵ KPMG reviewed the new process, but evidence subsequent to that review suggests that the process changes have not provided a sufficient solution to these problems.⁴⁶

It is difficult to assess the precise point at which poor performance on any single dimension of Bell Atlantic's wholesale performance begins to have a significant adverse effect on competition, and we certainly do not mean to suggest that a small deviation from any single standard established by the NYPSC should be dispositive in evaluating Bell Atlantic's application. However, it seems clear that, collectively, the number and magnitude of the deficiencies noted above are imposing a real constraint on competition through the use of unbundled loops and that significant improvement is needed in this area.⁴⁷

⁴³ See, e.g., Choice One Comments at 7-8; AT&T Comments at 42-44; NYPSC Eval. at 119-120; Mulligan Aff. ¶ 33.

⁴⁴ AT&T Comments at 43; Callahan/Connolly Aff. ¶¶ 9-10.

⁴⁵ NYPSC Eval. at 120-21.

⁴⁶ AT&T Comments at 42-44 & n.13; see also Callahan/Connolly Aff. ¶¶ 22-28 & Attach. 1.

⁴⁷ Indeed, Bell Atlantic's Performance Assurance Plan Reports state that Bell Atlantic would have paid the maximum penalty of \$787,037 in June, 55% of the maximum penalty (\$432,870) in July, and 65% of the maximum penalty (\$511,574) in August for poor hot-cut performance had the plan been in effect. Bell Atlantic *Ex Parte* Filing on PAP at Sheets I (June, July, August data).

We are unpersuaded by Bell Atlantic's argument that these deficiencies should be disregarded because they affect only a small percentage of the lines ordered by CLECs to date.⁴⁸ That argument is unpersuasive for three reasons. First, it seems clear that CLECs would have ordered a much larger number of unbundled loops but for the problems created by Bell Atlantic's handling of such orders. Bell Atlantic's recent performance, while clearly much improved over its earlier performance, still reflects significant problems. Because of the very serious and well-documented problems that persisted until quite recently, a number of CLECs severely limited or completely postponed their attempts to provide service through unbundled loops. Thus, the number of hot-cut orders submitted to date is relatively low precisely because of Bell Atlantic's historically poor performance in handling such orders. Second, the economic significance of competition through unbundled loops is greater than would be suggested merely by assessing the percentage of total customer lines served. The customers predominantly served by unbundled loops tend to be heavy users of telecommunications services and therefore tend to be particularly profitable customers both for CLECs and for Bell Atlantic.⁴⁹ Unbundled loops may be one of the principal means for CLECs to serve small and medium-sized businesses -- a large and important market.⁵⁰ Third, as competition develops and matures, this mode of entry is likely to become more significant than it is today. Among other factors contributing to that trend, limits on the

⁴⁸ *See, e.g.*, Bell Atlantic Brief at 18 n.20.

⁴⁹ Mulligan Aff. ¶¶ 6-7.

⁵⁰ *See* NYAG Comments at 14-15; AT&T Comments at 30; Mulligan Aff. ¶¶ 11, 13-16. Commenters estimate that the small and medium-sized business market alone may account for 3.2 million lines in New York. AT&T Comments at 30; Mulligan Aff. ¶ 7.

availability of unbundled switching (and, hence, the UNE-platform) can be expected to increase CLEC demand for unbundled loops to be connected to the CLEC's own switch.⁵¹ In sum, adequate wholesale performance in providing unbundled loops is important today and will become even more important in the future.

As noted above, Bell Atlantic's recent performance with regard to hot-cut orders, though still deficient in a number of ways, is considerably improved over its performance in the first half of 1999. The NYPSC expects further improvement to be forthcoming and notes that Bell Atlantic has now "put in place the procedures and training to maximize effective loop ordering and provisioning . . . and to minimize provisioning postponements and local service request confirmation delays and inaccuracies due to Bell Atlantic-NY process problems."⁵² The problems noted above do not appear to be insolvable, and the Department is hopeful that recently implemented changes will effectively correct these problems. However, Bell Atlantic filed this application before the results of those improvements could be assessed or demonstrated, and at this time there is no basis in the record to conclude that the problems have been resolved.⁵³

⁵¹ The Commission's recent decision regarding the Supreme Court's remand of Rule 319 will significantly limit the availability of unbundled switching and the platform for business customers. Federal Communications Commission, *FCC Promotes Local Telecommunications Competition: Adopts Rules on Unbundling of Network Elements*, Press Release (Sept. 15, 1999) <www.fcc.gov/Bureaus/Common_Carrier/News_Releases/1999/nrcc9066.html>. See also Mulligan Aff. ¶ 13. Bell Atlantic's platform offer has substantial limitations on its availability to serve business lines. Tariff P.S.C. No. 916 (issued Jan. 26, 1999) (revised Sept. 8, 1999 and Sept. 10, 1999) at 80, attached to Bell Atlantic Brief as App. H, Vol. 2, Tab 3.

⁵² NYPSC Eval. at 99.

⁵³ We believe that demonstrated, rather than promised, improvement is particularly important in this context. As noted above, most of the order processing problems appear to arise

IV. Bell Atlantic's Wholesale Performance In Providing Unbundled Elements To CLECs Wishing To Offer DSL High Speed Data Services

Residential demand for high speed digital services is growing very rapidly as consumers and telecommuters take advantage of attractive "broadband" applications on the Internet. Some forecasts of the demand for broadband services predict tens of millions of subscribers within five years.⁵³ For some time, Bell Atlantic has aggressively marketed its integrated services digital network ("ISDN") service for Internet access;⁵⁴ it is now in the process of rolling out a major deployment of asymmetrical DSL ("ADSL") services, both under the Bell Atlantic brand and in conjunction with major Internet service providers such as America Online.⁵⁵ Such services are expected to be marketed with long distance service when Bell Atlantic receives 271 authority. Clearly, an ability to offer high-speed Internet access will soon be a crucial requirement for all major carriers.⁵⁶

from the manual processing of orders; and although Bell Atlantic has recently submitted a detailed plan to improve flow-through processing of UNE-platform orders, Bell Atlantic has no near-term plans to increase flow-through for UNE-L orders.

⁵³ See Federal Communications Commission, *Broadband Today*, Cable Bureau Staff Report, at 32 ("*Broadband Today*") (Oct. 1999) <http://www.fcc.gov/Bureaus/Cable/News_Releases/1999/nrcb9017.html>. "Bell Atlantic plans to double the availability of its DSL products to 17 million telephone lines by year-end 1999." *Id.* at 28.

⁵⁴ Bell Atlantic has informed the DOJ that it currently has about 195,000 ISDN lines in New York.

⁵⁵ *Broadband Today* at 28; NorthPoint Comments, Attach. B at 2. Bell Atlantic is able to offer its customers ADSL service without installing another line because the data service uses only the high frequency portion of the loop's bandwidth and, thus, is compatible with analog phone service. *Broadband Today* at 20.

⁵⁶ See *Aquilina Aff.* at 6 n.1.

Although the expected demand for digital services has increased in recent years, it has been clear for some time that CLECs would seek access to unbundled loops in order to offer these services. As noted by the NYPSC, the FCC's 1996 Local Competition Order required incumbent LECs to provide access to unbundled loops, including specifically "two-wire and four-wire loops that are conditioned to transmit the digital signals needed to provide such services as ISDN, ADSL, HDSL [High bit rate DSL], and DS-1 level signals."⁵⁷ In its proceedings pursuant to Section 706 of the 1996 Act, the FCC reaffirmed its requirement that incumbents provide competitors with access to loops for the provision of digital services and ruled that the incumbents may not dictate the particular use that competitors may make of these facilities.⁵⁸

Bell Atlantic's Pre-Filing Statement did not address provisioning issues for DSL service, because CLECs had not begun to offer DSL services in New York at the time of that commitment, although the commitment did propose to establish a metric to measure performance regarding "premium" loops that Bell Atlantic had agreed to provide to DSL carriers.⁵⁹ After

⁵⁷ First Report and Order, *In re: Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket Nos. 96-98 and 95-185, 11 FCC Rcd 15499 ¶ 380 (1996) ("*FCC Local Competition Order*"), *aff'd in part, rev'd in part and remanded sub nom. AT&T v. Iowa Utilities Board*, 525 U.S. 366, 119 S.Ct. 729 (1999); NYPSC Eval. at 76.

⁵⁸ Memorandum Opinion and Order, and Notice of Proposed Rulemaking, *In Re: Deployment of Wireline Services Offering Advanced Telecommunications Capability*, 13 FCC Rcd. 24012, ¶ 53 (1998).

⁵⁹ Bell Atlantic Pre-Filing Statement at 25-26.

CLECs began to offer DSL services in mid-1998, they complained to the NYPSC and the FCC⁶⁰ that (1) they could not obtain needed preordering information, (2) they were not receiving timely firm order confirmations, (3) installations of loops were not completed at the committed date, and (4) the DSL metric reported by Bell Atlantic was not meaningful because it was not adjusted for loops that were installed incorrectly.⁶¹ It is still not clear that these problems have been resolved.⁶²

Access to preordering information is particularly important in connection with DSL services because of the special loop requirements for such services. CLECs need detailed information about available loops so that they can quickly determine whether a prospective customer can be served and what grade of service can be offered. CLEC comments make it clear that their inability to inform their customers promptly and reliably of service availability and installation times has damaged their ability to compete.⁶³

Bell Atlantic moved to address these preordering issues only after it introduced its own retail DSL service in June 1999. Through a tariff effective August 30, 1999, Bell Atlantic offered to provide one automated and two manual options for obtaining preordering information. Bell Atlantic asserts that the automated database will cover 90 percent of the lines by the end of

⁶⁰ NorthPoint Comments at Attach. B.

⁶¹ NorthPoint Comments at 18.

⁶² *See generally* NorthPoint Comments at 6, 10, 18; Rhythms Comments at 21-22; Covad Comments at 15-16; Cutcher/McChesney/Clancy Aff. ¶¶ 34, 61-66; NAS Comments at 7-8; Prism Comments at 8-10.

⁶³ Geis/Williams Aff. ¶¶ 38-39.

the year and, in testimony filed on October 18, promises to begin including more relevant information in that database than is currently offered.⁶⁴ CLECs object, however, that the database does not work reliably⁶⁵ and that as a practical matter they will have to resort to Bell Atlantic's manual processes, causing added delay and substantial additional charges.

These issues, and others discussed below, are the subject of an ongoing collaborative proceeding before the NYPSC.⁶⁶ While we expect that the NYPSC will soon resolve many of the disputed issues in that proceeding, we cannot conclude on the current record that Bell Atlantic is currently providing adequate access to preordering information needed to provide DSL services.

There are also serious unresolved issues relating to DSL ordering and provisioning processes. At the present time, orders for DSL loops do not flow through Bell Atlantic's ordering systems, but must be manually processed before entry into the provisioning systems. The CLECs complain that these procedures have resulted in late and inaccurate order confirmations.⁶⁷ These concerns seem to be supported by the performance reports for August and September, which show that, in those months, Bell Atlantic confirmed only 59.37 percent and 55.4 percent of ADSL orders on time.⁶⁸ Because there is substantial reason to believe that

⁶⁴ Bell Atlantic Brief at 21; DOJ Ex. 7: Bell Atlantic DSL Panel Testimony at 21-22.

⁶⁵ NorthPoint has found that its queries are rejected even when it uses Bell Atlantic's address validation system. NorthPoint Comments at 10.

⁶⁶ NYPSC Eval. at 93.

⁶⁷ *See, e.g.*, NorthPoint Comments at 13, 15.

⁶⁸ DOJ Ex. 8: ISDN/ADSL Performance Data at 1-2 (OR-1-04 & OR-1-06, Percent Orders Confirmed On Time).

demand for DSL service will quickly grow to much greater volumes than are currently being experienced, the Commission needs to be satisfied that Bell Atlantic will be capable of handling reasonably expected increases in DSL order volumes.

Bell Atlantic's record for provisioning DSL loops is also the subject of sharply conflicting allegations in the record. Bell Atlantic states in its application that its on-time performance in providing DSL loops is very good, and the September report shows missed appointments for ADSL at only 3.22 percent for 653 loops.⁶⁹ NorthPoint and other CLECs respond that these measurements are meaningless because "a substantial number of DSL loops tendered by Bell Atlantic to DSL CLECS . . . are defective, open, impaired, or in some significant manner wholly 'incomplete.'"⁷⁰ Covad similarly complains that a substantial portion of the loops Bell Atlantic installs are defective as shown by its test equipment.⁷¹

The NYPSC has not undertaken a reconciliation of these conflicting claims; however, during the collaborative instituted by the NYPSC, Bell Atlantic agreed to the CLECs' outstanding requests to establish a cooperative installation protocol, which it began to implement in the middle of September 1999. In addition, the NYPSC's carrier-to-carrier proceeding has begun the process of establishing metrics to measure more accurately performance in providing

⁶⁹ Bell Atlantic Brief at 20; DOJ Ex. 8: ISDN/ADSL Performance Data at 2 (PR-4-04 & PR-4-05, Percent Missed Appointments - BA).

⁷⁰ NorthPoint Comments at 18.

⁷¹ Covad Comments at 15.

DSL loops.⁷²

As to Bell Atlantic's historical performance in provisioning DSL loops, we are unable to conclude on the current record that Bell Atlantic has demonstrated an acceptable level of performance. It is possible, however, that the Commission may obtain information not currently available to the Department that would support such a conclusion. Whatever the record as to historical performance, we are hopeful that the new installation procedures adopted by Bell Atlantic in September 1999, and the improved performance measures that will be adopted by the NYPSC, will soon result in documented improved performance. But because Bell Atlantic filed this application before the results of those efforts can be seen, we cannot conclude that CLECs currently have access to DSL loops necessary for them to compete effectively.

V. Bell Atlantic's Wholesale Performance In Providing Competitors With The UNE-Platform

The UNE-platform is likely to be the principal vehicle, at least in the short term, for competitors offering mass market services to residential and small business customers.⁷³ Several

⁷² NYPSC Eval. at 94-95 ("Recommendations to the NYPSC are expected in December for the adoption of DSL-specific metrics to ensure that these services can be separately monitored to ensure provisioning at a commercially reasonable level of quality and timeliness.").

⁷³ CLEC dependence on the UNE-platform to provide local service to residential customers derives in part from the fact that other service options have not proven competitively viable to serve large numbers of residential customers. The investment needed to provide these services on CLEC networks is too high, as is the investment needed to provide service leasing UNE-loops. The resale discount has been insufficient to keep major carriers such as AT&T and MCI WorldCom from abandoning their statewide resale residential service offerings in New York. Also, the UNE-platform permits CLECs to offer service options unavailable through resale, such as advanced intelligent network features. Z-Tel Comments at 5-6, 8-9.

carriers have invested heavily in preparing to offer service on a large scale through the UNE-platform. These carriers are currently in a startup mode in which their marketing efforts have been limited, as they and Bell Atlantic identify and correct problems in ordering and provisioning service. The number of orders submitted to Bell Atlantic for processing during this startup phase has been substantial -- roughly 90,000 orders in August⁷⁴ -- and we expect that number to increase greatly over the next six months if there are no serious systems problems which constrain that growth.

Effective competition through the UNE-platform will require both CLECs and Bell Atlantic to have stable, robust, and efficient automated systems. Profit margins for serving the average residential customer are relatively modest; if CLECs are required to devote substantial resources to manual processing of orders, the costs of doing so may have a serious impact on those margins. In addition, heavy reliance on manual processes inevitably generates mistakes and delays in processing orders, which may seriously affect service quality. Customers may be wary of switching to CLECs if there is considerable uncertainty about the quality of service they offer.

Bell Atlantic has done much to develop and implement the types of automated systems that will be needed in this market environment. After serious and persistent startup problems, many of which were identified and corrected through the KPMG testing process, the systems

⁷⁴ See Dowell/Canny Decl., Tab 3D at 102 (OR-3-01: Percentage of Rejected Orders; this percentage is calculated based on the total number of CLEC orders submitted to Bell Atlantic); see Bell Atlantic Performance Measures Compliance Filing at 25.

have been developed and refined to the point that Bell Atlantic has demonstrated an acceptable level of performance in many areas.⁷⁵

Despite this substantial progress, however, two concerns remain. First, a large portion of UNE-platform orders still require some degree of manual processing. This heavy reliance on manual processing unnecessarily increases CLEC costs and creates a significant risk that there will be customer-affecting service problems when order volumes substantially increase. Second, the process of coordinating, testing, and implementing changes in Bell Atlantic's systems has generated significant problems; it is not clear that these issues have been adequately resolved.

A. Processing Of UNE-Platform Orders

Our concerns about Bell Atlantic's wholesale support for UNE-platform orders start with the high number of rejected orders. Overall, one third of the UNE orders that CLECs submit are rejected by Bell Atlantic.⁷⁶ Many of these orders are undoubtedly rejected because of errors committed by CLECs, for which Bell Atlantic should not be held responsible.⁷⁷ But order rejections may also occur for reasons within Bell Atlantic's control. Some "CLEC" errors may occur because Bell Atlantic has not provided adequate documentation of the requirements for valid orders,⁷⁸ and there is some evidence that Bell Atlantic erroneously rejects a significant

⁷⁵ See generally KPMG Final Report.

⁷⁶ Dowell/Canny Decl., Tab 3D at 79, 91, 102 (OR-3-01, Percent Rejected Orders: June (28.69%), July (34.01%) and August (33.65%)).

⁷⁷ Bell Atlantic Brief at 43.

⁷⁸ Crafton/Connolly Aff. ¶ 227; see also KPMG Final Report, POP5, IV-114, Test Cross Reference P5-13 (standard error messages on rejected orders not consistently clear and accurate).

number of correct orders.⁷⁹ The Department does not have sufficient information at this time to determine the extent to which Bell Atlantic is or is not responsible for the high levels of order rejections. But it is likely that the high rejection rate has unfortunate repercussions. CLECs must put rejected orders back into the ordering queue, and that may extend the original service due date. CLECs have to reschedule with customers service dates that are extended, particularly orders for new lines.⁸⁰

Even more troubling is the high level of manual processing that is required for UNE platform orders, a phenomenon that is largely within Bell Atlantic's control. At present, service representatives in Bell Atlantic's ordering center manually process almost half of UNE-platform orders.⁸¹ Manually processed orders are processed much more slowly and with much higher numbers of mistakes⁸² than electronically processed orders.⁸³ For example, while an

⁷⁹ Crafton/Connolly Aff. at Attach. 18; Z-Tel Comments at 19.

⁸⁰ The majority of current UNE-platform orders may be for service migrations where a rescheduling might not be required, but UNE-platform orders that involve new lines for which customers must be home at installation are expected to increase as the market matures.

⁸¹ Dowell/Canny Decl., Tab 3D at 79, 91, 102 (OR-5-01, Percent Flow-Through Total: June (54.48%), July (54.36%), August (59.28%)). We note that this performance measure understates the amount of manual processing that actually takes place in Bell Atlantic's ordering centers because it reports the flow-through rate for orders that are provisioned but does not include rejected orders that are not provisioned or orders that are canceled before being provisioned. *See* Bell Atlantic Performance Measures Compliance Filing at 28. When all orders submitted by CLECs are taken into account, Bell Atlantic reports that 52% of UNE-platform orders flow through electronically. DOJ Ex. 9: Excerpt from Bell Atlantic Presentation to Assistant Attorney General Joel I. Klein at 8.

⁸² Dowell/Canny Decl. ¶ 53 & Tab 3D at 102 (OR-6-01, Order Accuracy: August (only 63.59% of electronically submitted orders correctly input by Bell Atlantic service representatives in the ordering center)); DOJ Ex. 6: Aggregate September Performance Data at 7 (OR-6-01:

electronically processed order confirmation is returned to the CLEC in an average of 13 minutes, a manually processed confirmation is not returned on average for 15 hours.⁸⁴ And Bell Atlantic's service order representatives make mistakes on a significant number of the orders on which they work.⁸⁵ Bell Atlantic may be improving its "on-time" performance for order confirmations and rejects, although it is difficult to know based on one month of improved performance.⁸⁶ Moreover, it will always take much longer to process these notices manually than it would to process them electronically, and one would expect the current level of mistakes on manually processed orders to be reduced in an automated process.

Manual processing of orders and high reject rates increase CLEC processing costs because CLECs must devote additional resources to monitor the ordering and provisioning process and correct mistakes.⁸⁷ Those costs can be expected to increase as order volumes increase, and such costs may impair the competitive vitality of CLECs.

It does not appear that the manual processing is creating serious customer-affecting

42%).

⁸³ Compare Dowell/Canny Decl., Tab 3D at 78 (June), 92 (July), 102 (August) (OR-1-03, OR-1-04, OR-2-03, OR-2-04); DOJ Table of Processing Times at 1-2 *with* Dowell/Canny Decl., Tab 3D at 78 (June), 92 (July), 102 (August) (OR-1-01, OR-1-02, OR-2-01, OR-2-02); DOJ Table of Processing Times at 1-2.

⁸⁴ Dowell/Canny Decl., Tab 3D at 102 (OR-1-01 and OR-1-03).

⁸⁵ See *supra* note 82.

⁸⁶ See DOJ Ex. 5: DOJ Table of Processing Times (improvement from July to August on all disaggregated UNE-P metrics listed).

⁸⁷ See, e.g., Crafton/Connolly Aff. ¶¶ 24-29 & Confidential Attach. 2.

service problems at current volumes. If, however, order volumes increase rapidly and substantially, in accordance with CLECs' current marketing projections, there is a significant risk that customer-affecting service problems will develop, absent a reduction in the current level of manual processing. CLECs currently are giving Bell Atlantic more time to provision most UNE-platform orders than the period -- the "standard interval" -- that Bell Atlantic has told CLECs it needs to provision these orders.⁸⁸ As competition for residential customers increases, CLECs will need to compete more directly on the amount of time needed to install local service. The record suggests that Bell Atlantic is not finding it easy to provision UNE-platform service when CLECs request the standard interval,⁸⁹ and order processing delays engendered by heavy reliance on manual processing may exacerbate the problem.

B. Bell Atlantic Has Not Shown That Its OSS Environment Is Stable And Predictable

The record also indicates reasons for concern relating to Bell Atlantic's record of providing the necessary support to enable CLECs to develop and maintain their interfaces with Bell Atlantic's systems. CLECs intending to mass market UNE-platform-based service will

⁸⁸ Aquilina Aff. ¶ 35; Minutes of an Oral Argument, *In re: Petition of New York Telephone Company for Approval of Its Statement of Generally Available Terms and Conditions Pursuant to Section 252 of the Telecommunications Act of 1996 and Draft Filing of Petition for InterLATA Entry Pursuant to Section 271 of the Telecommunications Act of 1996*, NYPSIC, Case 97-C-0271, at 4260 (Aug. 31, 1999), attached to Bell Atlantic Brief as App. C, Vol. 63, Tab 989.

⁸⁹ The data comparing the time it takes to provision wholesale UNE-platform orders with comparable retail orders are murky, but even Bell Atlantic's substitute analysis causes us some concern. In that analysis, Bell Atlantic appears unable to provision UNE-platform orders within the standard interval when CLECs request the standard interval. As calculated by Bell Atlantic's experts, it took Bell Atlantic on average half a day longer than the standard interval to provision UNE-platform orders in August. Gertner/Bamberger Decl. at 10, Table 4.

ultimately have to build their own computer software to connect their ordering systems to Bell Atlantic's order processing and provisioning systems. In prior evaluations, we highlighted the competitive importance of these "application-to-application" interfaces.⁹⁰ It appears to be difficult for CLECs to move from Bell Atlantic's proprietary web-based Graphical User Interface ("GUI") to application-to-application interfaces, such as Electronic Data Interchange ("EDI"), for gathering pre-ordering information and for submitting orders.⁹¹ While there are myriad explanations for this continued dependence on the GUI,⁹² we are concerned that Bell Atlantic's EDI documentation has been so unstable that it has impaired CLEC ability to develop these interfaces⁹³ and that Bell Atlantic has not yet demonstrated, through its change control performance reports, that it is able to provide CLECs with relatively stable and predictable documentation.⁹⁴

⁹⁰ See DOJ Oklahoma Evaluation, App. A at 71-76; DOJ South Carolina Evaluation, App. A at 10-14; see also *FCC South Carolina Order* ¶¶ 156-159, 166.

⁹¹ One hundred CLECs use the GUI for pre-ordering; only three CLECs use EDI. Bell Atlantic Brief at 37; Miller/Jordan Decl. ¶¶ 22-23. So far these CLECs are able only to retrieve customer service records, which is just one of several pre-order functions. See, e.g., Lichtenberg/Sivori Aff. ¶ 56. More than 100 CLECs use the GUI for submitting orders; only six CLECs use EDI. Bell Atlantic Brief at 39-40; Miller/Jordan Decl. ¶ 35.

⁹² For example, the cost of purchasing or creating the software necessary to build an application-to-application interface is high and may be out of reach for smaller CLECs. See Z-Tel Comments at 16.

⁹³ KPMG Final Report, RMI1, VII-8, Table VII-1.8: RMI1 Evaluation Criteria and Results, Test Cross Reference R1-6 (documentation of proposed changes untimely; finality of documentation uncertain).

⁹⁴ Dowell/Canny Decl., Tab 3D at 97-98 (PO-4-01, Percent Notices Sent On Time-Bell Atlantic Originated: August (only 75% of change notifications with 45-day intervals and 88% of

Once they build interfaces using Bell Atlantic's documentation, CLECs must make sure that these interfaces interact correctly with Bell Atlantic's systems. Bell Atlantic provides CLECs with a quality assurance testing environment that serves two important functions: It is the environment in which new CLECs get their software interfaces certified by Bell Atlantic, and it is where established CLECs test new releases of Bell Atlantic's interfaces. Such testing is necessary to prevent major service disruptions when Bell Atlantic makes changes in its side of the interface. KPMG found Bell Atlantic's software testing environment seriously deficient; this finding raises the concern that competitors will be unable to develop and maintain the computer connections necessary to order high volumes of UNE-platform from Bell Atlantic.⁹⁵

Commendably, Bell Atlantic has recognized the importance of implementing improvements in these areas. On October 8, 1999, after filing this application, Bell Atlantic proposed a series of flow-through enhancements and presented the NYPSC with a three-phase plan to increase the percentage of UNE-platform orders processed electronically.⁹⁶ To improve

change confirmations with 66-day intervals provided on time, during the period Bell Atlantic characterized to the Department as a "major" software change)); *see also* Bell Atlantic Performance Measures Compliance Filing at 12 (specifying that notifications have 45-day intervals and confirmations have 66-day intervals).

⁹⁵ KPMG Final Report, POP1, IV-18 to IV-19, Table IV-1.9: POP1 Evaluation Criteria and Results-EDI Certification Test, Test Cross Reference P1-2.

⁹⁶ Bell Atlantic plans to try to increase the percentage of flow-through orders from 52% to 62-67% by October 30, 1999, to 67-72% by December 18, 1999, and to 72-77% by June 2000. *See* Joint October Reply Affidavit of Stuart Miller, Sean J. Sullivan and Arthur Zanzini on Behalf of Bell Atlantic-New York, NYPSC, Case No. 97-C-0271, ¶¶ 11-15, attached to Crafton/Connolly Aff. as Attach. 3. Bell Atlantic intends to increase flow-through in phase 1 primarily by rejecting more CLEC orders. The next two phases of flow-through improvement will focus on systems enhancements: software changes that permit additional order types,

its software documentation problems, Bell Atlantic developed a set of change management metrics designed, *inter alia*, to measure how often it provides CLECs with complete software documentation in a timely manner.⁹⁷ Bell Atlantic also undertook a two-phase plan to improve its quality assurance testing environment. The permanent phase of the improvement plan, a new separate testing environment, opened in late September 1999, just before Bell Atlantic filed this application.

We are hopeful that the flow-through enhancements will be successfully implemented, that Bell Atlantic is improving its ability to comply with its change management commitments and that the permanent test environment will meet CLEC testing needs. The results of these process improvements, however, do not appear in the current record.

VI. Post-271 Entry Performance Commitments Should Not Be Relied Upon To Ensure Implementation Of The Process Improvements Necessary To Open the Market

Bell Atlantic argues that if its application is granted, it will still have strong incentives to improve its performance in the areas discussed above,⁹⁸ pointing in particular to performance assurance plans which were orally adopted by the NYPSC on October 27, 1999.⁹⁹ The

accounts with contracts, and order cancellations to be electronically processed.

⁹⁷ These are metrics PO-4-01, PO-4-02, and PO-4-03 (Timeliness of Change Management Notice); PO-6-01 (Software Validation); PO-7-01, PO-7-02, PO-7-04 (Software Resolution Timeliness). Bell Atlantic Performance Measures Compliance Filing at 12 (PO-4 category), 14 (PO-6-01), 15 (PO-7 category).

⁹⁸ Bell Atlantic Brief at 67-71.

⁹⁹ Bell Atlantic filed two amended performance plans, the APAP and ACCAP, for approval by the NYPSC on September 24, 1999, less than one week before filing this

Department does not believe it would be wise to rely solely on these plans, rather than the more powerful incentives created by Section 271, to ensure rapid completion of necessary market-opening measures.¹⁰⁰

The standard that the Department uses in evaluating Section 271 applications -- the requirement that local telecommunications markets be shown to be fully and irreversibly open to competition before the BOC may offer long distance services -- is based, in significant part, on the difficulty of securing rapid implementation of new and complex access arrangements through

application. The NYPSC orally adopted the APAP and the ACCAP at its October 27, 1999, session. A written order is expected on November 1, 1999. At this time, we do not know whether the NYPSC will order any modifications to the plans proposed by Bell Atlantic. A full analysis of the APAP must wait until the NYPSC redefines some of the performance measures on which the APAP is based. In particular, how the "Achieved Flow-Through" metric is defined will affect the efficacy of the special flow-through measure contained in section E.1 of the APAP. APAP at 11. The NYPSC expects to issue an order addressing these performance measures issues during the week of November 1, 1999. Both of these orders will be issued after this Evaluation is filed with the Commission.

¹⁰⁰ In contrast, in advising the Commission to approve Bell Atlantic's New York 271 application, the NYPSC assumes that Bell Atlantic's level of wholesale performance on a number of items will improve after Bell Atlantic has received authority to offer long distance service. As part of these promised improvements, Bell Atlantic will: (1) take steps to ensure that preorder response times remain adequate as order volumes increase, NYPSC Eval. at 40; (2) improve LSRC and reject response times pursuant to additional monetary incentives in the APAP, *id.* at 43-44; (3) increase flow-through in a three-stage plan over the next several months, *id.* at 47; (4) improve "change control" compliance after long distance entry based on financial incentives in the ACCAP, *id.* at 57; (5) improve compliance with hot cut procedures after long distance entry by instituting a new measuring and reporting process, *id.* at 88-89; (6) disaggregate data relating to reported installation problems after long distance entry, *id.* at 90-91; (7) institute many process improvements for ordering and provisioning DSL loops in the ongoing collaborative process, *id.* at 92-94; (8) implement process improvements for repair of complex loops, *id.* at 99; and (9) provide unbundled "dark fiber" transport to CLECs, *id.* at 104.

regulation alone.¹⁰¹ Regulators necessarily have much less information than the regulated firm with which to judge which types of new arrangements are feasible, how they may best be implemented, how long it will take to implement them, and how effective they will be in achieving the desired wholesale performance. Moreover, the legal processes that are required to prove inadequate performance and to levy sanctions may generate substantial delay and uncertainty about the ultimate outcome of the regulatory process, and the sanctions which regulators may impose are often too small to motivate the regulated firm to implement the new arrangements rapidly, when rapid implementation will result in the loss of market power. The use of an appropriate standard under Section 271 avoids these difficulties by ensuring that the BOC has powerful incentives (*i.e.*, the ability to enter the long distance market) to cooperate to open its markets.¹⁰²

Our concerns about relative efficacy of regulation (as compared to the use of incentives under an appropriate Section 271 standard) can be illustrated by specific aspects of the performance assurance plans as proposed by Bell Atlantic. The effectiveness of those plans will depend on several important factors, including (i) *clarity* as to the precise level of performance that will be required, (ii) *certainty* that inadequate performance will be sanctioned, and (iii) *adequate penalties* that are large enough to create incentives for adequate performance.

Penalties under the performance assurance plans are triggered on the basis of performance

¹⁰¹ DOJ Ex. 1: Schwartz Aff. ¶¶ 154-57.

¹⁰² Regulation has proved to be more effective at *maintaining* adequate wholesale performance once the necessary new access arrangements have been put in place and a benchmark of acceptable wholesale performance has been established. *Id.* ¶¶ 137-140.

that drops below defined statistical standards on specific performance measures. But at the present time, there are still-unresolved disputes concerning the precise definitions that are or should be used for key measures and the level of performance at which penalties would be imposed. Bell Atlantic has proposed that lower standards be applied to the special measures regarding UNE ordering performance and hot cut performance. In addition, in the parallel track metrics docket, Case 97-C-0139, Bell Atlantic requested (the day after filing the proposed amended plans) that one of the flow-through metrics included as a special measure be redefined.¹⁰³ If the NYPSC were to accept Bell Atlantic's proposed redefinition, Bell Atlantic would be unlikely to incur *any* penalties under the special flow-through measure even if it fails to increase its current level of flow-through.

Even after these matters are clarified, there will be opportunities for Bell Atlantic to argue that inadequate performance should not trigger penalties. Within 45 days from the end of a month showing inadequate performance, Bell Atlantic can request to have its performance results modified on three grounds: (i) clustering of data, (ii) unusual CLEC behavior (modifications if "spiked" or highly variable order volumes affects manually processed confirmation and reject times), and (iii) for absolute standards, "non-normal" operating conditions.¹⁰⁴ No procedures or time requirements for considering these waiver requests are proposed in the amended plans, and the manner in which these standards will be interpreted is unclear at this time. This creates the potential for litigation and delay in imposing penalties and uncertainty that inadequate

¹⁰³ APAP at 11-13 & n.13.

¹⁰⁴ APAP at 15-17.

performance will in fact be punished.¹⁰⁵

The size of any penalties that may be imposed on Bell Atlantic for specific failures is not at all clear to the Department at this time. Bell Atlantic emphasizes the total penalties which could be imposed, in theory, for poor performance -- \$269 million in bill credits in the first year of the plan, and \$235 million in following years. Because of the structural caps and allocations within the plan, the penalties for specific deficiencies (*e.g.*, a failure to improve flow-through rates or to provision unbundled loops adequately) would be much smaller -- though we are unable to determine exactly how much smaller.¹⁰⁶ Moreover, there is no evidence in the application suggesting what, if any, amount of bill credits will provide sufficient incentives for Bell Atlantic to improve its current performance levels.

In offering these observations about the performance assurance plans, we do not mean to imply any criticism of the diligent efforts of the NYPSC to develop tools for assuring adequate wholesale performance. Our point, rather, is that even the best efforts to do so will have a limited degree of success because of inherent weaknesses of the regulatory process in this context. The appropriate use of Section 271 incentives will overcome some of these difficulties and, in our view, will be more effective in securing rapid and effective removal of the remaining

¹⁰⁵ This concern is not merely theoretical. The Attorney General of the State of New York states that Bell Atlantic has sought waivers for at least 17 months of data under its retail performance regulatory plan since it was instituted in September 1995. NYAG Comments at 34.

¹⁰⁶ According to the NYPSC, the APAP would have required Bell Atlantic to post about \$5 million in bill credits out of \$17.3 million in bill credits at stake during August had it been in place at that time. NYPSC Eval. at 7. *See also* Bell Atlantic *Ex Parte* Filing on PAP.

barriers to competition in New York.¹⁰⁷

VII. Conclusions And Recommendations

The current application demonstrates that Bell Atlantic has completed most of the steps needed to establish local telecommunications markets in New York that are fully and irreversibly open to competition. But the remaining obstacles to competition, though few in number, are significant. Effective access to unbundled loops, to provide both traditional voice and advanced data services, is a critical precondition to competition to serve important classes of customers. Competition to serve millions of residential customers through the UNE-platform will require robust and reliable electronic systems so that CLECs will have the ability to provide high quality service in an efficient manner. In both of these areas, Bell Atlantic has done a great deal to open its markets but has not completed (or demonstrated that it has completed) the process.

Because Bell Atlantic has come so far, and because of the importance of the remaining steps, this application requires careful judgments by the Commission. It is clear to the Department that Bell Atlantic should be required to demonstrate additional progress in solving the remaining problems before it is permitted to enter the long distance market. It is somewhat less clear precisely how the Commission should effectuate such a requirement.

We note, first, that some of our concerns relate to disputed factual issues, as to which, on the current record, the Department has concluded that Bell Atlantic has not made a sufficient

¹⁰⁷ We are concerned also about the precedential implications of relying on promises of future improvement as a basis for approving applications under Section 271. It would be unfortunate if future applicants were less committed to actually opening their markets because of the expectation that it would be sufficient for them to make such promises.

showing. It is possible, however, that information from Reply Comments and *ex parte* submissions will provide additional support for Bell Atlantic's claims and justify a conclusion by the Commission different from that reached by the Department on the basis of the current record.

As to other issues, the Commission will need to make careful judgments concerning the most appropriate disposition of this application. The Department of Justice starts with a strong presumption -- based on the structure and terms of the statute, on the Commission's prior decisions under Section 271, and on the Department's own economic and competitive analyses -- that a BOC should be required to demonstrate that all important market opening measures have been completed *before* it may enter the long distance market. Moreover, given the procedural constraints arising from the 90-day review period for Section 271 applications, we strongly support the Commission's prior decisions limiting the ability of applicants to submit data concerning post-application performance in support of their application.

These considerations lead us to the conclusion that a BOC should not be permitted to offer in-region interLATA services as long as important constraints on local competition remain. It is, therefore, our judgment that Bell Atlantic should not be permitted to offer such services until it demonstrates that it has solved the existing problems in its provision of access to unbundled network elements.

The Commission could implement this judgment by denying Bell Atlantic's application in a manner which identifies as clearly as possible the steps that Bell Atlantic must take to secure approval in a subsequent re-application. In light of the limited nature of the remaining problems,

the Commission could also consider, and make clear that it will provide, expedited review procedures for any subsequent application for New York.

As an alternative, the Commission might be able to approve this application subject to carefully crafted conditions consistent with the principles we have articulated, under which Bell Atlantic would be permitted to offer interLATA services only after taking specified steps and demonstrating that its performance has met appropriate requirements. In weighing this option, however, the Commission should (i) consider carefully the scope of its legal authority to impose conditions on its approval of a Section 271 application, as to which we express no view; (ii) provide mechanisms sufficient to enable it to reach an informed judgment and ensure full compliance with any conditions; and (iii) take care to avoid a precedent that would permit the requirements of Section 271 to be satisfied merely by promises of future compliance. We are concerned that such a conditional approval of this application might encourage future applications in states that are less open to competition than New York has been shown to be. Still, in light of the substantial record of progress in New York reflected in the record, we do not foreclose the possibility that the Commission may be able to approve this application at the culmination of these proceedings.

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Certificate of Service

I hereby certify that I have caused a true and accurate copy of the foregoing Evaluation of the United States Department of Justice to be served on the persons indicated on the attached service list by first class mail, overnight mail, or hand delivery, on November 1, 1999.

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EXHIBIT 1

**Affidavit of Marius Schwartz
on Behalf of the
U.S. Department of Justice**

COMPETITIVE IMPLICATIONS OF BELL OPERATING COMPANY ENTRY INTO
LONG-DISTANCE TELECOMMUNICATIONS SERVICES

AFFIDAVIT OF MARIUS SCHWARTZ

May 14, 1997

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Professional Background

1. My name is Marius Schwartz. I am a Professor of Economics at Georgetown University. I received my B.Sc. degree with first-class honors from the London School of Economics and my Ph.D. in economics from the University of California at Los Angeles. My research areas are in industrial organization, antitrust and regulation. I have published on these subjects and have taught courses at Georgetown University and to executives and government officials in the U.S. and other countries.

2. From April 1995 to June 1996, I served as the senior staff economist at the President's Council of Economic Advisers responsible for antitrust and regulated industries. Much of my work was on regulatory reform in telecommunications, and I participated in the development of the Administration's policy leading up to the enactment of the 1996 Telecommunications Act. From 1980 to the present, I have served intermittently as a consultant to the Antitrust Division of the Department of Justice on a wide variety of competition matters. I have also consulted for the OECD, World Bank, USAID, and private clients. My curriculum vitae is attached to this affidavit.

Scope of Assignment

3. I have been asked by the Antitrust Division of the U.S. Department of Justice to analyze the economic conditions under which authorizing regional Bell Operating Company (BOC) provision of in-region interLATA telecommunications services ("BOC entry") would be consistent with the public interest in competition, under the entry standard of § 271 of the Telecommunications Act of 1996 ("Act"). I have also been asked for my opinion, in light of my analysis, regarding the Justice Department's general standard for evaluating BOC applications under § 271 that is described in the Department's comments filed with the Federal Communications Commission. As part of my analysis I have considered both the potential costs

and benefits of authorizing interLATA entry by the BOCs, consistently with the specific provisions and overall competitive objectives of Act. I have not been asked to consider whether any individual BOC has met the requirements of § 271 in a particular state.

4. In connection with this assignment, I have drawn on the relevant economics literature and consulted with other academics, regulators, practitioners, and industry participants. I have also reviewed numerous documents, including but not limited to: submissions in connection with the Motion to Vacate the MFJ that was filed by four BOCs in 1995; submissions in the FCC's proceedings to implement the 1996 Act's provisions on local competition, accounting and non-accounting safeguards, and reform of universal service and access charges; the FCC's relevant Orders; regulatory filings with state commissions; documents submitted to the Department of Justice pursuant to the pending mergers between Bell Atlantic and NYNEX, and SBC and Pacific Telesis; and numerous responses submitted to the letter request of Acting Assistant Attorney General Joel Klein issued on November 21, 1996, concerning the competitive impact of interLATA entry by the BOCs ("responses to Joel Klein letter").

5. My assessment is that the Department of Justice's entry standard strikes a good balance between properly addressing the competitive concerns raised by BOC entry, and realizing the benefits from such entry as rapidly as can be justified in light of these concerns. The Department's standard, therefore, is consistent with the public interest in competition reflected in the entry test of section 271 of the Telecommunications Act.

Summary of Analysis and Conclusions

6. The 1996 Act aims to increase competition in *all* telecommunications markets; for the first time, this includes local markets that today are largely regulated monopolies. It is therefore necessary to evaluate the effects of BOC entry not only on competition in long-distance services, but also in local services and in "integrated services" (the offering of both local and long-distance

services—whether bundled or separately—by the same provider).

7. Under appropriate conditions, BOC entry holds the promise of yielding significant benefits to the BOCs and to consumers. The principal benefits may include: (a) reductions in retailing costs enabled by joint provision of local and long-distance services; (b) offering consumers valuable new options from dealing with providers of integrated services, e.g., the convenience of one-stop shopping for all their telecommunications requirements; and (c) increasing the degree of competition in long-distance services (both in interLATA services through BOC entry; and in intraLATA toll services in multi-LATA states that now lack dialing parity for entrants, since the Act requires intraLATA dialing parity in such a state when and only when BOC interLATA entry occurs in the state).

8. BOC entry, however, also raises potential concerns. The principal risk of authorizing premature BOC entry is that doing so will result in significantly less BOC cooperation, than could be induced by an appropriate entry standard, in providing good access at cost-based prices to the various functions and services of a BOC's local networks needed by entrants wishing to offer local or integrated services. These requisite "wholesale local services" include interconnection, unbundled network elements, and discounted local service for resale. Securing efficient access to these services of the BOCs' ubiquitous local networks will be critical for some time to the development of competition in local and integrated services. A BOC's monopolistic withholding of such access cooperation would be a potent and destructive form of rivalry: it would raise competitors' costs, degrade their quality, and deny consumers the benefits of new products. And if facilities-based local competition fails to develop, BOC entry could pose a growing threat to long-distance competition, since today's established access arrangements will increasingly require changes over time.

9. Authorizing premature BOC entry would prematurely reduce a BOC's cooperation incentives for two main reasons: (a) the BOC stands to gain if it can leverage its local market

power into the newly opened markets for long-distance and integrated services; and (b) the BOC is emboldened to stiffen its resistance to local competition having secured its coveted long-distance authority. After explaining these incentives, I argue that regulatory and other post-entry safeguards are considerably less likely to secure the new BOC arrangements for local competition than would a more procompetitive entry standard.

10. First, consider leverage incentives. Once the BOC offers long-distance retail services and thus integrated retail services, it becomes a competitor to its access customers—carriers that must purchase from it access services used to provide these retail services. A BOC then becomes less willing to provide access services to others than if it did not offer the retail services itself. This reduced willingness arises in large part, though by no means entirely, because a BOC's prices for wholesale local services and for local retail services are likely to remain more tightly regulated than its prices for long-distance retail services. Asymmetric regulation of this sort pushes a firm to evade regulation by leveraging the more tightly regulated market power into the less regulated services that require access to the regulated bottleneck services. To raise prices of unregulated services, a BOC must undermine competitors; this it might do—if unchecked by regulation—through various forms of “access discrimination” that raise competitors' costs or degrade their quality.

11. Leverage into long-distance services would entail a BOC's degrading of competitors' long-distance access arrangements; a BOC's ability to do so, however, is limited in the short run (see ¶ 14). But leverage into integrated services could entail degrading of competitors' long-distance access or denying to competitors good access to its wholesale *local* services—because competitors need both to offer integrated services. Undermining integrated-service competitors by restricting their access to wholesale local services could enable a BOC to charge higher prices for its unregulated long-distance services for two reasons: (1) competitors are denied cost savings from joint provision of services, which could raise their cost of providing long-distance services

and thus weaken the discipline they impose on the BOC's prices; and (2) some consumers would be willing to pay a premium for dealing with a provider of integrated services, reflecting, for example, the value of one-stop-shopping.

12. Second, and independent of such incentives to leverage market power into long-distance or integrated services, a BOC like any dominant incumbent is inclined to resist cooperating with local entrants that threaten its core local market power. This resistance can be softened—though not eliminated—by authorizing a BOC's long-distance entry only if its adequate cooperation with local entrants has first been secured. Before entry is authorized, the lure of added profit from long-distance and integrated services gives the BOC an incentive to expedite its required cooperation; after entry, however, time is on the BOC's side and its inclination to cooperate correspondingly diminishes. As a practical matter, rescinding a BOC's entry authority if it slows down its cooperation may well be difficult as well as disruptive. (Halting its future marketing efforts may be a more practical option, but is also less potent.)

13. For these reasons, once a BOC's entry is authorized, its incentives to cooperate in providing network access to competitors will diminish significantly. Therefore, a key question is: how effectively can regulatory and other safeguards enforce the requisite BOC cooperation post entry in the face of reduced BOC incentives? Economic reasoning suggests—and historical experience confirms—that the efficacy of regulatory and other “outside enforcement” varies widely with the economic environment. Regulation fares much better in a stable environment where regulators understand what is and is not standard practice, than in a rapidly changing environment where more frequent adjustments are needed and informational asymmetries are greater. Correspondingly, regulatory oversight can do a reasonable job of maintaining well-established arrangements; but it is far less adept at forcing incumbents to rapidly implement new arrangements, as the lack of historical benchmarks on acceptable performance gives incumbents great latitude to engage in plausible deniability. These observations have important implications.

14. Access arrangements for long-distance services are largely well established; hence regulatory and other safeguards can prevent significant degradation. Although the necessary access arrangements will certainly evolve over time, I understand that radical changes in technical arrangements governing the majority of interexchange revenues are not imminent. While customized arrangements pose a potential problem, such arrangements are used mainly by large customers for whom competitive access alternatives have developed more rapidly. On balance, therefore, regulatory and other safeguards can render the threat to technical arrangements for long-distance access tolerable, at least in the short run.

15. The picture is quite different for access arrangements to wholesale local services. These requisite arrangements are largely new; their implementation will require extensive cooperation by incumbents in developing a host of technical, operational and business protocols, and in establishing appropriate prices.

16. Mandating incumbents' cooperation, as the Act does, surely helps; but the process will evolve much more quickly and efficiently if incumbents have better incentives to cooperate. Thus, the Act sets up the § 271 process which, as is widely acknowledged, only allows for BOC entry when such local-competition access arrangements are meaningfully made available and the market is truly open to competition. This sequencing serves important purposes, as described below. Regulators and other outside enforcers have significantly inferior information than a BOC about how to implement these new systems and how long the task should take. These informational asymmetries hinder reliance on post-entry measures (such as halting BOC marketing of long-distance services, or imposing financial penalties) to force BOC implementation of these new arrangements, since enforcers' uncertainty about how long implementation should take makes it difficult (and inefficient) to specify rigid deadlines.

17. As the § 271 sequencing recognizes, however, these difficulties can be significantly mitigated by requiring as pre-conditions for BOC entry that all major new systems necessary to

open the local market have been made available to entrants, and that their performance has been sufficiently demonstrated; absent such a demonstration, one cannot be confident that the systems indeed do what they promise. Such an entry standard does a better job of aligning incentives: the more informed BOC then has stronger incentives to implement things rapidly in order to expedite opening the local market and thereby its own long-distance entry. And establishing performance benchmarks to gauge the functioning of these new arrangements before authorizing BOC entry renders post-entry safeguards—regulatory, antitrust and contractual—more effective at countering subsequent BOC incentives to degrade these arrangements. Thus, authorizing BOC entry only after a BOC institutes the new access arrangements that are necessary to open the local market to competition is likely to greatly accelerate the emergence of local competition.

18. Although delaying BOC entry until the local market is open may impose some costs, the more rapid opening of the local market that will result is likely to yield significantly larger benefits to consumers. The local market is more than twice as large as long distance (net of access charges), and is largely a regulated monopoly; thus, adding even a modest dose of competition could yield major gains in lower costs and prices, improved service, and product innovation. BOC cooperation in providing wholesale local services also could permit others to compete relatively quickly in integrated services (such as by reselling local services along with long-distance and other services); the ability to offer integrated services is important to enabling long-distance carriers and others to compete effectively with a BOC once it is authorized to offer long-distance service. And in the long run, facilities-based local competition can aid regulation—and eventually, one would hope, supplant it—in safeguarding access arrangements for long-distance services in a less intrusive manner.

19. The foregoing analysis persuades me that BOC entry is appropriate when, and only when, the market in the state has been irreversibly opened to local competition. I believe this entry standard will provide incentives to the BOCs to extend the cooperation necessary to open local

markets more rapidly and efficiently; will help establish the benchmarks enforcers need to maintain the new access arrangements post entry; and will permit BOC entry as rapidly as is consistent with these constraints. Opening the market does not require evidence of local competition of all forms and in all regions of a state sufficient to substantially discipline BOC market power. The Act aims to let market forces determine what forms of entry work best and where; and regulatory and other safeguards will still play a role in disciplining BOC abuse of market power. But, at a minimum, opening the local market requires full, meaningful implementation of the § 271 competitive checklist, not mere paper compliance.

20. By far the best test of whether the local market has been opened to competition is whether meaningful local competition emerges. Local competition establishes presumptions; the more widespread and varied it is, the greater our confidence that the market has been opened. In particular, use on a commercial scale of the new access arrangements needed to support all three modes of local entry envisioned in the Act—facilities-based, unbundled elements, and resale—demonstrates that competitors are obtaining what they need from the BOC. Local competition, even on a modest scale, can also signal entrants' willingness to commit investments and demonstrate their confidence in the openness of the market. Finally, the presence of local competitors can directly assist regulators in preventing future backsliding by the dominant incumbents.

21. If sufficiently diverse competition fails to develop, it is important to understand why. As implied earlier, one possibility is simply lack of interest by entrants in pursuing certain entry modes in certain regions. But before reaching such a conclusion, it is important to ascertain that competition is not being stifled by artificial barriers. Thus, if sufficient competition fails to develop, there should be a rebuttable presumption that this is not due to lack of entrants' interest, but to a failure to irreversibly open the local market. Rebutting this presumption requires ascertaining that the main elements of an open market indeed are in place. The most important

element, the logic for which was explained earlier, is the following. *New technical and operational arrangements must be available and shown to be working*: to support all three entry modes envisioned in the Act; on a sufficient scale, and capable of being rapidly expanded and extended to regions where they are not initially implemented; and for sufficient duration and variety to provide reliable benchmarks to assess and enforce future cooperation.

22. *Procompetitive pricing* of these key inputs also is necessary to inspire confidence that, despite the absence of sufficient actual competition, the market is indeed open. Prohibitively high prices would render the new access arrangements meaningless; to permit efficient local entry, entrants must have adequate assurance that BOC prices for these inputs will remain reasonable and cost-based after interLATA relief is granted. (The FCC has determined that the appropriate costs are: forward-looking incremental cost for unbundled network elements and for transport and termination of local calls; and wholesale discounts off the retail price that are close to the incumbent's avoided retailing costs, in the case of local service sold to other carriers for resale.) Awareness that the § 271 entry process will weigh seriously whether key inputs are priced in a manner that supports efficient competitive entry will usefully complement state efforts in opening local markets.

23. Finally, one must ascertain that competition is not being hindered by any lingering *major state regulatory or other artificial barriers*. (Although such barriers may be subject to preemption under § 253 of the Act, the timeliness and effectiveness of any such FCC preemption decisions is uncertain.) If such barriers are likely for some time to seriously hinder competitors' ability to avail themselves of the new access arrangements put in place with BOC cooperation, these arrangements could become obsolete and the value of such BOC cooperation will decay; and securing this cooperation again once the barriers have been removed but after BOC entry has been authorized will be considerably harder.

24. In short, if sufficient local competition is observed, this demonstrates that the market has

been irreversibly opened; if not, one should exercise more caution in approving the BOC's entry, and insist on offsetting evidence that the market indeed has been irreversibly opened. I have reviewed the Department of Justice's entry standard in light of this analysis. I conclude that it strikes a good balance between properly addressing the competitive concerns raised by BOC entry, and realizing the benefits from such entry as rapidly as can be justified in light of these concerns. It therefore serves the public interest in fostering competition.

I. The 1996 Telecommunications Act and BOC Entry into Long-Distance Services

25. The 1996 Act represents a major shift in U.S. telecommunications policy by establishing as a federal goal the promotion of competition in all telecommunications services. The most significant change is the requirement that local telephone markets, heretofore regulated franchise monopolies, be opened to competition. In addition and relatedly, the Act establishes a procedure for authorizing the BOCs to offer long-distance (interLATA) telecommunications services originating in their service regions after a BOC has sufficiently opened its local markets to competition and BOC entry is judged to be in the public interest.

26. Section A below reviews the main relevant telecommunications markets and Section B discusses the Act's goals of increasing competition and improving performance in these markets. Section C stresses why BOC cooperation will be critical to achieving the Act's goals, and section D discusses the benefits and costs of authorizing BOC entry before there is effective local competition. Based on this analysis, section E discusses the main principles that a procompetitive entry standard should incorporate.

A. The Major Telecommunications Markets Relevant to BOC Entry

27. The 1982 consent decree that broke up the vertically integrated Bell system (Modification

of Final Judgment, “MFJ”¹) created seven new regional BOCs, and divided those parts of the country served by the Bell system into Local Access and Transport Areas (LATAs); today, the BOCs serve 164 LATAs. Under the MFJ, a BOC could only offer telecommunications services within LATAs (intraLATA). InterLATA services have been provided by long-distance companies, also known as interexchange carriers (IXCs). Recently, however, some local exchange carriers (LECs) not subject to the Act’s § 271 interLATA restriction on the BOCs, have been making serious inroads into long-distance services.

28. Superseding the MFJ, the 1996 Act authorizes any BOC immediately to offer long-distance (interLATA) services that originate in states outside its service regions. But to offer interLATA services originating in its region, a BOC must receive FCC approval under § 271 of the Act. A BOC applies for approval state-wide.² Approval is granted only after the FCC determines all of the following: (a) which if any of the two tracks stipulated in the Act the BOC is eligible to use at the time to satisfy the *competitive checklist* requiring it to open its local markets in the state to competition: Track A (interconnection agreement with a facilities-based competitor serving business and residential customers), or Track B (statement of generally offered terms to competitors where no request has been made by a provider for access and interconnection); (b) after consulting with the state commission, determines that the BOC, through Track A or B, has satisfied the competitive checklist; and (c) determines that such approval is in the *public interest*. In making its determination on a § 271 application, the FCC must consult with the Department of Justice and give substantial weight to its competitive

¹ *U.S. v. AT&T*, 552 F. Supp. 131 (D.D.C., 1982). Judge Greene entered the MFJ on August 24, 1984, and the divestiture was consummated January 1, 1984.

² Once a BOC receives interLATA approval in any state, § 273 of the Act authorizes it also to enter manufacturing of telecommunications equipment, from which the BOCs are still barred. I have not been asked, in preparing this affidavit, to address equipment markets.

assessment. (In addition, § 272 requires the BOC to offer interLATA services, both in and out of region, through a separate affiliate subject to certain safeguards.)

29. Since the Act links a BOC's interLATA entry authority to the opening of its local markets, in advocating a particular entry standard one must consider its effects on competition in both interLATA and local markets.

1. The BOCs dominate key local networks and are regulated

30. Table 1 shows telecommunications revenues from local (intraLATA) markets now dominated by the BOCs in their regions, and from long-distance (interLATA) markets which the BOCs seek to enter. The data are for 1995, the most recent year for which comprehensive data are available.³ Despite some changes since the passage of the Act, notably an increase in the activity of local entrants (discussed shortly), the basic market relationships shown by the 1995 data have not changed markedly. Two points stand out. First, local revenues are twice as large as long-distance revenues (net of access payments collected by LECs). Second, incumbent LECs account for the vast majority of local revenues: \$102.8 bn compared with a combined \$0.6 bn for CAPs and CLECs; although CAP plus CLEC revenue has risen to about \$2 billion in 1996, it is still dwarfed by LEC revenues.

31. In their service regions the BOCs have virtual monopolies over *switched* services, both local exchange and exchange access to long-distance carriers. They also dominate special (or

³ The data come from the FCC's *Telecommunications Industry Revenue: TRS Fund Worksheet*, December 1996 (*TRS*). There are some relatively minor discrepancies between the *TRS* data and the FCC's *Statistics of Communications Common Carriers, 1995/96 (SCCC)*. I use *TRS* data because it covers more local carriers. In most cases only LECs with annual revenues over \$100 million are required to report to *SCCC* (the 53 such LECs reporting to *SCCC* for 1995 accounted for somewhat over 90% of all LEC revenues). In contrast, almost all telecommunications carriers (1,310) reported to *TRS* for 1995. Thus, *TRS* data cover more LECs (which helps explain some of the discrepancy between the *TRS* and *SCCC* data on LECs), and includes information on other local providers, CAPs (Competitive Access Providers) and CLECs (Competitive Local Exchange Carriers—new local entrants).

dedicated) access used by long-distance carriers. And in most states they also dominate intraLATA toll services, due to the BOCs' continuing ability in those states to deny to IXC's dialing parity (the ability of a customer to make intraLATA toll calls through an IXC without dialing more digits than through the BOC) before the BOCs begin providing interLATA services in these states.⁴ In 1995, the ratio of LEC revenues nationwide to long-distance revenue net of access was about 2-to-1 (Table 1); the BOCs accounted for about 73% of all LEC revenues nationwide (Table 1) and about 77% of all interLATA minutes originated in BOC service areas (SCCC, Table 2.10). The 2-to-1 ratio therefore is also a reasonable approximation of the relative sizes of (a) those markets which a BOC now dominates (local markets in its service areas) versus (b) those markets now closed to a BOC and in which the BOC would have the greatest impact (interLATA calls originating in its service areas).⁵

32. In recent years, certain local competition has emerged. In central business districts, CAPs have constructed networks that enable large customers to bypass LECs and link directly to IXC's (mainly to send but not receive calls), and provide some links between local private networks. One can expect CAPs and CLECs to expand into switched services, since the 1996 Act preempts many legal barriers that had precluded competition for such switched services in many states.⁶

⁴ Competition has been growing in intraLATA toll service, especially in states that introduced dialing parity between the incumbent LEC and IXC's. IXC's were estimated to account for about \$3.3 billion of intraLATA toll revenues in 1995, compared with \$10.1 billion for all LECs (Table 1). I discuss intraLATA dialing parity further in section II.B.

⁵ The Act bars a BOC (until it secures § 271 authority) from providing interLATA services that originate anywhere in its states, including parts of a state where local service is provided by other LECs not the BOC. However, the BOC's competitive significance in interLATA services is likely to be greatest for calls originating in its service areas, where it dominates local networks. (Reflecting the difference that control of local networks can make, the Act permits the BOCs to offer interLATA services originating in out-of-region states.)

⁶ Indeed, Table 1 understates the revenues of CAPs and CLECs today. New Paradigm Resources Group (NPRG), based on data it developed together with Connecticut Research, reports the following trends.

But CAPs and other local entrants face more than just legal hurdles.

33. Expanding local operations is expensive, and requires significant cooperation from incumbents. As mentioned, the BOCs in their regions retain the only ubiquitous switched local networks. These consist of several major elements. (a) The *local loop* is the sets of wires linking subscriber premises to the telephone company's wire centers (or "central offices"). This local distribution plant is by far the most expensive network element; duplicating it on a large scale would be prohibitively costly, and probably inefficient. (b) *Switching* facilities allow subscribers to communicate indirectly (as opposed to using point-to-point links) with others. Virtually all residential subscribers and small businesses depend on switched local access to originate and to terminate both their local and long distance calls, as non-switched access is only economical for large users. (c) *Local transport* facilities are high capacity trunk lines that connect central offices or other switches. (d) The BOCs also control key *databases*, and key network *signaling* functions—the flow of information associated with setting up, disconnecting, and otherwise controlling a telephone call (information such as the identity of the parties, the duration of the call and the signal being transmitted, e.g., voice or data).

34. In view of their substantial market power, the BOCs and other LECs remain regulated in their prices for most local services and exchange access. Moreover, as explained shortly, the new Act requires incumbent LECs to offer numerous new "wholesale" local services at regulated

In 1996 CLECs, in which NPRG includes also CAPs, nearly doubled their revenues to \$2.2 billion and increased their market shares for all service categories. Their estimated shares of national totals are: 0.4% of local services; 1.8% of intraLATA toll; 0.3% of switched access services; and 10.6% of dedicated access services. NPRG expects these shares to increase considerably in the mid-term future as CLECs are aggressively deploying switch facilities. Still, NPRG notes that these shares remain negligible when compared to incumbent LECs—consistent with the pattern in Table 1—and concludes that, although strong competition for dedicated access services may exist today for selected locations, for the overall local telecommunications market, robust competition does not exist today. NPRG, *Annual Report on Local Telecommunications*, 1996-97.

prices to other telecommunications providers.

2. Long-distance markets are relatively competitive and largely unregulated

35. The extent of competitiveness of long-distance markets is hotly debated (see section II.C); but it is surely greater than in local services. There are four national IXCs, which in 1995 had the following revenue shares: AT&T 53%, MCI 18%, Sprint 10%, LDDS/WorldCom 5%; there are also numerous other carriers, with a significant total market share of 14% (*SCCC*, 1995/96, Table 1.4). And there is considerable switching of customers between carriers. In short, while there is not perfect competition, there is considerable competition.⁷

3. Inefficiencies in the present industry structure

36. While the MFJ succeeded in increasing competition in long-distance services, the current structure of the U.S. telecommunications industry is surely far from perfect.

37. *Losses from separation.* The MFJ's separation of activities based on LATAs imposes certain costs. As explained in section II, it precludes the BOCs from attempting to exploit various economies of scope, especially on the retailing side, associated with joint provision of local and long-distance services; from offering consumers the benefits of one-stop shopping and new services that require both local and interLATA facilities; and from bringing more competition to long-distance services (see the ensuing section I.D.1). LATA boundaries

⁷ In finding AT&T non-dominant, the FCC assessed that "most major segments of the interexchange market are subject to substantial competition today, and the vast majority of interexchange services and transactions are subject to substantial competition." *Motion of AT&T Corp. to be Reclassified as a Non-dominant Carrier*, 11 FCC Rcd 3271, 3288, ¶ 26 (1995). The FCC reiterated these views a year later: "Thus, we believe that market forces will generally ensure that the rates, practices, and classifications [of IXCs] are just, reasonable, and not unjustly or unreasonably discriminatory. . . . We also reject the unsupported suggestion that the current levels of competition are inadequate to constrain AT&T's prices." *Policy and Rules Concerning the Interstate, Interexchange Market*, CC Docket No. 96-61, Second Report and Order, FCC 96-424, ¶¶ 21, 22 (released October 31, 1996).

necessarily impose artificial separation between points near the boundaries, and do not always conform to economic markets or efficient network configurations. LATAs vary widely in size and population; intraLATA calls can travel hundreds of miles, thereby better resembling long-distance calls than local calls as regards the network facilities utilized.⁸ For all these reasons, confining the BOCs (or any other firms) to particular geographic regions or types of services is not a first-best solution.

38. *Absence of local competition.* But the most glaring problem today is one that the MFJ was not designed to alter: the absence of local competition. Indeed, confining the BOCs may have been the best guardian of nascent long-distance competition in an era where persistence of the BOCs' regulated local monopolies was taken as given. Replacing such monopolies with local competition, however, can ultimately provide a better safeguard for long-distance competition,⁹ while also allowing removal of current restrictions on the BOCs.

39. In addition to safeguarding competition in long distance, introducing local competition at this point is likely to yield even greater benefits by improving market performance in the provision of local services, including local exchange and exchange access, and of integrated services. The local market is more than twice as large as long distance (Table 1), and is largely monopolized by incumbent LECs. While regulation holds down some LEC prices, it introduces

⁸ To some extent this reflects the choice of relatively large LATA boundaries at divestiture (a typical LATA is much larger than a local exchange network). However, even if at divestiture LATAs had been drawn to maximize the degree of separation between the perceived local monopoly bottlenecks and the potentially competitive segments, airtight separation would still be impossible. The boundary between "monopoly" and "potentially competitive" segments is not stationary, but changes with technology and the advent of new services. Any rigid regulatory separation is therefore bound to become imperfect.

⁹ The BOCs' own statements implicitly acknowledge that regulation is an inferior safeguard to competition. "This competition (from CAPs) was driving the Bell companies to lower the price *and raise the quality* (emphasis added) of their local exchange services even before the 1996 Act." Joint Response of Bell Atlantic and US West to Joel Klein letter, December 13, 1996, 32-33.

its own costs.¹⁰ These include: a distorted price structure; rigidities in adjusting prices to changing conditions; and weakening firms' incentives to contain costs (if regulation is largely cost-based), to maintain quality (if regulation is of the price-cap variety), and to be innovative and responsive to customer demands. Where feasible, competition is far superior to regulated monopoly as a device for promoting cost reduction, innovation, and superior service.

¹⁰ Robert W. Crandall and Leonard W. Waverman, *Talk Is Cheap: The Promise of Regulatory Reform in North American Telecommunications*, The Brookings Institution, 1995, chapters 3, 8 ("Crandall and Waverman, 1995"). Gerald W. Brock, *Telecommunications Policy for the Information Age: From Monopoly to Competition*, Harvard University Press, 1994, chapters 12, 14, 15.

B. The New Competitive Vision in the 1996 Act

40. The 1996 Act creates a clean slate and offers an unusual opportunity to remedy many of the above deficiencies in the present industry structure.

1. The Act aims to promote unfettered competition in all markets

41. The Act's unifying goal is increased competition in all markets and the eventual elimination of artificial service boundaries. This means more competition in providing: local services; long-distance services; and "integrated services"—the options of one-stop shopping for, or obtaining bundled packages of, these and other telecommunications services.¹¹

42. If successful in promoting local competition, the Act will eventually allow the replacement of detailed, hands-on regulation of local retail prices and services with a combination of local competition and more confined and less intrusive regulation of only key bottleneck network services.¹² (Some regulation of interconnection, especially of termination charges, will be necessary for some time, as explained shortly.) And it will permit any firm to offer any service anywhere, including doing away with restrictions on what services the BOCs may offer and how. As the FCC put it:

Indeed, the relationship between fostering competition in local telecommunications markets and promoting greater competition in the long distance market is fundamental to the 1996 Act. . . the opening of one of the last monopoly bottleneck strongholds in telecommunications -- the local exchange and exchange access markets -- to competition

¹¹ One-stop shopping and bundled packages are closely related notions, but not identical. One-stop shopping lets a customer obtain the same services as before, but from a single source. Bundled packages entail combining and pricing the individual services in new ways. Some customers may demand only one-stop shopping; others may value bundles, while continuing to shop for individual elements separately (e.g., in response to special promotions); still others may choose to purchase only integrated bundles and only from the same source. For brevity I will refer to these features collectively as "integrated services."

¹² See, e.g., Joseph Farrell, "Creating Local Competition," Speech delivered at FCC, May 15, 1996 ("Farrell 1996").

is intended to pave the way for enhanced competition in *all* telecommunications markets, by allowing all providers to enter all markets.¹³

¹³ *In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket No. 96-98, First Report and Order, (Aug. 8, 1996) (“Local Competition Order”), ¶ 4.

2. The Act seeks to enable various forms of local competition

43. The Act discusses three forms of entry into local markets: facilities-based, resale, and unbundled network elements.
44. *Facilities-based entrants* serve their subscribers using their own network facilities except to exchange traffic with the incumbent LEC.
45. *Resellers* bring no independent network facilities, but resell under their own name the existing services provided by the incumbent (total service resale), combined perhaps with other services. They undertake all the relevant customer-interface functions such as billing and marketing (“retailers” is therefore a better description than the conventionally-used “resellers,” since the latter suggests only an arbitrage function).
46. *Entrants using unbundled elements* may lease from the incumbent unbundled network elements, individually or in combination, for example, leasing the incumbent’s unbundled loops but providing their own switching facilities.¹⁴
47. All the above entry modes can serve valuable competitive roles. Facilities-based entry potentially exerts the greatest competitive discipline on the incumbent. But it may not always be desirable, as it could require costly duplication of existing facilities such as loops that could more economically be obtained from the incumbent. Even where desirable, such entry could take considerable time. It is thus important to recognize the potential value of the other two entry modes.
48. Entry by firms that are not entirely facilities based can be beneficial in various ways. First, an entrant could bring direct competitive discipline to those segments it enters, in the form

¹⁴ Important differences between resale and the use of unbundled elements stem from the different standards for pricing stipulated in the Act in the two cases (as I explain in section V), and from increased opportunities that use of unbundled elements offers for access competition, product and service innovation, and eventual migration to facilities-based entry.

of lower costs and prices or higher quality. For example, resellers might perform retailing functions more effectively than an incumbent; loop unbundlers might limit an incumbent's ability to discriminate against IXCs through control over the intelligence embedded in the switch. Even entrants that are no more efficient could undercut the incumbent by accepting a lower profit margin—because regulation is unlikely to succeed in lowering the incumbent's prices all the way to cost. In addition to such direct competitive discipline, entrants can provide indirect discipline: by giving regulators a benchmark of true costs or technical capabilities, they can assist them in better regulating the incumbent.

49. Second, such entry can increase product variety and quality. For example, reselling local services enables entrants that provide also other services to offer one-stop shopping without having to build facilities for all their services or in all regions; the major IXCs among others view such ability as very important. Resellers or entrants using unbundled elements might offer new pricing plans better tailored to certain customers than are the incumbent's offerings. Entrants using unbundled loops might offer new switch-based (“vertical”) services. More generally, smaller entrepreneurial firms could stimulate innovation if given the opportunity to specialize in segments where they enjoy a comparative advantage while obtaining from the incumbent at cost-based prices other unbundled elements they require.

50. Third, such entry modes can assist and accelerate the transition to full-facilities competition, by allowing entrants to attain a customer base before being forced to build extensive facilities. Requiring entrants to be entirely facilities-based at the outset would saddle them with unnecessarily high fixed costs and excess capacity (while subscribers are being added), making entry more risky and more costly. Conversely, granting entrants access at reasonable prices to complementary LEC facilities during the transition could permit a faster and more economical transition to full-facilities competition. Indeed, in the long-distance market some entrants began mainly as resellers and added their own capacity as their name recognition and subscriber base

grew.¹⁵

51. Recognizing the potential value of all entry modes, the FCC observes: “Section 251 neither explicitly nor implicitly expresses a preference for one particular entry strategy. Moreover, given the likelihood that entrants will combine or alter entry strategies over time, an attempt to indicate such a preference in our section 251 rules may have unintended and undesirable results. Rather, our obligation . . . is to establish rules that will ensure that all pro-competitive entry strategies may be explored.” (Local Competition Order, ¶ 12.)

C. Cooperation by Incumbent LECs Will Be Critical

52. Removal of legal and regulatory barriers is enormously important to promoting local competition, which is the key to securing the Act’s goals. But Congress recognized that removing legal barriers is only half the battle. One must also remove artificial obstacles mounted by incumbent LECs, since all local entrants need access to certain LEC inputs.

53. *Facilities-based entrants require interconnection.* A facilities-based entrant would still require good and reasonably-priced interconnection to the LEC’s public switched network. Interconnection is vital because the essence of communication is the ability to reach and be reached by others. Thus, telephone service exhibits such unusually strong positive “network externalities”—the network’s value to a subscriber increases greatly with the number of subscribers that can be reached through the network. Initially an entrant will have far fewer subscribers than the incumbent, so if networks were not adequately interconnected, customers would prefer the incumbent’s even if the entrant’s network was otherwise superior.

54. As a result, the incumbent can use ubiquity advantages that derive from control of its

¹⁵ In long distance, however, there is an active wholesale market because multiple facilities owners compete to provide bulk capacity. Before such competition emerged, regulation was required to induce AT&T to provide wholesale capacity to others. Similarly, implementing local resale today—and other wholesale local services—will require regulation as long as LECs retain dominance over local networks.

installed subscriber base and bottleneck facilities as strategic weapons to stifle entry.¹⁶ For example, the incumbent might impose onerous interconnection terms or deny number portability (the ability of customers to maintain their telephone numbers if they switch to an entrant). Overcoming such ubiquity barriers in telecommunications would be very difficult without the aid of regulation. On this point, economists are—quite out of character—virtually unanimous. Thus, until the incumbent’s share of subscribers is significantly eroded, even efficient facilities-based competitors will depend on continued regulation to discipline the incumbent’s interconnection terms and prices; to secure number portability; to allow its customers to call any subscriber of the incumbent in the local area without dialing more digits than would another subscriber of the incumbent (“local dialing parity”); and to access common signaling facilities and databases.

55. *Resellers require adequate wholesale discounts.* Resellers require the incumbent’s cooperation in switching over customers and in obtaining access to various operations support systems. In addition, since resellers undertake costly retailing functions such as marketing and billing otherwise performed by the LEC, to succeed even an efficient reseller must obtain the LEC services at wholesale prices discounted off the LEC’s retail prices by an amount equal to the

¹⁶ A transparent example of the importance of “interconnection” (or “compatibility”) in the face of ubiquity, is directory assistance. A firm with only a small subscriber base would be inherently limited in its ability to offer adequate such services—whether through operator services, yellow pages, or other modes—if denied access to the necessary information about the incumbent’s subscribers. Industrial organization economists have recognized the importance of ubiquity and installed-base advantages in industries characterized by strong (positive) network externalities. Non-technical surveys of this literature and relevant bibliography can be found in Michael L. Katz and Carl Shapiro, “Systems Competition and Network Effects,” *Journal of Economic Perspectives*, vol. 8, no. 2, Spring 1994, 93-115, and Stanley M. Besen and Joseph Farrell, “Choosing How to Compete: Strategies and Tactics in Standardization,” same journal and issue, 117-131. The need for interconnection (broadly defined) is probably more acute in telecommunications than in any other industry. For a recent formal analysis of strategic use of interconnection pricing (what the 1996 Act calls “transport and termination” charges) to reduce competition see Jean-Jacques Laffont, Patrick Rey, and Jean Tirole, “Network Competition: I. Overview and Nondiscriminatory Pricing,” and “Network Competition: II. Price Discrimination,” Institut d’Economie Industrielle, Toulouse, 1997.

LEC's avoided retailing costs.

56. *Partial-facilities entrants require network unbundling.* Like a full-facilities entrant, a partial-facilities entrant also requires interconnection so its subscribers can communicate with the incumbent's. But it requires also network unbundling—access at economical pricing to that *subset* of network elements it wishes to lease from the LEC. The degree of incumbent cooperation needed to make unbundling work efficiently is probably even greater than for the other two entry modes, since unbundling can involve reaching deeper into the network.¹⁷

57. The Act (§§ 251, 252) requires incumbent LECs to provide the above requisite cooperation to all local entrants. But requiring incumbent cooperation and attaining it are two different things. Incumbents are naturally inclined to resist any encroachment by competitors, and regulators will have their work cut out for them in implementing the Act's requirements for promoting local competition. Softening incumbents' resistance and inducing greater cooperation would therefore be quite valuable. As I will show, this point is critical for developing a procompetitive BOC entry standard.

D. The Potential Benefits and Costs of BOC Entry: Overview

58. There is broad agreement that BOC interLATA entry is in the public interest once the BOC faces sufficient local competition to eliminate its local market power. But what are the tradeoffs from authorizing earlier BOC entry?

1. Potential benefits

59. The potential benefits of earlier BOC entry are conceptually straightforward. Briefly,

¹⁷ As a general matter, although unbundling requirements may generate competitive benefits, such requirements potentially create organizational diseconomies as well. The extent of these benefits and costs vary from industry to industry, and depend also on the degree of unbundling that is required. The 1996 Act reflects a policy judgment that it will be economically beneficial to require the unbundling of certain elements of the networks of incumbent LECs, and I have assumed here that this Congressional judgment is correct.

BOC entry could allow realization of *economies of scope*, especially in retailing functions: offering local and long-distance services jointly could produce large savings in billing, marketing, and other costs. Moreover, it is widely believed that many consumers would value highly the simplicity and convenience of a single bill, a single customer service representative, and other advantages of *one-stop shopping* for all their telecommunications services, as well as being able to obtain new bundled packages of such services. The BOC in its region is unusually well positioned to tap these advantages on both the supply and demand side of joint provision because it is the dominant provider of a key ingredient, local services, and enjoys an established reputation and customer base.

60. In the longer run, these advantages of joint provision are not unique to the BOCs; other telecommunications providers with established reputations (such as the major IXCs) could realize these benefits provided the BOCs and state regulators have effectively opened the local markets to competition as required in the Act. However, in the short run the BOCs do possess some special advantages in joint provision (see section II.A).

61. Aside from these benefits of joint provision, BOC entry could bring more competition in long-distance services. The BOC is unusually well placed to provide such additional competition, especially for residential and low-volume business customers, due to various advantages deriving from its powerful brand name and established customer links in its region (see section II.C.2). Indeed, because there are always potential benefits from letting any firm try its luck in any market, economists' normal instinct is to avoid placing artificial entry restrictions, unless there are strong offsetting considerations.

2. Potential costs

62. In this case, however, there are offsetting considerations. It is important to understand these potential costs in order to appreciate why BOC entry cannot be analyzed as just generic entry by any other firm. Because the potential costs and how to best address them are less

transparent than the benefits, this affidavit devotes more attention to analyzing these issues.

63. In a nutshell, a BOC's control over key local network inputs needed by others to compete in local services, long-distance services, and integrated services could enable it to inefficiently handicap rivals and distort competition in all these services. A BOC's incentives to handicap such rivals will increase after entry, compared to its pre-entry incentives under a suitably structured entry standard. These altered incentives can be very damaging, since regulatory (and other) oversight cannot always secure BOC cooperation in supplying inputs to rivals as effectively as would be forthcoming if incentives were better aligned. I outline next why BOC incentives to cooperate will diminish post entry, then discuss the ability of regulatory oversight to enforce cooperation in the face of these reduced BOC incentives. Section E draws out the implications for the design of a procompetitive entry standard.

64. Authorizing BOC entry affects BOC incentives through two main channels: (a) leverage into long-distance and integrated services; and (b) emboldened resistance to local competition.

a. Leverage into long-distance and integrated services

65. *Long-distance services.* The Department of Justice sought the Bell System's 1984 divestiture of its local telephone operating companies to prevent misuse of these key monopoly local networks to stifle competition in related markets—notably long-distance services, equipment manufacturing, and information services—that were viewed as potentially competitive but heavily dependent on access to these local networks. Incentives to artificially favor one's affiliates in adjacent markets flow in large part (though certainly not entirely) from asymmetric regulation. A firm whose prices are regulated at the bottleneck, as the Bell system was for local telephone services and as the BOCs are today, has strong incentives to circumvent such regulation by favoring its unregulated (or less tightly regulated) operations in adjacent

markets.¹⁸ The favoritism can involve cross-subsidization (see section III.B.1.a). More importantly, it can involve non-price access discrimination—hampering rivals’ access to the bottleneck, for example, by imposing conditions that inflate rivals’ costs or degrade their quality (see section III.A.1). This enables the firm to raise its (less regulated) prices in those adjacent markets, while distorting competition and harming consumers in the process.

66. The choice to seek divestiture of the regulated local telephone monopolies from long-distance segments reflected a judgment that, at that time, regulation could not—without being overly intrusive—adequately control the myriad types of (non-price) access discrimination that a vertically-integrated entity could employ. If allowed into long distance, BOC incentives would resurface to attempt access discrimination against IXCs in order to circumvent regulation. Indeed, today there may be a new motive for access discrimination, namely, to weaken the major IXCs as potential entrants into local services; BOC entry reduces the cost to it of engaging in such behavior since lost access revenue from reduced IXC sales is partly offset by increased BOC long-distance sales (see section III.B.2.a). However, a BOC’s *ability* to act on its incentives and engage in such access discrimination is weaker today, as explained shortly.

67. *Integrated services.* The ability to offer integrated services is widely emphasized as competitively important, both due to cost savings from joint provision and to the willingness of some consumers to pay a premium for dealing with integrated providers. The key inputs that non-BOCs lack to offer integrated services in a BOC’s region are the monopolized *local* services; long-distance and other services can be readily obtained from alternative providers. A BOC’s entry into long-distance—and hence integrated services—directly reduces its incentives to supply others key wholesale local services which they need to provide integrated services. As

¹⁸ See, for example, Timothy J. Brennan, “Why Regulated Firms Should Be Kept Out of Unregulated Markets: Understanding the Divestiture in *United States v. AT&T*,” *Antitrust Bulletin* 32 (1987), 741–793.

with long-distance services, a main driver of BOC leverage incentives into integrated services is asymmetric regulation: the BOCs are likely for some time to remain regulated in their prices for local services or inputs, but would become unregulated (or less regulated) in retail sales of long-distance services. The wrinkle here is that undermining competitors in integrated services by withholding from them good access to wholesale local services could benefit a BOC beyond attempting to degrade only long-distance access.

68. The reasoning is as follows. Regulation is likely to be more effective in preventing a BOC from degrading existing long-distance access arrangements than in prodding it to establish the largely new arrangements for wholesale *local* services (see section I.E below and section IV). Thus, impeding access to wholesale local services can be a more potent way for the BOC to weaken competitors in integrated services. This in turn could be profitable for at least two reasons. (a) Limiting rivals' ability to realize cost savings from joint provision of services also limits the downward pressure they can exert on the BOC's unregulated prices for long-distance services. (b) Some customers are willing pay a premium to deal with a provider of integrated services (e.g., they value one-stop shopping); hence, a BOC could extract higher (unregulated) prices from such customers for its long-distance services if can impede other providers of integrated services.

b. Emboldened resistance to local competition

69. *Local services.* Promoting local competition is a key stand-alone goal of the Act (witness the §§ 251, 252 requirements on all incumbent LECs), but one whose attainment will require considerable LEC cooperation. Naturally, all other things being equal, the LECs are reluctant to extend such cooperation to competitors that could threaten their local dominance (this reluctance does not hinge on a LEC's status as subject to price or profit regulation). Providing LECs with incentives to cooperate can greatly accelerate the process. In the case of the BOCs, the promise of interLATA entry *conditional* on having first provided appropriate cooperation can be a potent

tool for enticing cooperation. This point is very important.

70. The BOC is likely to be far better informed than regulators about how to establish the new local access arrangements and how long this should take. Thus, authorizing BOC entry only after the requisite arrangements necessary to open the local market are made available puts the onus in the right place: the BOC's desire for earlier entry prods it to implement its part quicker. Conversely, the ability to prod a BOC to implement new systems diminishes significantly once entry authority is granted. Absent meaningful benchmarks, penalty threats are problematic, because regulators and courts lack the information about what are reasonable implementation lags for new systems. Authorizing BOC entry before its local market is open would thus prematurely embolden the BOC to stiffen its resistance to opening its market.

E. Principles for a Procompetitive Entry Standard

71. By itself, allowing a BOC to offer long-distance and integrated services is desirable; the potential benefits could be substantial. The danger with premature BOC entry, however, is certainly not that it will enhance the BOC's ability to compete; the danger is that it will allow the BOC to impede others' ability to compete. A procompetitive BOC entry standard should strive to ensure that all parties are given an opportunity to compete on the merits. As the FCC's former chief economist has put it, our goal should always be to level the playing field upwards (Farrell, 1996).

72. Given the importance of good access to BOC local networks for protecting competition in long-distance services and for promoting it in local and in integrated services, the costs of "early" BOC entry are likely to outweigh the benefits if regulatory and other safeguards cannot assure good access in the face of reduced BOC incentives to cooperate. A key question therefore for developing a procompetitive entry standard concerns the efficacy of various post-entry safeguards in enforcing BOC cooperation.

73. Economic reasoning suggests—and historical experience confirms (see section IV)—that

the efficacy of regulatory oversight varies widely with the economic environment. Regulation, while never perfect, fares much better in a stable environment where information is reasonably symmetric, than in a rapidly changing environment where informational asymmetries are greater and more frequent adjustments are needed. Correspondingly, regulatory oversight does much better at enforcing existing access arrangements than at overcoming incumbents' resistance to rapidly implement new arrangements, for which the lack of historical benchmarks on what constitutes acceptable performance gives incumbents great latitude for plausible deniability.

74. These observations have important implications. Because access arrangements for long-distance services have had over a decade to develop, the combination of regulation and established voluntary arrangements among IXCs and LECs is likely to prevent any significant degradation of these established arrangements. Although the necessary arrangements will certainly evolve over time, my understanding is that radical changes in access arrangements governing the majority of interexchange revenues are not imminent. The evidence thus suggests that, when weighed against the potential benefits of BOC entry, the threat to long-distance access arrangements from allowing BOC entry is tolerable in the short run.¹⁹

75. The picture is quite different regarding access arrangements for local competition. These arrangements—for interconnection and, especially, for network unbundling and total service resale—are largely new and untested. Implementing them will require substantial cooperation by incumbent LECs in developing a host of new technical, operational and business protocols, and in establishing appropriate prices. Incumbents will have wide latitude to stall the process by foot dragging, slow rolling, and otherwise withholding cooperation. “Sins of omission” of this sort are especially difficult for outsiders to detect and prevent, since there is no historical benchmark

¹⁹ Over the longer term, technical evolution could give rise to greater problems for regulators in safeguarding long-distance access if local competition fails to develop.

to guide what is possible and to gauge deviations from this norm. Thus, local competition will evolve more expeditiously and more efficiently if the BOCs have greater incentives to cooperate in putting in place the new access arrangements needed to open their local markets to competition.

76. An appropriately structured interLATA entry standard can play a major role in stimulating BOC cooperation. One should harbor no illusions: incumbent LECs have great latitude to help or hinder the evolution of local competition, and a suitable BOC entry standard can elicit much more BOC cooperation in establishing and properly pricing the key new arrangements.

77. On the other hand, once the major new arrangements have been established and shown to be commercially operable, and once reasonable prices for them have been set, a track record is created for what constitutes “good performance.” Post-entry safeguards—regulatory, antitrust and contractual—then become more effective at countering BOC attempts to reduce cooperation, since the performance benchmarks can help enforcers to prevent future backsliding and to extend these arrangements to other regions or other entrants.²⁰ Thus, authorizing BOC entry only after the major new access arrangements are in place—or demonstrably made available—can cement important steps to irreversibly open local markets to competition.

78. It is important, however, that these new access arrangements be demonstrated to work on a commercially significant scale, under real-world strains; arrangements that exist only on paper

²⁰ I understand that several CLECs have incorporated certain performance benchmarks into their contracts with penalty clauses if BOCs fail to meet such standards. Moreover, several state commissions such as in Illinois and Georgia have or may soon receive authority to enforce performance standards by levying fines where appropriate. Peter Elstrom, “Let the Telecom Dogfight Begin,” *Business Week*, April 7, 1997. Finally, even after BOC entry the Act authorizes the FCC to halt a BOC’s signing of additional customers. All these safeguards become much more effective once there is a clearer notion of what constitute violations.

or have not been meaningfully tested do not provide much comfort. As with any new ventures, there will be inevitable growing pains; it is important to iron out the kinks while the BOC is still relatively inclined to cooperate—that is to say, before interLATA entry has been authorized. The § 271 entry authority thus is a potent one-time measure that, if properly used, can achieve a real advance in local competition—with favorable effects also on competition in integrated services, and in the longer run also on competition in long distance.

79. Weighing the potential benefits and costs of BOC entry leads me to advocate the following entry standard: BOC interLATA entry should be authorized only if there is sufficient confidence that the local market in the state has been irreversibly opened to competition. Authorizing earlier entry would raise serious competitive concerns; while delaying entry once the local market is open would unnecessarily deprive consumers of potentially large benefits. This open-market standard does not require the presence of effective local competition of all forms and in all regions of the state; the Act aims to let market forces determine what modes of competition work best and where, and regulatory and other safeguards will still play a role in preventing abuse of BOC market power. But it does require considerably more than paper compliance with the competitive checklist.

80. By far the best test of whether the local market has been opened is observing the emergence of meaningful local competition. Local competition establishes presumptions; the more widespread and varied it is, the greater our confidence that the local market has been irreversibly opened. Use on a commercial scale of the new access arrangements needed to support all three local-entry modes envisioned in the Act—facilities-based, unbundled elements, and resale—demonstrates that competitors are obtaining what they need. If sufficiently diverse competition fails to develop, it is important to understand why. An absence of sufficient competitive entry calls for skepticism in approving an entry application, requiring offsetting evidence that the absence of competition reflects lack of interest by entrants. In the absence of

such a showing, the presumption would be that the market has not been irreversibly opened. For reasons sketched in the earlier Summary and explained further in section V.D, the main requirements for an open market are: full, meaningful implementation of the major new technical and operational access arrangements for local competition; adequate assurance that BOC prices are reasonable and cost-based and will continue to remain so after interLATA relief is granted; and removal of major state regulatory or other artificial barriers that are likely to significantly delay local competition.

81. The remainder of this affidavit fleshes out the basis for these conclusions. Section II discusses the likely benefits from early BOC entry. Section III discusses the competitive concerns, and section IV addresses the efficacy of regulatory and other post-entry safeguards in counteracting these concerns. Section V elaborates on the requirements needed to determine that the local market is irreversibly opened to competition, and concludes that the Justice Department's entry standard correctly incorporates these requirements and therefore serves the public interest in promoting competition.

II. Potential Benefits of BOC Entry

82. There are potentially significant benefits from early BOC interLATA entry. The argument rests on two points: (1) BOC entry can bring certain efficiencies; and (2) these efficiencies cannot be attained by other providers as fully or expeditiously without BOC entry (if they could, BOC entry would not be necessary). Step (2) arises because the BOCs today would possess certain unique advantages in providing integrated services; and because the Act ties the removal of certain constraints on the ability of other firms to compete to the approval of BOC interLATA entry. The resulting potential benefits from BOC entry include: A) cost savings and introduction of new integrated services, made possible by joint provision of local and long-distance services; B) increased competition in intraLATA toll services in states that now lack

dialing parity; and C) increased competition in interLATA services.

A. Joint-Provision Efficiencies: Cost Savings and New Integrated Services

83. The efficiencies from jointly providing local and long-distance services largely involve: (a) on the supply side, the cost savings from joint retailing of services; and (b) on the demand side, the value to consumers of one-stop shopping and other new integrated services.

1. Cost savings

84. *Technological economies* on the network side exploitable only through BOC interLATA entry seem modest. First, IXC's network costs are only a relatively small share of their total cost of providing long-distance services, so there is only relatively little cost to cut; several BOCs reportedly have signed contracts with IXCs to lease wholesale long-distance capacity at prices between 1 and 2 cents per minute.²¹ Second, the separate affiliate requirement in § 272, aimed at combating cross-subsidization and discrimination, appears to preclude network integration and therefore to restrict attainment of network economies in providing local and long-distance services, to the extent such economies did exist. Finally, I am not aware of compelling evidence that significant such economies do exist. Consistent with these arguments that the economies exploitable on the network side are only modest, various BOCs plan to offer long-distance services—at least initially—not by expanding their own facilities but primarily by leasing wholesale IXC capacity.

85. *Retailing economies* however do appear significant. Offering an additional service (i.e., long-distance) to existing customers entails lower incremental costs of marketing, billing, customer service, and other retailing functions than the corresponding costs of providing that

²¹ Merrill Lynch, *Telecom Services—RBOCs & GTE*, November 13, 1996. Salomon Brothers, *Telecommunications Services*, April 17, 1996.

service alone.²² A BOC offering long-distance services could plausibly realize cost savings in these retailing functions of around 2 to 2.5 cents per minute compared to an IXC that is not providing integrated services (see discussion below, however). Taking the average price of a domestic interLATA call to be roughly 13.5 cents, this would represent a 15%-19% savings.

2. New integrated services

86. Quite aside from cost savings, joint retailing of local and long-distance services can provide direct benefits to consumers, akin to obtaining a new, higher-quality product. Consumers therefore could benefit even if the prices of the underlying services did not fall due to cost savings. Consumers are said to value highly the convenience and simplicity of one-stop shopping and other advantages offered by an integrated services provider. The impressive success of GTE and other non-BOC LECs at capturing long-distance business, sometimes without undercutting IXCs' prices, attests to the importance of offering integrated services.²³ If provided interLATA authority, a BOCs could make available the benefits of such integrated services to consumers in its service regions.

3. The ability of other carriers to attain these efficiencies

87. A BOC, if allowed interLATA entry, would currently enjoy certain advantages over most

²² Whereas §§ 272(a), (b) appear to restrict network integration, § 272(g) permits joint marketing of local and long-distance services by a BOC or its affiliate, thus allowing the realization of certain retailing economies. Retailing costs are significant. Crandall and Waverman (1995, p. 142) estimated AT&T's 1993 costs per interstate conversation minute net of access payments as: Plant and operations costs, 3.7 cents (Crandall and Waverman as well as others believe the figure is lower today); Marketing and customer service, 3.9 cents; General and Administrative, 2.9 cents.

²³ GTE, the largest LEC, signed more than 750,000 long-distance customers between March 1996 and December 1996 (and by February 1997 over 1 million), and cited a big reason for this success to be customers' preference for a single bill and a single number for customer service. Gautam Naik, "GTE to Introduce Flat-Rate Toll Calls For Business Users," *Wall Street Journal*, December 18, 1996. Reportedly, GTE did not engage in any substantial under-pricing of the major IXCs, based on published plans. Merrill Lynch, *Telecom Services—Long Distance*, Second Quarter Review, August 12, 1996.

or all other carriers in the joint provision of telecommunications services in its region: (a) its established brand name allows it to market additional telecommunications services at relatively low costs of advertising and promotion; (b) its existing relations with virtually all local subscribers allows it to offer billing and customer service for added services at relatively low cost; (c) partly for these reasons, it can obtain lower wholesale prices for long-distance capacity from IXC than can others; and, most importantly, (d) its control of local networks makes it the dominant source of key local services needed to offer integrated services.

88. The largest IXCs similarly enjoy strong reputations and established customer relations with telephone subscribers in the BOC's region. Thus, they could match many if not all of the efficiencies deriving from (a) and (b), *provided* they could obtain comparable access to (c)—the key local services now controlled by the BOCs.²⁴ The Act, of course, requires all incumbent LECs to provide such access to wholesale local services; however, delaying BOC interLATA entry until such comparable access has been secured would delay the advent of benefits from joint provision. The basic reason is that implementation and proper pricing of access to the various new wholesale local services required by the Act will take time.²⁵ Thus, there is a benefit

²⁴ IXCs may still face some disadvantages in joint retailing, e.g., IXCs sometimes rely on BOCs for local billing, hence would face a cost disadvantage unless the BOC offered billing services to them at cost. One must also distinguish BOC retailing advantages that reflect cost savings from those that reflect misappropriation of IXC "assets." For example, when an IXC requests from the BOC a local access arrangement needed to provide a new long-distance capability to a customer, the BOC may alert its long-distance operation to the customer's needs and beat the IXC to the punch. Such behavior constitutes misappropriation of IXC information, essentially free riding on the marketing efforts of the IXC; the separate affiliate requirements in § 272 of the Act bars such behavior, as well as other forms of discrimination.

²⁵ In addition to these inevitable delays, there may be binding constraints imposed by the Act itself. The quickest route for non-BOCs to offer integrated services on a large scale would be to obtain local services from the BOCs at discounted wholesale prices for resale. But § 271(e)(1) of the Act prohibits the three largest IXCs (any carrier that at enactment served more than 5% of U.S. presubscribed access lines)—who are also the most likely large-scale potential competitors to the BOCs in integrated services—from jointly marketing resold local services with long distance-services until February 1999, unless the BOC is authorized to offer interLATA services in the state before this date. It remains unclear

side to allowing early BOC entry. (The cost side of authorizing BOC entry before certain market-opening measures have been implemented is discussed later.)

B. Increasing the Competition in IntraLATA Toll Services via Dialing Parity

89. Section 271(e)(2)(B) of the Act prohibits a non-excepted state from requiring a BOC to implement intraLATA toll dialing parity before February 1999 unless the BOC is authorized to offer interLATA services in the state.²⁶ Section 271(e)(2)(A) requires a BOC to implement intraLATA toll dialing parity when it begins offering interLATA services. Thus, BOC interLATA entry would indirectly boost competition in intraLATA toll services by triggering dialing parity; such dialing parity has proven to be very important for stimulating intraLATA toll competition. In Minnesota, for example, competitors have captured over 30% of the market since toll parity was implemented in February 1996.

C. Increasing the Competition in InterLATA Services

90. The argument for why BOC entry would increase competition in interLATA services rests on three premises. First, interLATA markets exhibit imperfect competition. Second, the BOC is uniquely positioned to offer increased competition (otherwise other entrants would do just as well). Third, BOC entry indeed would bring such competition.

1. Competitiveness of interLATA markets

91. The extent of interLATA competition is hotly contested. BOCs and their experts characterize it as “anemic” and “tacit collusion” while IXCs portray it as “robust” and “intensely

whether the restriction also would apply to local services obtained by purchasing all required unbundled network elements from the BOC (the so called “platform”).

²⁶ Single-LATA and states that ordered dialing parity by December 19, 1995 are excepted. As of April 22, 1997, there were 26 multi-LATA states where toll dialing parity is thus precluded by the Act. In 1995, 62% of all completed intraLATA toll calls originated in these states. *SCCC 1995/96, Table 2.6.*

competitive.”²⁷ It is helpful to review some salient points.

92. *Market Structure.* Supply of interLATA services is quite concentrated: in 1995, AT&T accounted for about 53% of revenues, MCI for 18% and Sprint for 10%. On the other hand, concentration has declined considerably since divestiture (when AT&T’s share of market revenue was over 90%) and is continuing to decline. Four carriers have national networks (AT&T, MCI, Sprint, and WorldCom) and at least one more national network is being assembled; many carriers have regional networks; and there are hundreds of resellers. The market share of carriers other than AT&T, MCI and Sprint has grown from under 12% in 1991 to over 19% in 1995,²⁸ and, as the FCC observed in October 1995 when finding AT&T non-dominant, these carriers exert considerable competitive discipline. Nevertheless, the growth of independents is in theory consistent with supracompetitive (“umbrella”) pricing by the majors. In gauging competition therefore one must, as usual, look beyond concentration and other aspects of market structure and examine performance.

93. *Performance.* Crandall and Waverman (1995, chapter 5) survey the literature on interLATA competition and remark: “. . . existing studies. . . are not particularly convincing and do not lead to a single conclusion” (p. 165). This literature has generated so much heat but remarkably little light for reasons of data limitations²⁹ and methodological problems.³⁰ Crandall

²⁷ For a sampling of the contrasting views compare Paul W. MacAvoy, *The Failure of Antitrust and Regulation to Establish Competition in Long-Distance Telephone Services*, MIT Press and AEI Press 1996, with Douglas B. Bernheim and Robert D. Willig, *The Scope of Competition in Telecommunications*, AEI Studies in Telecommunications Deregulation, Working Paper, October 1996, 84-85, forthcoming, MIT Press and AEI Press.

²⁸ FCC, *Statistics of Communications Common Carriers*, 1995/96, Table 1.4.

²⁹ Available price data generally reflect published tariffs (“posted prices”) not actual transaction prices; the discrepancy between these is large and growing due to increasing use of discount plans. Recovering average revenue data per minute from published figures on total revenues is complicated by the absence of accurate data on quantities—the number of minutes of network use. More and more usage minutes of large

and Waverman perform additional analysis using interLATA *intrastate* data, which offers more observations than interstate data (there are 38 multi-LATA states but only one national jurisdiction), and more sophisticated estimates of quantities. They find that between 1987 and 1993 prices fell much more than access charges; prices net of access fell 4% per year by one estimate (pp. 156-7). Moreover, the data used (*tariffs*, for peak period, switched five-minute calls) fail to capture the impact of various discount plans. Finally, while falling prices could be due to non-competition factors, such as technological cost-reductions, there are other signs of increased competition. Notably, the narrowing of dispersion in prices of calls (a) across states for a given distance, and (b) across different distances suggests that competitive pressures are pushing prices to more closely track costs (pp. 151-3).

94. Crandall and Waverman's overall assessment is that the interLATA market displays

business customers are unswitched (private lines, virtual private networks) or switched only at one end (WATS, 800 calls), and therefore are not captured in conventional statistics on use of the public switched network. Comparing trends in telephone rates measured by Bureau of Labor Statistics (that use tariffs not transactions prices), Crandall and Waverman (pp. 133-6) observe: "The temporal patterns. . . are so wildly inconsistent that they cast doubt on the validity of any of these data." For example, from 1986-93 there was an apparent acceleration in the degree of competition and rate declines, yet reported growth of network use slowed markedly.

³⁰ For example, the widely cited study by Taylor and Taylor (*American Economic Review Papers and Proceedings*, May 1993) which finds that AT&T's rate reductions have been less than the reductions in its access costs mandated by the FCC, uses not actual data on AT&T's price reductions but projected reductions; such *ex ante* calculations "are suspect" and "unreliable." (Crandall and Waverman, "CW," 130, 168-9). A study by MacAvoy purporting to find tacit collusion among the three largest IXCs (*Journal of Economics and Management Strategy*, 1995) uses tariffs, not transactions prices; and it includes in IXCs' long run incremental cost net of access charges (LRIC) only "incremental operating expenses incurred for transporting switched calls," estimated by the WEFA group to be 1 cent per minute; all sales and administrative costs are left out. The much touted WEFA study that projects \$490 billion in savings to consumers by 2003 from BOC entry assumes among other things: the above LRIC figure of 1 cent; that existing IXC competition is characterized by a simple Cournot model with equal sized firms; that adding a fourth player in a region—the BOC—would decrease rates by 50%; and that these price declines would stimulate the overall economy and add 3.6 million additional jobs over the next ten years. (CW, 169-70.)

“considerable competition” that is “more vigorous than that predicted by the Cournot model” (p. 163) and that “has been effective in reducing prices” (p. 132). However, they add that “(interLATA) markets are not fully competitive so that further entry would be of real value” (p. 132). I share this overall assessment. Allegations that interLATA price competition is nonexistent defy common sense: if there is no competition, why do so many customers switch back and forth between carriers each year?³¹ More likely, of course, is that there is considerable competition not captured in published price data, such as the familiar \$50 or \$100 checks as inducements to switch between carriers. On the other hand, though competition exists and is increasing,³² there is surely room for more competition.³³

2. BOC Advantages over other long-distance entrants

95. A BOC in its region enjoys significant efficiency advantages over other potential entrants into long-distance services. It stretches credulity to argue—as some have—that a BOC has nothing uniquely positive to offer, for example, that if it leases others’ facilities to provide long-distance services then it is no different from the hundreds of existing resellers.

96. A BOC’s reputation and established billing and customer service arrangements with local subscribers would enable it to market long-distance services more effectively than could other entrants. A BOC would be especially well placed to address lower-volume customers. First,

³¹ In 1994, 19 million customers (20% of all customers) changed carriers 27 million times. In 1995, customers changed carriers over 42 million times, and the 1st quarter of 1996 saw an even faster pace. Peter K. Pitsch, “The Long Distance Market Is Competitive,” Pitsch Communications, September 3, 1996, p. 2.

³² Merrill Lynch, *Telecom Services — Long Distance*, November 13, 1996. John J. Keller, “AT&T Results Hit by Cost of Changing Marketplace,” Wall Street Journal, October 18, 1996 (“cutthroat competition in long distance services”).

³³ The publicized flat-rate plans recently offered by major IXCs, such as Sprint’s 10 cents per minute at off peak times and AT&T’s 15 cents per minute any time, do suggest increased competition; but they also call into question previous claims that the market was intensely competitive already.

billing and other “fixed and common costs” of serving a customer are relatively large compared to the revenue from low-volume customers, and a BOC already incurs most of these costs in providing local service. Second, low-volume customers are often reluctant to switch from a major IXC to an unfamiliar vendor, and a BOC in its region is often the only carrier with a comparable reputation to those of the major IXCs.³⁴ These advantages which would render the BOC a powerful retailer of long-distance services also enable it to obtain wholesale long-distance capacity from IXCs at unusually low prices, further increasing its cost advantage over other potential entrants into retail long-distance services.

3. How much competition will BOC entry in fact add?

97. The flip side of the BOC’s unique advantages, however, is that the BOC may not feel compelled to pass through most of its competitive advantages to consumers. For example, a BOC may elect to pass on to consumers only a fraction of the unusually large discounts it obtains from IXCs on wholesale long-distance capacity. The degree of pass-through is important: it not only influences the distribution of gains between the BOC and consumers, but also influences the degree to which long-distance calling volume will increase, which in turn affects the gains to society from BOC entry.³⁵ Precisely how much a BOC’s entry will (a) lower prices or (b) largely reshuffle profits from IXCs is an open question. Those who argue that BOC entry will greatly lower prices by increasing competition must explain why—if the long-distance market is far

³⁴ These unique BOC advantages in retailing would yield benefits from BOC interLATA entry even if there was perfect competition in interLATA services, because they allow a BOC to realize various efficiencies (discussed earlier) from joint provision of local and interLATA services. However, if interLATA competition is seriously imperfect and if BOC entry would substantially increase this competition, then the value of such entry is magnified, because it also serves to correct a competitive distortion.

³⁵ Benefits from joint provision of local and long-distance services (cost savings or new services—see section A) will endure even if long-distance calling volume does not expand; but the focus here is on the added gains from increased long-distance competition.

from competitive despite the presence of several major IXCs—adding one (albeit potent) competitor in the state would radically alter matters.

98. In my opinion BOC entry would not yield as dramatic an increase in competition as some claim, in part because of the rapid increase in competition that is already occurring.³⁶

Nevertheless, some further price declines can be expected from BOC entry. Still greater benefits are likely from joint provision of local and long-distance services (cost savings, availability of new integrated services), whose advent would be delayed by delaying BOC interLATA entry. However, authorizing BOC interLATA entry before the local market has been opened to competition also carries competitive risks; to these I now turn.

III. Potential Competitive Concerns Raised by BOC Entry

99. Section A below discusses more comprehensively the various practices a BOC might employ against long-distance carriers or local entrants, and section B why BOC incentives to do so will increase post entry. Section C addresses whether BOC entry would be inefficient solely because BOC access prices to IXCs, with whom BOCs would compete, are well above BOC costs of providing such access.

A. Anticompetitive Practices: Access Discrimination and Exclusionary Pricing

100. In various ways, both long-distance carriers and local entrants depend on good access to a BOC's ubiquitous local network. Control of these vital local inputs gives a BOC an unusual

³⁶ Merrill Lynch, *Telecom Services—Long Distance*, February 14, 1997, reports that increased supply of long-distance capacity has led to “very competitive bidding in the wholesale market” and that the resulting stiffer competition from entities that benefit from this steep resale discount—independent LECs, resellers, dial around companies and pre-paid calling cards—has forced the larger IXCs to pursue more aggressive pricing tactics. As an example, AT&T has begun offering 10 cents per minute anytime, anywhere with a \$5 monthly fee, or without any fee for calls at off-peak times. John J. Keller, “Best Phone Discounts Go to Hardest Bargainers,” *Wall Street Journal*, February 13, 1997, B1.

ability, if unchecked by regulation, to engage in anticompetitive practices. It is useful to distinguish between exclusionary practices that involve non-price terms of access to a BOC's facilities ("access discrimination") and those that involve prices—because the welfare effects of the two sets of practices can differ, as can the incentives to engage in them.

1. Access discrimination

101. *Types of practices.* A BOC could impede the ability of rivals to compete by misusing its control of the local network in various ways. It might *raise competitors' costs*, for example, by imposing unnecessarily costly requirements for network interconnection or providing them inferior support or maintenance functions. Increasing competitors' costs induces them to raise prices and thereby indirectly diverts retail sales from competitors to the BOC or its affiliate. A BOC might also divert demand away from competitors and towards its affiliates directly, without forcing them to raise prices. This might be done by *degrading competitors' quality*, such as by foot-dragging in providing new access arrangements, or by *appropriating competitively sensitive information* about customers obtained in the course of supplying rivals with bottleneck inputs. I will label all these non-price methods to weaken rivals—both in long-distance and in local services—under the general rubric of "access discrimination."

102. *Inefficiencies.* Access discrimination is a particularly inefficient form of rivalry. Raising competitors' costs is directly harmful, even if it does not lead to higher prices. In fact, prices are likely to rise; this both harms consumers, and creates additional social losses from output reduction. Degrading competitors' quality too is directly inefficient, harming both competitors and consumers. In addition, these practices and the misappropriation of competitively sensitive information could—by weakening competitors or discouraging entry—reduce the variety of products available the other innovations that competitors might bring to a market. These inefficiencies will be borne by both competitors and consumers.

2. Over-pricing of inputs

103. Overpricing of inputs needed by competitors, or of outputs that are complementary to those sold by competitors, also is inefficient. The social harm here occurs not because of the high prices themselves but because these high prices inefficiently reduce the quantities purchased. However, setting prohibitively high prices for bottleneck inputs, such as call termination, is tantamount to refusing to supply such inputs and thus can create inefficiencies of comparable magnitudes to those under access discrimination. Steep overpricing of inputs can be seriously anticompetitive even well short of complete exclusion of rivals: by greatly inflating rivals' costs, it can artificially and significantly depress their market presence.

3. Under-pricing of outputs

104. BOC entry conceivably could stifle competition also by giving the BOC a new instrument—charging artificially low prices for long-distance services. The arguments can be usefully grouped into three categories, that differ in their plausibility and welfare effects.

105. The first is *predatory pricing* or variants thereof: a BOC would set prices temporarily low in order to stifle competition and subsequently raise prices.³⁷ Economists are somewhat skeptical of predation arguments, especially when some rivals are well-financed corporations such as the major IXCs, absent regulatory cross-subsidy.

106. The second argument invokes such *cross-subsidy*. A BOC may set an artificially low price that could be profitable to the BOC whether or not price can be subsequently raised in the targeted market; such behavior could be profitable because it entails cross-subsidy from the BOC's regulated activities. As such, it also is inefficient. Section B.1.a below addresses this

³⁷ For instance, some have argued that a BOC could use low prices of long-distance services to stifle not only long-distance competition but also *local* competition. A BOC's prices for many local services are likely to be regulated but not its long-distance prices; by marketing complex bundles of both services a BOC might offer targeted discounts through its long-distance prices to those local customers most vulnerable to competition. The greater complexity of detecting and proving predatory pricing when part of a complex bundle of services might help the BOC escape antitrust scrutiny of such pricing.

argument, concluding that cross-subsidy incentives are likely to be weaker for the BOCs today due to increased reliance on price caps and other “incentive regulation.”

107. The third argument does not invoke predation or cross-subsidy, but a *price squeeze*. Because a BOC charges IXC access prices well above its costs, it has an artificial advantage in competing with IXCs for long-distance services. This argument is evaluated in section C.

B. Why BOC Entry Increases Anticompetitive Incentives

108. It is helpful to distinguish anticompetitive incentives driven by attempts to circumvent regulation of price or profit, from incentives that do not hinge on the presence of regulation.

1. Regulatory Evasion

a. Cost misallocation (“cross-subsidization”)

109. *Incentives and methods.* Traditional U.S. regulation of public utilities, including local telephone companies, was known as cost-of-service or rate-of-return regulation, because prices were intended to offer the firm a reasonable opportunity to cover its costs including a fair rate of return on capital. A firm whose prices are regulated in such a manner and which also has unregulated (or more lightly regulated) operations in competitive markets will have incentives to shift profit from the regulated to the unregulated side: the higher profit earned by unregulated operations flows directly to shareholders, while the lower profit of the regulated side allows it to “justify” requests for higher allowable prices. Such profit shifting can occur by misallocating various costs of the unregulated entity to the regulated one, behavior more commonly known as “cross-subsidization.”³⁸

³⁸ These cost misallocations can involve purely accounting manipulations, such as mischaracterizing costs attributable to the unregulated side as “joint and common” to both operations; actual payments, such as overpaying the unregulated affiliates for services or assets they provide or undercharging them for services or assets provided to them; or real resource misallocations, such as selecting production methods that are not cost-minimizing but display more common costs that can then be misattributed. Misallocating revenues of the regulated operation to the unregulated one is conceptually similar, as it leaves the regulated side with a greater deficit which can be used to defend requests for rate increases. I prefer the term “cost misallocation”

110. *Anticompetitive effects.* The incentives to engage in cost misallocation stem from a desire to circumvent regulation; but such behavior can have incidental effects of distorting competition. Overpaying an affiliate for its services artificially favors it in competing for sales to the regulated side; misallocating the affiliate's costs to the regulated side (and thus ratepayers) favors it in competing for outside customers by artificially reducing its costs and thereby allowing it to set artificially low prices. These competitive distortions mean that winners are no longer determined on the merits.³⁹

111. *Accounting safeguards and separate subsidiaries.* To help detect and prevent cost misallocations, regulators often subject firms to detailed accounting safeguards and sometimes require that unregulated, competitive activities be undertaken through separate subsidiaries. Section 272 of the Act imposes such requirements on BOCs wishing to offer long-distance services. Although such safeguards have some bite, it is widely acknowledged that they have not eliminated cost misallocation in the past, and it is naive to believe they could do so in the future if the firm has strong incentives to engage in cost misallocation.

112. *Price cap regulation.* Importantly, however, the BOCs argue that incentives to misallocate costs no longer exist because in recent years the FCC and state commissions have moved from traditional cost-of-service regulation towards pure price-caps, that sever the link between a firm's allowable regulated price and its costs. Cost misallocation then loses its

to cross-subsidization because the latter is sometimes wrongly taken to require that the price of the unregulated service must be below marginal cost. As the preceding examples indicate, the phenomenon is more general.

³⁹ Additional inefficiencies arise quite aside from the distortion of competition in the unregulated markets. First, prices increase to consumers of the regulated products. Second, any real resource misallocations are directly costly, for example, biasing the choice of production methods towards ones that entail excessive common costs. Finally, even if prices of unregulated services fall (which they need not do, e.g., if the cost misallocation involves only fixed and not variable costs), they would be artificially below cost, causing consumption of unregulated services to be excessive.

purpose, because higher reported costs for the regulated side no longer yield higher prices.

113. These claims overstate the extent of the regulatory changes, for two reasons. First, traditional regulation exhibited some lag between rate cases, during which period prices were not continuously adjusted towards cost. Second, today's regulation does not—and cannot— amount to pure price caps. Price caps can never be pure, but are periodically revised.⁴⁰ In addition, some schemes of “incentive regulation” do not involve price caps, but require adjustment of prices to share profits (or losses) with consumers once profits are outside certain specified bands. Therefore, a regulated firm's allowable future prices will ultimately depend on its past costs, which re-introduces some incentives to engage in cost misallocation.

114. Nevertheless, these regulatory changes do seem to have markedly altered BOCs' incentives. The BOCs have embarked on aggressive cost-cutting programs, which financial analysts and others attribute to the regulatory changes.⁴¹ These efforts suggest the BOCs assign some credibility to the new regulatory promises. But in that case, they also would not seem to have a strong basis for counting on regulators to allow rapid price increases beyond stipulated levels in response to increased costs due to cost misallocation (or other reasons).⁴² In short,

⁴⁰ Pure price caps would establish a permanent formula for determining the firm's maximum allowable prices at all future dates, based on initial forecasts of the firm's attainable costs (and perhaps indexed to variables that influence costs but lie outside the firm's control, e.g., the overall inflation rate); allowable prices would not be revised in light of the firm's actual cost realizations. But in practice, revisions will necessarily occur. One reason is forecasting errors: if regulators underestimate the firm's true costs and stick to the allowed prices, the firm will go bankrupt; if they overestimate costs, the firm will earn large profits that invite strong political pressure to lower allowable prices. Another reason for revising price caps is the introduction of new services, *if* these services are to make a contribution towards covering the firm's fixed and common costs. In light of all this, it is not surprising that the FCC and most if not all states have already revised their initial formulas.

⁴¹ See, for example, Merrill Lynch, *Telecom Services—RBOCs & GTE*, Second Quarter Review, August 9, 1996.

⁴² Moreover, regulators are especially protective of important customer classes for which local competition is likely to develop more slowly, such as rural and low-volume residential customers. They

incentives to engage in cost misallocation are certainly more attenuated today, which also serves to lower the risks of the BOCs engaging in anticompetitively low pricing.

b. Leverage incentives due to asymmetric regulation

115. A different and more serious anticompetitive incentive involves leveraging of market power from the price-constrained bottleneck to adjacent, unregulated markets, by engaging in the myriad forms of (non-price) access discrimination. As was explained in section I.D.2, incentives for leverage stem in large part from asymmetric regulation: the firm's prices for bottleneck services are regulated, but its prices for other services that rely on the bottleneck services are not regulated (or less tightly regulated). Here it is worth clarifying a few points.

116. First, contrary to some claims, access discrimination is not costless to a BOC since it reduces BOC input sales to the targeted carriers.⁴³ Nevertheless, a BOC generally will have some incentives to attempt access discrimination if it is selling unregulated services that compete with those offered by firms that depend on its regulated inputs. And unfortunately the more stringent is price regulation of the firm's bottleneck inputs, i.e., the more "successful" is price regulation, the stronger is the incentive to attempt access discrimination.

117. Second, § 272's requirement that a BOC sell its long-distance services only through a separate affiliate by itself does little to dilute a BOC's incentives to attempt access discrimination against the affiliate's competitors (e.g., IXCs)—because the affiliate's and parent's profits accrue to common shareholders. Regulators can dilute the common interests of a firm's different units

would thus be especially reluctant to allow price increases in these "monopoly" segments due to cost misallocation from the relatively competitive segments.

⁴³ The firm must compare this revenue loss with the increased profits from selling its unregulated services. For example, the tradeoff is worse when: (1) its services are poorer substitutes for those of rivals, because a smaller fraction of rivals' lost output and thus access revenue is offset by increased demand for the firm's own services; and (2) the firm's ability to expand sales of unregulated is constrained, by capacity limits or other factors.

by imposing further requirements, e.g., that managers be rewarded based only on the performance of their units, not of the overall firm; they also can attempt to block avenues of discrimination. But to eliminate *all* incentives and ability to favor affiliates would require eliminating all commonality of interest (including via personnel rotation or central oversight) and sharing of resources. This would require not separate affiliates but separate firms.⁴⁴ Thus, as long as a BOC is subject to asymmetric price regulation, incentives will persist to attempt access discrimination for purposes of leverage.

118. Finally, it is worth stressing that motives of leverage into integrated services—once a BOC has secured interLATA entry and thus may offer also integrated services—would drive a BOC to reduce cooperation not only in providing access for long-distance services, but also for the host of new wholesale local services needed by integrated-services competitors and called for by the Act.

2. Protecting the core local market

a. Reduced cost of harming IXCs to delay their local entry

119. The major IXCs are among the most likely *large-scale* potential entrants into local markets. Through access discrimination, a BOC may be able to damage the IXCs' reputations in its region and reduce their customer base, thereby also delaying their entry into its local markets. Long-distance entry lowers a BOC's cost of pursuing access discrimination, because while the BOC loses access revenue due to reduced sales of IXCs, some of these reduced sales are now diverted to the BOC's affiliate instead of being lost altogether.⁴⁵

⁴⁴ As a matter of logic, it will be impossible to eliminate *all* potential avenues of discrimination without also vitiating economies of scope—in which case requiring separate firms would seem preferable to awkward regulatory quasi-separation within a firm. There is no perfect way out of this dilemma; the hope is to block the main avenues of harmful discrimination without unduly foreclosing efficiencies.

⁴⁵ This is the same as the logic underlying discrimination incentives for purposes of leveraging the price-regulated local access monopoly into higher long-distance prices (see B.1.b above). But the purpose

b. Reduced incentives to cooperate with local entrants

120. Finally and importantly, a BOC's incentives to cooperate with local entrants would be inadequate even putting aside leverage motives into adjacent markets (as would be relevant if integrated services were unimportant, and if regulation could perfectly prevent access discrimination against IXCs). Like any dominant incumbent a BOC is inclined to resist entry, because dominance in providing even purely local services is profitable, notwithstanding regulation.⁴⁶ At the same time, the BOC could value entry authority into long distance; for example, its strong brand name locally and ability to realize cost savings through joint retailing functions could allow it to earn profits in long distance (section II.C). Therefore, to receive long-distance authority it would be willing to extend some cooperation to local entrants. Granting such authority before the local market is open, however, will prematurely reduce the BOC's incentives to continue cooperating in opening its market.

C. Artificial Cost Advantage in Competing for Long-Distance Services

121. Among the concerns voiced by major IXCs is that a BOC would have artificial cost

here is not to raise price in long distance, rather, to delay entry by IXCs into the local market; hence the argument does not hinge on the BOC being able to offer unregulated long distance services or any other form of asymmetric regulation. Note that this was not an issue at divestiture, as local monopoly was protected by state franchises.

⁴⁶ This requires only that price regulation not be capable of reducing prices perfectly to cost, hardly a stringent assumption. Perfect "global price-cap" regulation might in theory eliminate incentives to discriminate against competitors. See Jean-Jacques Laffont and Jean Tirole: "Creating Competition through Interconnection: Theory and Practice," February 1996, forthcoming in *Journal of Regulatory Economics*, and "Global Price Caps and the Regulation of Interconnection," July 1996. But in practice price caps are never pure, so allowing entry is likely to end up hurting the firm by ultimately contributing to the tightening of price caps. It is true that the incumbent's incentive to cooperate with output-market competitors may well be greater if it could sell to them the inputs they require at unregulated rather than regulated prices. But even then, the incentive is likely to be inadequate. Once competition is established, it limits the ability to extract profits from customers; it is highly unlikely—for reasons involving contracting problems or antitrust—that the incumbent could collect sufficient profit through overpricing of inputs to competitors initially to offset these lost future profits. Predictably, dominant incumbents often resist entry into their markets.

advantages in competing for long-distance business because their access prices to IXCs are well above cost.⁴⁷ The IXCs are right that even if imputation rules required a BOC to charge its affiliate the same access price as it charges IXCs, an affiliate would treat such a price as merely an internal transfer, and would try to base its retail prices on the true cost of obtaining access.⁴⁸ A BOC's affiliate would then be able to undercut IXCs' prices selectively to certain customers and capture such business even if it is inherently less efficient than IXCs.

122. The IXCs' argument is correct as far as it goes. But it overlooks the fact that selective discounts by a BOC could well increase total long-distance output and benefit consumers. One must be clear about the alternatives being compared. Assuming that access charges by BOCs to IXCs would be no higher if BOC entry is authorized than if it is not, an assumption discussed below, a BOC's ability to offer selective discounts should increase total long-distance output and benefit long-distance consumers, as compared with barring BOC entry. (This assumes that BOC entry does not induce IXCs to exit the market as a result of being unable to profitably operate at a reduced scale; if exit does occur, a BOC may be able to raise price.) The basic reason is that

⁴⁷ Responses to Joel Klein letter by AT&T (p.21), MCI (pp. 9-10), Sprint (p.3), December 1996. The FCC's recent actions on access charges and price caps, while helping to bring down access charges, do not purport to bring them down to cost and in fact are likely to leave them well above costs for some time. Moreover, intrastate access charges, which now typically exceed interstate charges, will remain under the jurisdiction of state commissions and considerable uncertainty remains about their levels. Thus, the issue raised by the IXCs remains pertinent.

⁴⁸ The IXCs are implicitly assuming that imputation rules would not be capable of seriously constraining a BOC affiliate's retail prices. This assumption is probably realistic, given the difficulties of comparing the other relevant variables necessary to conduct an imputation test. (The test prohibits: $p \leq c + w + d$, where p is the affiliate's retail price, c the affiliate's cost of non-bottleneck inputs, w the input price to its rival, and d the firm's extra cost of providing the bottleneck inputs to the rival than to the affiliate. In practice, estimating c and d , can be especially problematic; even agreeing on the relevant services to be used when comparing w and p can be contentious.) Moreover, there is a general question about the wisdom of zealously enforcing any price floors. Such policies can easily stray from protecting competition to protecting competitors.

IXCs' cost has not increased—because by assumption access prices are no higher—but a new competitor (the BOC) enjoys lower cost of serving the long-distance market (albeit artificially lower, because it charges to IXCs access prices well above its own incremental cost of providing access, while basing its own retail pricing behavior on the latter).⁴⁹

123. The assumption that regulation will prevent a BOC from subsequently raising access prices to IXCs (or failing to lower them as much as would otherwise have occurred) is important, however. In particular, there are dangers of regulating access pricing by including in a common basket both access services “sold” to the BOC’s affiliate and to IXCs and subjecting the basket to an overall price cap. By lowering the price to its affiliate a BOC would then be allowed to raise prices to IXCs while adhering to the cap; the BOC gains, of course, since the additional profits earned by its affiliate are unregulated. Thus, a BOC will have strong incentives to try and give its affiliate preferential discounts, in order to justify raising the access prices charged to IXCs.

124. The Act and current regulation prohibit such discrimination in access pricing. However, a BOC may plead “nondiscrimination” by designing discounted offers that are nominally available to all but are targeted to its affiliate. It can make discounts conditional on terms that (a) are alleged to provide cost savings and (b) are contrived such that the affiliate is more likely to accept, for example, a buyer’s agreeing to make very long-term purchase commitments.⁵⁰ The

⁴⁹ Observe that the concern is not with the BOC raising the access price or engaging in access discrimination against IXCs, but with reducing its retail price given that access to IXCs is priced above cost.

⁵⁰ Of course, discounts for long-term commitments can reflect legitimate business reasons. In the guise of such reasons, however, one also could contrive contracts of such long duration and such stringent terms for breach that only an affiliate would feel comfortable accepting. An affiliate would realize that if changed circumstances made it efficient to breach its commitment, it would be allowed to do so (in the interest of maximizing overall firm profit) far more readily than would an outsider such as an IXC. A BOC also might try to rationalize discounts based on the *percentage* of a long-distance carrier’s minutes committed to the BOC. An IXC might value the option of flexibility, such as splitting its minutes between a BOC and a CAP (especially if CAPs continue to expand), while a BOC’s affiliate

scope for such gamesmanship can be reduced by having separate price caps for access services sold to competitors and to affiliates. And in general, if competitively significant “nondiscriminatory” discounted offers are disproportionately accepted by affiliates, some scrutiny may be warranted of whether discounts reflect genuine cost savings.⁵¹

125. In sum, I would be reluctant to advocate delaying a BOC’s interLATA entry solely on the grounds that its access prices to IXCs are currently well above its incremental cost—as long as the BOC can adequately be prevented from raising access prices to IXCs post entry.⁵² It is certainly true, however, that the best course is to reduce access charges closer to cost. Assuming that (non-price) access discrimination could be prevented, reducing access prices would both expand downstream output and prevent distortion of competition.

would far more readily accept exclusivity with the parent.

⁵¹ Unfortunately, it is not easy to police against true price discrimination when buyers require significantly different arrangements, leading to potentially different costs of service. See, for example, Marius Schwartz, “The Perverse Effects of the Robinson-Patman Act,” *Antitrust Bulletin*, 31 (Fall 1986), 733-757.

⁵² Authorizing BOC entry, of course, does not foreclose subsequent antitrust action if price squeezes are deemed to be anticompetitive.

IV. The Ability of Regulatory Safeguards to Negate Concerns Raised by BOC Entry

126. Based on the preceding analysis, the main potential competitive concerns raised by BOC entry are access discrimination against long-distance carriers and, especially, the withholding of cooperation in implementing and pricing appropriately the various new wholesale local services. How serious these potential concerns in fact are depends on how effectively and expeditiously they can be addressed by regulatory and other safeguards. Section A below discusses generic shortcomings of regulation, showing by implication that there is real value to having a BOC be more disposed to cooperate than having to rely exclusively on forcing its cooperation. Nevertheless, while never perfect, regulatory and other safeguards are far more adept at preventing degradation of established access arrangements than at forcing implementation of new arrangements; this difference has key implications for the design of a pro-competitive standard for BOC entry (see section V). Sections B and C document this difference drawing on past experience with LEC behavior.

A. Generic Shortcomings of Regulation, and Existing vs. New Arrangements

127. Regulation faces several inherent shortcomings in trying to curb a firm's incentives to discriminate against competitors, which caution us against relying on it exclusively.⁵³

1. Generic shortcomings of regulation

128. *Detecting abuses.* In order to be effective, regulators must be able to detect a violation. This requires knowing, among other things, what the firm actually did (not what it claims) and often what alternatives it could have pursued. Outsiders such as regulators, courts, and even

⁵³ For good discussions of the limitations of state and FCC regulation prior to the 1996 Act, see the December 1994 Declarations of Nina W. Cornell (focusing on state regulation, especially pp. 35-63) ("Cornell, 1994") and of Daniel Kelley (FCC regulation, especially pp. 37-75) opposing the motion by four BOCs to vacate the MFJ. *Unites States of America v. Western Electric Company, Inc. and American Telephone and Telegraph Company*, United States District Court for the District of Columbia, Civil Action No. 82-0192.

competitors possess vastly inferior information than the firm about its business environment and conduct. And while a regulator can learn a great deal by consulting with interested industry parties, to eliminate the informational disadvantage entirely the regulator would have to become the firm.

129. *Proving abuses.* Detecting a violation is not the same as being able to prove it. Regulated firms enjoy—for good reasons—procedural safeguards including the right, which they often exercise, to challenge regulatory decisions in court. A non-specialist court is likely to be less informed about conditions in the industry than is a regulator, and the adversarial court proceedings offer the better-informed firm ample opportunity to raise various objections. Thus, even if a regulator is convinced there is a violation, proving it to the standard needed to take corrective action may be too costly or simply not feasible.

130. The issue of proof is important. The BOCs have repeatedly argued that preventing discrimination is easy because a service difference great enough to influence the behavior of customers assuredly would be detected by competitors and by regulators. However, simply showing such a difference is not sufficient to prove a BOC has discriminated, especially with new or customized arrangements—there could be “innocent” explanations with a sufficient ring of plausibility (different circumstances of transactions, events beyond the firm’s control, etc.). Indeed, a major advantage of competition over regulation in taming market power is that a competitor is not constrained by the same rules as a regulator: if a competitor believes the incumbent’s price is excessive or its service is inferior it can simply offer customers better options—without having to prove to anyone that the firm is misbehaving.

131. *Deterring abuses.* Effective deterrence requires the expected penalty to exceed the expected gain from engaging in an abuse. The requisite penalty may have to be large given (a)

the potentially large gains to a firm and (b) the limited chance that a violation will be detected and proved, hence that the penalty will be imposed. Regulators may not always have the legal rights or the political ability to impose penalties large enough to achieve meaningful deterrence. Imposing high penalties is especially problematic when violations are not demonstrably blatant, as is likely with new (as opposed to established) access arrangements.

132. *Correcting abuses.* Since deterrence will not be perfect, a regulator also must be able to rectify the effects of abuses quickly and effectively. But the damage to a competitor imposed, for example, by technical discrimination can be difficult to reverse: discrimination may have allowed the regulated firm to beat the rival to market with a new product. This first-mover advantage could have a durable impact, for example, if consumers would have to incur significant switching costs should they wish to move to the entrant. (For this reason, the Act tries to minimize these costs through such means as requiring number portability.)

133. *Cost-effective regulation.* Finally, regulation would have to accomplish the above tasks in a cost-effective manner. It does little good to prevent abuses if doing so means intruding into the firm's decisions to a suffocating degree, or expending vast resources on regulation. As a practical matter, the resources made available to regulators may limit their ability to engage even in the efficient degree of oversight. The FCC and state commissions are operating under tight budgetary and personnel constraints that may not be commensurate with their responsibilities: the new Act has vastly increased the FCC's duties, and state commissions must grapple also with the rapidly changing electric utility industry.

2. Existing vs. new arrangements

134. Assuring equal access to BOC local networks—for both long-distance carriers and local competitors—in the face of reduced BOC incentives to cooperate requires policing against sins of *commission* and *omission*: a BOC might attempt to reduce cooperation from existing levels by degrading existing access arrangements, or fail to provide a greater level of cooperation as it

should in establishing new arrangements.

135. It is difficult for regulators to eliminate entirely even sins of commission—the degradation of existing arrangements.⁵⁴ Nevertheless, once arrangements are in place and there is some track record against which to benchmark “good behavior,” preventing access discrimination becomes much more manageable.

136. Conversely, enforcing the implementation of new arrangements is much harder. It is particularly difficult to prevent such sins of omission, since there are no good historical benchmarks to guide what is feasible for the firm. Implementing the new Act’s local-competition requirements of interconnection, unbundling and resale will require dramatic and wide ranging changes in the way a LEC does business. For example, loop unbundling will require physical (not just electronic) changes. And new electronic interfaces will be needed to coordinate ordering, billing and other functions for carriers that resell a BOC’s local service. With reduced incentives to cooperate once allowed into long distance, a BOC could delay such arrangements considerably. It may initially refuse to provide a new arrangement, citing prohibitive costs; then relent and “merely” delay or give priority to requests from its affiliate to place it at a competitive advantage. The point is not that such excuses are never true, but that it will be difficult for regulators to discern which are true and which are not.

B. Enforcing Existing Access Arrangements

137. By and large, the U.S. experience with participation by regulated LECs in long-distance markets suggests that once access arrangements for competitors are established, subsequent

⁵⁴ For example, requiring a BOC to meet “objective” performance measures such as average provisioning intervals is not a perfect safeguard. A BOC could discriminate while showing identical average intervals for its affiliates and outsiders, because the same average can conceal important variations: when it is very important for an IXC to get rapid service the BOC can delay it, while meeting the overall average requirement by providing expeditious service when the IXC least needs it.

problems become much more manageable. To cite a recent example, IXCs have made substantial inroads competing for intraLATA toll services in states such as Minnesota and Alaska that had implemented intraLATA dialing parity prior to the 1996 Act. I am not aware of backsliding by LECs on providing such dialing parity.

138. It is of course possible that we have yet to see the full arsenal of incumbent responses; intraLATA dialing parity is a recent phenomenon and incumbents may still be mulling their options. However, certain LECs such as Rochester Telephone (which is part of Frontier), United (which is part of Sprint) and Lincoln Telephone were not subject to the MFJ and have offered long-distance (interLATA) services in competition with IXCs for some time. I understand that IXCs have made few complaints against these LECs about degradation of existing access arrangements.

139. More recently, Sprint has owned Centel in Nevada since 1992, yet IXCs have made no significant complaints to Nevada regulators. Southern New England Telephone Company (SNET) has begun offering interLATA service jointly with its local service; so has GTE since the passage of the Act (which ended the consent decree that prevented GTE's local operating companies from jointly marketing long-distance services). GTE and SNET have been very successful in capturing long-distance business, but neither has elicited serious complaints concerning their degradation of existing long-distance access arrangements for IXCs.

140. In short the scope for a BOC, after allowed interLATA entry, to degrade existing access arrangements used by IXCs is relatively limited in the short run. Most importantly, regulatory and antitrust safeguards can do a far better job of enforcing such existing access arrangements given the long track record of experience with them. In addition, a BOC would face some technical difficulties today in finely targeting for discrimination only pieces of the network that serve IXCs or their customers. Finally, some of the markets which the BOCs are said to target if allowed interLATA entry, low- to medium-volume residential and business customers, are also

ones where IXC require relatively simpler access arrangements.⁵⁵

C. Implementing New Access Arrangements

1. IntraLATA toll dialing parity

141. The main long-distance markets in which the BOCs have participated since the MFJ are those for intrastate, intraLATA toll services. Dialing parity—the ability to reach a carrier other than the LEC without dialing additional digits—is very important to subscribers who must dial manually, such as most residential subscribers and small businesses lacking a PBX. Indeed, LECs consistently opposed dialing parity on the grounds that implementing it would cause them to lose massive amounts of traffic. Until a few years ago, no BOC provided dialing parity anywhere. Often regulators did not seek to enforce dialing parity (partly on grounds of protecting this LEC revenue in order to support cross-subsidies of other services such as basic residential access and most services in rural areas). But even where they did, incumbents successfully delayed the process through protracted appeals.

142. The case of Minnesota is instructive.⁵⁶ The Public Utilities Commission (PUC) determined in October 1985 that dialing parity to IXCs for intraLATA toll calls (through “1+ presubscription”) was in the public interest, and in November 1987 created a committee to develop an implementation schedule and a means of paying the costs of presubscription. U S

⁵⁵ About 80% of LECs’ interstate access revenues comes from switched traffic (Table 1, note 6), where access arrangements are largely standardized. Dedicated access is used mainly by large customers, and competition from CAPs and CLECs is developing faster for such dedicated arrangements. However, if local competition fails to develop for broader segments of the market, the BOCs if allowed into long-distance could pose a growing threat to access arrangements used by IXCs: new arrangements will become increasingly necessary, and local networks might be re-configured to permit more subtle forms of access discrimination.

⁵⁶ The ensuing discussion draws on Cornell (1994), and on interviews conducted by the Department of Justice. My purpose here is not to single out the Minnesota Public Utilities Commission or the incumbent BOC, U S West, but to illustrate generic problems.

West, the incumbent BOC, asked the PUC to reconsider its public interest finding, but was denied in January 1988. In June 1989 the study committee filed a report stating that presubscription could be done and proposing a method of implementation and funding.

143. In September, 1992, U S West again petitioned the PUC essentially to reconsider its decision that presubscription was in the public interest. The PUC denied the request but reconvened the study committee, having decided that the earlier report might be outdated. The committee submitted an updated report in August, 1993. In July, 1994, the PUC set implementation guidelines for intraLATA equal access by incumbent LECs not already providing it. After further unsuccessful efforts by U S West to challenge the PUC's order in court, intraLATA presubscription was finally implemented in February 1996—over a decade after the PUC had determined that it was in the public interest.

144. This episode, and others like it, are all the more striking given that claims challenging the technical feasibility of dialing parity had long been refuted. In exchanges serving most traffic in Alaska dialing parity was implemented in 1991-92. GTE implemented a comparable capability for itself in Hawaii in 1986; but only in July 1996 did the Hawaii PUC compel it to provide intraLATA dialing parity to others. Thus, technological uncertainty is not the sole problem; incumbents have considerable ability to stall the process through regulatory and legal challenges.⁵⁷

2. “Open Network Architecture”

145. One of the toughest challenges to meeting the new Act's local competition requirements

⁵⁷ The BOCs continue to resist intraLATA dialing parity today. For example, in states such as Michigan and Wisconsin where commissions have ordered such parity, Ameritech has mounted numerous regulatory and legal challenges. Technical barriers are sometimes cited; however, Michigan regulators found that 82% of Ameritech switches could be converted immediately, while the remaining ones would require only some software development.

will be in assuring competitors access to unbundled network elements. The FCC's experience with attempting to implement Open Network Architecture (ONA), while different in some respects, nevertheless is instructive.⁵⁸

146. The FCC's *Computer II* rules (1980) allowed BOCs to offer unregulated enhanced services (such as computerized data processing that also require access to telephone networks) only through separate subsidiaries, in part to help prevent access discrimination to telephone networks against competing enhanced service providers. Ameritech proposed an early version of ONA partly as a substitute safeguard against discrimination: by offering access to disaggregated network elements which enhanced service providers could use flexibly, ONA would reduce a BOC's ability to discriminate. Other BOCs similarly argued that ONA would void the need for the structural separation required by *Computer II*. The FCC concurred: in *Computer III* (1986), it ordered the BOCs to develop plans for ONA and determined that ONA requirements would be "self-enforcing in controlling discrimination."

147. Backsliding from initial ONA promises began almost immediately, though much of this was not conscious discrimination but inevitable in view of the unrealistic expectations initially touted for ONA. And major, protracted controversy ensued over whether the BOCs had actually implemented the reduced version of ONA that they did promise. The FCC, while acknowledging that ONA had not been fully implemented, ruled the BOCs had nevertheless done enough to justify lifting the separate subsidiary requirement. The Ninth Circuit (1994) strongly disagreed, finding that the FCC had failed to explain how these scaled back safeguards, that fell well short of the "fundamental unbundling" originally envisioned in *Computer III*, would suffice to prevent discrimination.

⁵⁸ A summary of the main episodes in the history of ONA and the relevant references can be found in the decision *California v. FCC*, 39 F.3d, 919 (9th Cir. 1994).

148. There are important differences between the network unbundling envisioned in ONA and that required by the 1996 Act. We have a much clearer idea today of the services local competitors might provide and their requirements than we did then for enhanced service providers. And the technological advances needed for ONA were more pathbreaking than the measures required to implement the Act's unbundling requirements (as spelled out in the FCC's Local Competition Order). Still, ONA offers important lessons: backsliding from initial promises, whether deliberate or not, is likely; and so are disputes over the details of what has—and has not—been implemented. These lessons highlight the dangers of relying on “paper implementation” of new requirements and, to avoid protracted regulatory and legal skirmishes, the importance of authorizing a BOC's interLATA entry only after there is enough confidence that it has indeed implemented key local competition requirements.

V. Principles for a Procompetitive Entry Standard

149. At the risk of oversimplification, the stylized pattern emerging from section IV is that once access arrangements are in place and there is a track record against which to benchmark “good behavior,” the task of preventing access discrimination becomes much more manageable. It is very difficult, however, to impose new arrangements against the firm's will. These considerations, and the earlier analysis of the potential benefits from BOC entry, lead me to the following principles for a procompetitive BOC entry standard.

A. Fully Effective Local Competition Is Not a Prerequisite

150. Withholding BOC entry authority until there is sufficient local competition to eliminate a BOC's market power would not be appropriate on economic grounds. Even if barring the BOCs from long distance was justified at divestiture in order to promote the nascent long-distance competition, such competition could be protected today while allowing BOC entry well before there is effective local competition.

151. There are now several major established long-distance carriers. Regulators today are more attuned to risks of discrimination and, importantly, long-distance access arrangements are well established. The new Act prohibits many discriminatory practices that were not specifically prohibited pre-divestiture. In addition and importantly, the Act provides for opening of the local market which over time should yield additional safeguards for long-distance competition, both by providing direct alternatives, and by offering benchmarks to assist regulators in regulating BOC conduct.

152. Moreover, the development of local competition—a central goal of the Act—can itself be accelerated by authorizing BOC entry before there is effective local competition, *provided* that such authority is appropriately conditioned on prior BOC cooperation with local entrants. Local competition will develop sooner if the BOCs cooperate, and the BOCs should be more willing to cooperate if in so doing they secure earlier entry into long distance. This logic, I believe, is integral to the particular sequencing adopted in § 271.

153. Finally, as noted earlier, BOC entry has the potential to yield significant benefits in provision of integrated services and increased long-distance competition. Since the potential costs can be mitigated through regulatory, antitrust and other safeguards once the market is open and benchmarks are in place, coupled with some local competition, the value of attaining earlier the benefits of BOC entry reinforces the case for approving such entry well before effective local competition is in place.

B. The Local Market Must Be Irreversibly Open to Competition

154. While section IV showed that regulators can do a reasonable job of preserving established arrangements, it also raised significant doubts about their ability to expeditiously enforce new arrangements in the face of BOC resistance. This is particularly an issue for the new local-competition arrangements required by the Act, many of which entail radical departures from past practice. Given the pivotal role of these arrangements in laying the foundation for local

competition as envisioned in the Act, and that local competition holds the key to achieving the Act's goals, I believe that BOC entry should be authorized only once there is sufficient confidence that the BOC's local market has been irreversibly opened to competition through all three entry modes contemplated by the Act. Several steps, discussed next, lead to this conclusion.

1. BOC incentives to cooperate can make a great difference

155. The BOCs themselves seem quite aware of their latitude, within the regulatory and legislative constraints, to affect the pace and efficacy of the process to open up local markets to competition. The importance of BOC cooperation is illustrated by contrasting the experiences of intraLATA toll versus interLATA markets. BOCs successfully delayed implementation of dialing parity for intraLATA toll markets, where they were allowed to compete. In contrast, establishing the physical and administrative arrangements for equal access to IXCs after divestiture was a considerable achievement for the industry; and it was made possible in large part by BOCs' willingness to cooperate given that they were barred from directly participating in long distance and thus had strong interests in ensuring efficient operation of the exchange access business.

2. Importance of securing BOC cooperation before authorizing entry

156. As explained previously, relying on penalty threats to force implementation of new systems is problematic, because enforcers will have far less information than the BOC about how long the process should take. Providing a BOC with incentives to act faster—by authorizing its entry only once sufficient implementation has occurred—will accomplish the process more quickly and more efficiently. Once these main new technical and organizational access arrangements for local competition are in place and shown to be working, they can establish performance benchmarks to assist enforcers in preventing future backsliding. That is, pre-entry implementation of the new systems makes regulatory and other safeguards considerably more effective and less burdensome.

157. On the other hand, once entry is authorized, BOC incentives to continue cooperating will diminish significantly. As a practical matter, rescinding a BOC's long-distance authority would be difficult and, in any event, would be disruptive. While freezing a BOC's future marketing authority would be a more practical option, it also is less potent. Faced with a loss of an important incentive mechanism—the § 271 entry authority—BOC cooperation would have to be induced by threatening penalties which, as noted, are less effective when the issue is implementation of new measures. Thus, it is important to grant BOC entry only after sufficient cooperation has first been secured.

3. The benefits from delayed BOC entry outweigh the costs

158. The Department of Justice's standard would involve some delay in BOC entry relative to adopting an "early" entry standard that required only checklist compliance on paper. This will impose non-trivial costs, by temporarily depriving consumers of increased availability of integrated services, as well as increased competition in long-distance services (see section II). But the costs of delay are outweighed by the prospective benefits.

a. Local versus long-distance markets

159. A BOC's local markets are about twice as large as its in-region long-distance markets. In addition, the local market is a regulated monopoly, with substantial room for improvement in performance. In contrast long-distance markets, though not perfectly competitive, exhibit considerable rivalry and are becoming more competitive even without BOC entry. The gains from injecting even a modest dose of local competition can thus easily outweigh those from adding one, albeit major, competitor into long-distance markets in a BOC's region. (Recall that BOCs already may offer long-distance service outside their regions.)

160. Aside from its inherent benefits, local competition can also help safeguard long-distance competition in the longer run. A BOC's entry into long distance is likely, over time, to pose a

growing threat to the ability of IXC's to compete with it on an equal footing, or invite more intrusive regulation to prevent this, than if local competition emerged sooner. Finally, local competition holds the key to robust competition in offering integrated services—since the key monopolized pieces are local inputs and services.

b. Integrated services

161. “*Competitive parity.*” The BOCs argue that any delay of their entry into long distance would give their competitors—especially the major IXC's—important and unfair first-mover advantages in competing to provide integrated services (such as offering one-stop shopping). In addition, and somewhat inconsistently, they argue that delaying BOC entry would deny consumers the benefits of these offerings which the BOC's—if allowed into long distance—would be *uniquely* positioned to provide. I address first the issue of competitive parity, then the more important questions of impact on consumers and on overall welfare.

162. In general, the competitive process works best when no artificial handicap is placed on competitors and all firms are allowed to compete on the merits. At first glance, delaying BOC entry while IXC's and others make inroads into local markets may seem to violate this principle of respecting competitive parity in offering integrated services. This, however, overlooks the fundamental asymmetry in the position of a BOC versus other players.

163. The BOC is the sole major source of local services in its region. In contrast, there are several national and many regional facilities-based providers of long-distance services. If reciprocal entry is allowed concurrently—that is, if BOC entry into long distance is allowed immediately—the BOC's will have a major and artificial advantage in offering integrated services. They will be able to obtain long-distance services rapidly, seamlessly, and at prices very close to cost—because of the vigorous competition among IXC's vying to sell such services to a large wholesale customer as the BOC. In contrast, other would-be providers of integrated services have only one major source for local services: the BOC. Once allowed into long

distance, a BOC would have strong incentives to deny to others the various wholesale local services they need to offer integrated services. Potential competitors would have to wrangle with this sole provider for every new access arrangement or discount. Regulatory and antitrust intervention can certainly help, but it cannot in a cost-effective manner eliminate entirely the disadvantage resulting from the absence of local competition; if it could, we would rely on regulation and not insist on competition.

164. Moving towards parity in competition for integrated services therefore calls for insisting that the BOCs first take substantial measures to open up their local markets—even if by doing so they expose themselves to some entry—because once they are allowed into long distance they can rapidly make up any advantage the IXC's might have temporarily gained.⁵⁹

165. *Effect on consumers.* More important than the effect on competitive parity for its own sake, is the effect delayed BOC entry has on consumers of integrated services and on overall welfare. Delaying BOC entry would delay delivering the benefits of integrated services to consumers through the BOC. However, integrated services will be available to some extent from non-BOC sources. Competitors other than the largest three IXC's could attempt to obtain BOC local services for total service resale. And all competitors could attempt to provide their own local services through facilities-based entry or through use of unbundled local elements

⁵⁹ The structure of the Act reflects a desire to prevent either the BOCs or the IXC's from gaining a substantial "first mover" advantage in offering packages of local and long-distance services, and does so by attempting to deny either one a significant head start. Thus, § 271 requires the opening of the local market to competition—for both resale and unbundled element competition—before BOCs may enter the long-distance market. Similarly, § 271(e) prohibits large IXC's from jointly marketing resold local services in a state prior to the BOC's long-distance entry and, except where already required by a state, limits the implementation of intraLATA toll dialing parity prior to the BOC's entry. Finally, the Act requires the FCC to act on § 271 applications within 90 days, a requirement that ensures that BOC entry will occur promptly after—but not before—all prerequisites for such entry have been satisfied. I believe these requirements are consistent with the above reasoning.

leased from the BOC.⁶⁰

166. Admittedly, competitors are unlikely to obtain such local inputs or services as efficiently and expeditiously as the BOC would have offered its own long-distance affiliate. It will take time and regulatory pressure to implement the necessary new arrangements for supplying competitors with wholesale local services. Quite aside from BOC reluctance, there may be genuine transaction costs in making local inputs available to others as smoothly as to one's own affiliate; transaction costs often explain why in many settings firms prefer vertical integration over arm's length contracting with others. Thus, the local components of integrated services available from non-BOC suppliers are likely to be inferior to or not available as promptly as those that would be available from a BOC if it were immediately allowed to offer long-distance and thus integrated services. This inferiority will show up in the price or quality of the integrated services offered to consumers by non-BOC providers.

167. However—and this is the rub—the BOC will more willingly supply to others its local services or inputs and on better terms if it is barred from long-distance and thus integrated services. As explained earlier, a BOC's incentives to promote such wholesale products increases if it is barred from selling, especially at unregulated prices, competing retail services.

168. In short, barring a BOC from long distance creates a tradeoff regarding integrated services. No other competitor is likely to have as good a set of local services as quickly as would a BOC if allowed immediate interLATA entry. But while a BOC is barred from offering retail integrated services, it has incentives to supply others with wholesale local services on better terms than after it secures interLATA entry. This availability of "better" local inputs to a broader

⁶⁰ Although the Act prohibits the three largest IXCs from jointly marketing long-distance services with local services obtained from the BOC for total service resale, until BOC interLATA entry is authorized (or until February 1999), it allows joint marketing of local services provided via one's own facilities or via unbundled BOC elements.

set of players is valuable; additional players bring greater variety and other benefits (improved customer service, more experimentation with new pricing plans, and other creative offerings). The net effect of earlier BOC entry on market performance in delivering integrated services is thus theoretically ambiguous in the short run. In the long run, competition in integrated services is likely to be far more robust and performance thus superior if strong local competition emerges. That goal is better advanced by authorizing BOC entry only after the conditions of the Department's standards have been met.

169. For all these reasons, accepting a modest delay in BOC entry to comply with the Department's standard is a worthwhile price. BOC cooperation in implementing the § 271 competitive checklist requirements would go a long way towards laying the foundation for healthy local competition. And securing such cooperation is far more likely by making it a prerequisite for BOC interLATA entry. Accepting a modest delay of BOC entry does not foreclose future options; but once entry authority is granted, we may have lost an important tool for opening the local market.

C. Local Competition as Evidence of an Open Market

170. Seeing significant and diverse local competition take root provides by far the best evidence that the market indeed has been irreversibly opened to competition. On the other hand, even with an open market, local competition may still be delayed for other reasons.⁶¹ In particular, we should not expect to see all forms of local competition in all locations, and certainly not right away; indeed, the guiding philosophy of the Act is that market forces should be allowed to dictate what works and what doesn't, once artificial barriers have been removed. For example, if we are successful in ensuring that incumbents make available unbundled network

⁶¹ For instance, some potential entrants are re-evaluating plans to build their own loops and waiting for technological advances that would allow broad-band delivery capability and let them offer not only telephone service but also video and data services.

elements at prices reasonably close to incremental cost and if such arrangements work smoothly, then it would be wasteful to insist that entrants build entirely their own facilities.

171. Balancing these two considerations, I see the role of observing local competition as establishing presumptions: if sufficient competition is observed, the market is presumed open. If not, one should ask why not; the BOC would face a heavier burden to demonstrate that the market is truly open and that the absence of actual competition was not for lack of BOC cooperation in opening up its networks to competitors.

172. The best proof is in the pudding: the emergence of local competition provides by far the best evidence and assurance that the local market indeed has been irreversibly opened.

Observing local competition is helpful for several reasons.

173. *Checklist implementation.* Seeing some actual competition is the most convincing demonstration of meaningful checklist implementation. Without seeing new access arrangements in use by competitors, there will be lingering doubt as to whether these arrangements are truly adequate or whether their pricing is appropriate to make entry by efficient competitors feasible.

174. *Signal of entrants' confidence.* Competitors' willingness to commit 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. Since competitors are knowledgeable about the industry and have an obvious stake in making competition work, their actions speak loudly.⁶² Indeed, firm plans to commit substantial investments to the market could be a better indicator than observing a more limited amount of

⁶² In general, it is instructive to observe the actions of parties that have a direct interest in the outcome, because they are likely to have better information than outsiders or find it in their incentives to obtain such information. This principle of "follow the money" has led economists to place substantial weight on how the stock market interprets various events.

competition already in place. (It is important, however, that the plans be firm, e.g., involving contracts for specialized equipment that entail substantial penalty clauses for cancellation. There is a long record of plans to enter local phone service that have been perennially revised, such as by the cable companies to cite one example.)

175. *Entrants' direct role in safeguarding competition.* Quite aside from signaling confidence that local competition can be successful, the presence of competitors can directly help to prevent backsliding on cooperation by incumbents. The presence of competitors can provide regulators with additional benchmarks of what is possible and at what cost, thereby helping regulators (or the courts) to better enforce incumbent cooperation. In addition, established competitors create an additional constituency with a stake in preventing backsliding by incumbents or regulators. Once established competitors are in place, they can help to limit discrimination by acting as whistle blowers.

176. In all cases, of course, the more widespread is the local competition geographically, in the types of services offered, and in the range of access services used from the incumbent, the greater is our degree of confidence that the market has been opened.

177. *Resale versus other entry modes.* It is important to ensure that facilities-based entry options (including through unbundled elements) are truly made possible, as they have important potential advantages over total service resale. They can discipline an incumbent's behavior in more segments, not only on the retailing side but also in certain network functions; for example, entrants renting unbundled loops but bringing their own switches can help curb switch-based discrimination against long-distance carriers in securing local access, and can allow the introduction of new services based on the electronic features in the switch.

178. In addition, entry using unbundled elements can often exert stronger downward pressure on retail prices than can entry through resale—partly due to the different pricing standards

adopted in the Act: wholesale prices for total service resale are computed “top down,” by starting with retail prices and subtracting only the avoided retailing costs; in contrast, unbundled elements are priced “bottom up,” by starting with the estimated facility costs of these elements. Since retail prices for many services are well above the underlying costs of both retailing and network elements, subtracting only the estimated retailing costs to obtain wholesale prices for total service resale is likely to still leave these wholesale prices above the underlying costs of facilities.

D. Assessing Local-Market Openness in the Absence of Sufficient Competition

179. As mentioned, we do not expect to see all forms of competition everywhere. However, if sufficiently diverse competition is not observed, it is important to understand why. Before concluding that this is simply for lack of interest by entrants in pursuing certain entry modes in certain regions, it is important to ascertain that competition is not being stifled by artificial barriers. Indeed, absent a showing by the BOCs that lack of entry simply reflects a lack of interest, the presumption should be that the market is not open. Reversing this presumption requires verifying that the main elements of an open market indeed are in place. The main elements are discussed below.

1. Full, meaningful implementation of new access arrangements

180. Many of the access arrangements required by the Act for local competition are new. They raise a host of novel issues in technical areas (e.g., loop unbundling), business protocols (e.g., for switching customers from the incumbent to entrants under total service resale), and sharing operations support systems. A condition for finding the local market open, when sufficiently diverse local competition is not yet observed, should be that all such major systems and protocols (including but not limited to loop unbundling, electronic interfaces, operations support systems, access to signaling and databases) are readily available for commercial usage. They should provide regulators sufficient confidence that the conditions have been established to facilitate

efficient entry through all three entry modes contemplated in the Act (facilities based, unbundled network elements, and resale), and for serving all major types of customers. And they should provide a sufficient track record of performance to give regulators reliable benchmarks for gauging and enforcing future cooperation.

181. Moreover, the scale of operations is critical. Systems that stringently cap the rate at which the incumbent's customers can switch to competitors, for example, by processing orders manually or having only a few and perennially busy fax machines, are a sure way to stifle competition. In order not to significantly impede competitors' ability to expand, the above systems should also be capable of being scaled up relatively quickly to accommodate reasonably foreseeable expansion demanded by entrants in a given geographic region (e.g., the ability to rapidly switch over to the entrant a large number of customers, through loop unbundling or total service resale); and capable of being rapidly extended to regions where they are not initially implemented. In addition, a BOC must have implemented number portability and local dialing parity.

182. These new access arrangements must be proven to work in practice. Many of the arrangements called for by the Act (such as loop unbundling) are unprecedented. Implementing such radical new arrangements often proves more difficult than expected even where there is goodwill on both sides.⁶³ These difficulties increase by an order of magnitude, however, when one side is recalcitrant; there is then endless scope for acrimony and mutual finger pointing, creating a regulatory morass. It is therefore important to have some practical experience with these arrangements, under real-world business conditions and not just in the laboratory, and iron out the major kinks while incumbents are still relatively predisposed to cooperate. The absence of (non-trivial) competition calls for waiting longer to test the new access arrangements, because experience with them under competitive conditions could help pinpoint potential problems more quickly. One should conclude that the market is open only if there is sufficient confidence that

⁶³ For example, I learned from Bell Atlantic in July 1996 that it had been working with MFS in Baltimore since February 1995 to implement loop unbundling and had encountered considerable difficulties despite both parties' attempts to work cooperatively.

the major implementation problems have been resolved.⁶⁴

2. Cost-based pricing of new local-competition access arrangements

183. “Availability” of the above access arrangements will be illusory if prices are prohibitively high. Thus, interconnection agreements forming the basis for § 271 entry authority under Track A, or interconnection offers under Track B, should provide entrants with satisfactory pricing assurances. Prices should be reasonably close to cost, as stipulated in the Act. And competitors must have adequate assurance that prices will remain reasonable and cost-based after interLATA relief is granted, in order to make efficient entry viable. Thus, if interim prices are used in the BOC’s agreements or offers, there should be some assurance that after interLATA entry is authorized the BOC’s prices to local competitors will remain within a tolerable range of these interim levels (e.g., indexed to inflation plus or minus a modest deviation) for a sufficient duration.

184. Even entrants building their own networks will require reasonable prices for terminating their calls on the incumbent’s network; assuring such prices is thus critical to the development of facilities-based local competition. Reasonable prices also are necessary for unbundled network elements if, as Congress intended, we are to facilitate also partial facilities-based competition; it would be tremendously costly, slow, and often inefficient for entrants to duplicate the incumbent’s entire local network, especially its local loop. Finally, reasonably-priced local service for total service resale is needed in order to provide other carriers a meaningful opportunity to compete quickly and widely in providing integrated services.

185. *Pricing standards.* Section 252 (d) of the Act requires state commissions to use the following pricing standards in arbitrating disputes between incumbents and local competitors: (1) prices of interconnection and unbundled network elements should be based on each party’s cost of providing these items; (2) prices of transport and termination of local calls should provide for

⁶⁴ Indeed, the arbitration process has not addressed all the relevant issues. (1) Many states have yet to establish performance standards and in certain cases have been reluctant to involve themselves at all in private negotiations on such matters despite appeals by entrants to do so. (2) Some states have determined that certain issues (such as liquidated damages), were outside their jurisdictional boundaries, wholly precluding their consideration in arbitration. Thus, insistence on appropriate performance benchmarks through the § 271 process can usefully complement state efforts.

mutual and reciprocal recovery by each carrier of (a reasonable approximation of) the additional costs of terminating such calls; and (3) wholesale prices should be based on retail prices for these services minus the marketing, billing and other costs that will be avoided by the LEC by selling at wholesale versus at retail.

186. The FCC in its Local Competition Order, while acknowledging that responsibility for arbitrating specific price levels rests with state commissions, proposed a methodology for arriving at prices: (1) for interconnection and unbundled elements, use forward looking Total Element Long-Run Incremental Cost (TELRIC); and (2) for transport and termination, require symmetric prices based on the incumbent LEC's TELRIC. It suggested proxy ranges for these prices, and for wholesale discounts for total service resale, that a state commissions could use pending completion of its own cost study. These pricing rules and interim proxies were generally praised by competitors, but have been stayed by the Eighth Circuit. Considerable uncertainty remains about the course of these key prices.

187. *Role of § 271 entry authority.* Denying BOC interLATA entry when local competition is seriously impeded by inappropriate BOC pricing of key local inputs can accelerate opening of the local market. Although state commissions are empowered to arbitrate pricing disputes between incumbents and competitors, awareness that the § 271 process will weigh seriously whether key inputs are priced in a manner that supports efficient local entry will usefully complement state efforts to enforce procompetitively low input prices by the BOC to competitors in order to open the local market. This point merits elaboration.

188. State arbitration of interconnection agreements does not occur in a political vacuum. Rather, prices emerging from arbitration are likely to reflect the demands and bargaining powers of the incumbent and its potential competitors. There is great asymmetry in these bargaining powers—since the dominant incumbent is content to preserve the status quo, while the entrant is clamoring for an agreement. By making procompetitive BOC prices to local competitors a requirement for finding the local market to be open one can help reduce the bargaining-power asymmetry, and thus reduce the BOC's prices—thereby complementing state efforts to foster local competition.

3. Removal of substantial regulatory and other barriers

189. Finally, in order to be confident that the local market is irreversibly open, one must ascertain that there remain no major state regulatory or other artificial barriers likely to significantly delay local competition. The Act requires removal of such barriers;⁶⁵ but there are gray areas. States have some latitude to impose obligations under the rubric of protecting universal service; local authorities may manage public rights-of-way or require fair and reasonable compensation for their use. Although all such actions must be on a competitively neutral and nondiscriminatory basis, there is sure to be controversy over the precise meaning of these terms.⁶⁶ Thus, the timeliness and effectiveness of FCC preemption of such barriers is uncertain. In addition, the BOCs themselves may have latitude to engage in certain practices which, while not explicitly unlawful, may hinder competition.⁶⁷

190. If such barriers are likely to seriously delay competitors' ability to avail themselves of new technical and pricing arrangements for access put in place with BOC cooperation, these arrangements could become obsolete. The value of BOC cooperation in establishing these arrangements will then decay; and securing BOC cooperation again in establishing new arrangements once these barriers have been removed but after BOC entry has been authorized will be far harder.⁶⁸

⁶⁵ Section 253(a) states: "No State or local statute or regulation, or other State or local legal requirement, may prohibit or have the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service." Section 253(d) empowers the FCC to preempt such barriers.

⁶⁶ For example, Texas has imposed certain "buildout" requirements on entrants, requiring them to provide service over at least a certain area which may hamper their ability to enter effectively; requests are pending with the FCC to preempt this and other provisions of the Texas statute. Numerous municipalities reportedly plan to impose fees on new telecommunications providers—but not on incumbents—for use of rights-of-way and local infrastructure. Bryan Gruley, "Disputed Call: Detroit Suburb Sparks Fight by Levying Fees on Telecom Concerns," *Wall Street Journal*, December 23, 1996. The FCC has decided not to challenge such fees in the case of Troy, Michigan.

⁶⁷ For example, some incumbent LECs are said to be signing exclusive access agreements with landlords of multi-unit buildings, housing a high density of customers. Such agreements could stifle the ability of entrants to compete, by denying them the opportunity to attain economies of density in a given area. A provision prohibiting such agreements was dropped from the Act; nevertheless, permitting such agreements can hinder competition.

⁶⁸ A concern is that a standard which links BOC entry to removal of regulatory barriers beyond its influence may discourage BOC cooperation, because cooperation may fail to yield a reward. There are several responses to this concern however. First, a BOC's ability to influence the regulatory process in a

E. Conclusion: The Department of Justice's Entry Standard Is Procompetitive

191. The major remaining bottleneck in telecommunications today, controlled by the BOCs in most regions, is local networks. These regulated local monopolies are an inefficient institution, whose replacement by a mix of local competition and lighter regulation can generate large net social benefits in local services, in integrated services, and in protecting and promoting competition in long-distance services while allowing BOC entry. This is the guiding philosophy of the 1996 Act.

192. Authorizing BOC entry when—and only when—the BOC's local market is open would go a long way to promoting local competition and achieving the goals of the Act. The Department of Justice's entry standard embodies this principle. It strikes a good balance between attempting to rapidly realize the benefits from BOC entry while properly addressing the competitive concerns, and therefore serves the public interest in competition.

state should not be underestimated. Second, requiring an open market as a condition for BOC entry can help persuade states to do more to remove remaining barriers. Third, and most importantly, dismantling such barriers need not impose onerous delay; whereas authorizing BOC entry before the local market is open can seriously jeopardize prospects for opening it in the future. The reasons are twofold. (a) Such barriers may prevent commercial use by entrants of the BOCs wholesale inputs and prevent the BOC from demonstrating that their systems will work under actual usage. (b) As noted in the text, even if the systems would work today, these systems could require major changes if sufficient time elapses before entry. Thus, if entrants cannot avail themselves of these new systems for some time due to the presence of residual barriers, the initial BOC cooperation in establishing these new systems will have had only limited value; and securing future BOC cooperation in updating these systems once these barriers have been removed will be more difficult if BOC entry has already been authorized. As a practical matter, however, I believe that meaningful BOC implementation of the competitive checklist is likely to result in opening the local market in most cases.

I hereby swear, under penalty of perjury, that the foregoing is true to the best of my knowledge and belief.

Marius Schwartz

Subscribed and sworn before me this _____ day of _____, 1997.

Notary Public

Table 1: Telecommunications Revenues (1995) ¹

	(1)	(2)	(3)	(4)
	All LECs	% of Total	BOCs	% of Revenues
1. All LECs, and BOCs alone	(\$ billion)	Telecom	(\$ billion)	of All LECs ²
		Revenues ²		
Local Revenues	56.6	36.9%	43.0	76%
Local Exchange Service ³	45.0	29.3%	35.2	78%
Local Private Line	1.2	0.8%	0.9	75%
Miscellaneous Local Revenues ⁴	10.4	6.8%	6.9	66%
Network Access Services ⁵	33.4	21.8%	22.5	67%
Federal Subscriber Line Charges	7.0	4.6%	5.8	83% ⁶
Access Charges paid by LD Carriers	26.4	17.2%	16.7	64% ⁶
Toll Revenues	12.8	8.3%	9.5	74%
Switched Service (intraLATA toll)	10.1	6.6%	7.3	73%
Miscellaneous Toll Revenues ⁷	2.7	1.7%	2.2	81%
Total All Reporting LECs	102.8	67.0%	75.0	
2. CAPs and CLECs	0.6	0.4%		
3. LD Carriers' Net Toll Revenues ⁸	50.0	32.6%		

¹ Source: FCC, Telecommunication Relay Service (TRS) Fund Worksheet Data, December 1996. All data are for 1995. Abbreviations: LECs – Local Exchange Carriers; CAPs - Competitive Access Providers; CLECs - Competitive Local Exchange Carriers; BOCs – Bell Operating Companies; LD – Long Distance.

² Col. (2) is \$ bn in Col. (1) ÷ \$153.4 bn (Total Telecommunications Revenues). Col. (4) is Col. (3) as % of Col. (1).

³ Includes primarily revenues from Basic Local Services (approx. \$34 bn) and some vertical services.

⁴ Includes primarily Directory Revenues (approx. \$4 bn), Nonregulated Revenues (approx. \$3.6 bn), and Carrier Billing and Collection Revenues (approx. \$1 bn).

⁵ Of which \$8.9 bn is intrastate access, and \$24.5 bn is interstate (including \$7 bn in Federal Subscriber Line Charges). The FCC's Statistics of Communications Common Carriers 1995/96 (table 2.9) breaks down interstate access charges paid by LD carriers (i.e. not including SLC) into switched and dedicated access, with switched access accounting for 80%. No comparable breakdown is reported for intrastate access.

⁶ This percentage is computed using data from the FCC's Statistics of Communications Common Carriers 1995/96 (table 2.9, lines 154 to 158), which reports the break-down of BOCs' Network Access Revenues in SLC and Access Charges paid by LD Carriers. TRS Fund Worksheet Data does not report such information.

⁷ Includes \$1.6 bn in Operator Service, Pay Telephone and Card Revenues, \$9 bn in Long Distance Private Line Service, and \$.25 bn in All Other Long Distance Revenues.

⁸ Total Gross Revenues of Long-Distance Carriers are \$76.4 bn, of which \$26.4 bn were paid in access charges to LECs. The \$76.4 bn figure includes approx. \$3.3 bn from intraLATA toll (AT&T estimate), and the rest is interLATA. Of the \$76.4 bn, 93% accrued to IXC's, 5% to Toll Resellers and the rest to Operator Service Providers, Pre-Paid Calling Card Providers, Pay Telephone Providers and Others.

All LECs (\$ billion)	BOCs Telecom ²	% of Revenues of All LECs ²
153.4	100.0%	

EXHIBIT 2

**Supplemental Affidavit of
Marius Schwartz
on Behalf of the
U.S. Department of Justice**

**THE “OPEN LOCAL MARKET STANDARD” FOR AUTHORIZING
BOC INTERLATA ENTRY: REPLY TO BOC CRITICISMS**

by

MARIUS SCHWARTZ

Supplemental Affidavit on behalf of U.S. Department of Justice

November 3, 1997

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Professional Background

1. My name is Marius Schwartz. I am a Professor of Economics at Georgetown University. I received my B.Sc. degree with first-class honors from the London School of Economics and my Ph.D. in economics from the University of California at Los Angeles. My research areas are in industrial organization, antitrust and regulation. I have published on these subjects and have taught courses in these areas to students and to executives and government officials in the U.S. and other countries.
2. From April 1995 to June 1996, I was the senior staff economist at the President's Council of Economic Advisers responsible for antitrust and regulated industries. Much of my work was on regulatory reform in telecommunications, and I participated in the development of the Administration's policy leading up to the enactment of the 1996 Telecommunications Act. From 1980 to the present, I have served intermittently as a consultant to the Antitrust Division of the Department of Justice on a variety of competition matters. I have also consulted for international agencies and private companies. My curriculum vitae is attached as Exhibit 1.
3. I submitted an affidavit to the Federal Communications Commission on behalf of the U.S. Department of Justice ("DOJ") in connection with the application by SBC to provide interLATA services in Oklahoma, and of Ameritech to provide such services in Michigan.¹

¹ Affidavit of Marius Schwartz, "Competitive Implications of Bell Operating Company Entry into Long-Distance Telecommunications Services," May 14, 1997, filed with the FCC as an appendix to the Department of Justice's evaluation of SBC's application to provide interLATA services in Oklahoma, May 16, 1997 (In the Matter of Application of SBC Communications, Inc. Pursuant to Section 271 of the Telecommunications Act of 1996 to Provide In-Region, InterLATA Services in Oklahoma, CC Docket 97-121), and of Ameritech's application in Michigan, June 25, 1997 (In the Matter of Application of Ameritech Michigan Pursuant to Section 271 of the Telecommunications Act of 1996 to Provide In-Region, InterLATA Services in the State of Michigan, CC Docket 97-137). The affidavit is available on the Internet at: www.usdoj.gov/atr/statements/Affiwp60.htm.

Scope and Purpose of This Affidavit

4. My original affidavit analyzed the competitive implications of authorizing BOC in-region interLATA entry and explained why the Department of Justice’s Open Local Market standard for authorizing such entry (“DOJ standard” or “Open Local Market standard”) is economically sound. That standard requires the local market in the applicant BOC’s state to have been fully and irreversibly opened to competition through all three entry modes envisioned by the Telecommunications Act—facilities based, resale, and unbundled network elements.

5. The most reliable demonstration of such opening is observing meaningful local entry of all three modes. Failing that, one looks to verify that the main conditions for an open market are in place. These are: (1) meaningful implementation of the competitive checklist items, notably establishment of the various new wholesale systems (such as Operations Support Systems) and network unbundling needed to facilitate local competition, and demonstration—over a duration sufficient to yield useful performance benchmarks—that these systems are capable of functioning under real business conditions and of being scaled up appropriately to accommodate entrant demand; (2) assurance that BOC prices for inputs needed by local entrants (interconnection, unbundled network elements) will remain reasonable and cost based after BOC interLATA entry is approved; and (3) the absence of major state or local regulatory barriers or any other barriers likely to significantly impede competition.

6. This standard has since been criticized by both BOCs and IXCs. From the IXC end, the standard is criticized as too permissive. It allegedly understates the danger that premature BOC entry poses to competition in the long-distance market by overstating the efficacy of regulatory safeguards, and therefore errs in not requiring effective local competition as a prerequisite for authorizing BOC entry.² As I explained, however, effective local competition—while it may be the appropriate standard for complete deregulation—is an overly stringent standard for allowing BOC entry subject to ongoing regulatory and antitrust safeguards. (Schwartz Affidavit, ¶¶ 150-153.) Such safeguards

² See, e.g., Comments of MCI Telecommunications Corporation, CC Docket No. 97-137 (June 10, 1997) and Reply Comments of MCI Telecommunications Corporation, CC Docket No. 97-121 (May 27, 1997).

will remain available after BOC entry is authorized.

7. The more numerous criticisms have come from the other end: the BOCs and their economic experts argue that the standard is too restrictive and unworkable. The present affidavit addresses those criticisms.³

I. WHY BENEFITS FROM THE “OPEN MARKET STANDARD” ARE LIKELY TO SUBSTANTIALLY OUTWEIGH THE COSTS

8. Rather than respond to the BOC experts individually, I focus on their main criticisms of the DOJ standard—as they portray it:

- (a) *The standard needlessly delays BOC interLATA entry.* Such delay is not necessary to advance local competition and may retard local competition—by giving IXC’s strategic incentives to hold back from aggressively entering local markets for fear that doing so would hasten approval of BOC entry. (Kahn and Tardiff Reply Aff., ¶¶ 62, 64.)
- (b) *The standard is overly regulatory and involves micro-management by the DOJ.* (Kahn and Tardiff Reply Aff., ¶ 65.) Rather than letting competition determine market outcomes, it requires actual success of competitors to demonstrate that the market is open. For example, it requires metric tests of local competition—a BOC

³ See, e.g., in the Oklahoma proceeding, Reply Affidavit of Alfred E. Kahn and Timothy J. Tardiff on behalf of SBC, May 20, 1997 (“Kahn and Tardiff”), and SBC’s Response to DOJ’s Evaluation, May 27, 1997 (“SBC Response”). In the Michigan proceeding, see: Reply Affidavit of BellSouth in support of Ameritech’s application (“BellSouth Reply, Michigan”), July 7, 1997, and the appended Declaration of Jerry Hausman (“Hausman 1”); and the following submissions on behalf of Ameritech: Affidavit of Robert Crandall and Leonard Waverman, April 11, 1997 (“Crandall and Waverman”) and Reply Affidavit, July 3, 1997 (“Crandall and Waverman Reply”); Reply Affidavit of Richard J. Gilbert and John C. Panzar, July 2, 1997 (“Gilbert and Panzar”); and Reply Affidavit of Paul W. MacAvoy, July 2, 1997 (“MacAvoy”). In the application by BellSouth in South Carolina, see: Affidavit of Richard J. Gilbert, September 30, 1997 (“Gilbert”); Declaration of Jerry A. Hausman, September 30, 1997 (“Hausman 2”); and Declaration of Richard L. Schmalensee, September 30, 1997 (“Schmalensee”), all on behalf of BellSouth.

must lose a certain number of customers in order to prove that new wholesale support systems work. (SBC Response, at 13.) And it requires observing all three entry modes—through own facilities, unbundled elements, and resale—in order to prove that market is open to all these three modes. (Gilbert and Panzar Reply Aff., ¶ 9.)

- (c) *The costs resulting from the delay of BOC entry caused by the restrictive DOJ standard are huge and outweigh any benefits.* All BOC experts referenced in footnote 3 make this claim, explicitly or implicitly. For example, Professor Kahn and Dr. Tardiff assert: “Perhaps most fundamentally, Professor Schwartz’s conclusion that the benefits from delay outweigh the cost is speculative...he has provided no basis whatever for an objective assessment of the comparative benefits or losses...” (Kahn and Tardiff Reply Aff., ¶ 65.)

9. Let me begin by refuting the last and most important point. It is true that my affidavit did not attempt to explicitly quantify the benefits or costs of delayed BOC entry. While I am sympathetic to attempts by some BOC experts to try and quantify such effects, forecasts are only as good as their underlying assumptions. Given the tremendous uncertainty involved in the case at hand, forecasting exercises are inherently speculative. Moreover, as I will show in Part II of this affidavit, some forecasts of the benefits of BOC entry produce the illusion of precision, when in fact they hinge on dubious assumptions that cause the estimates of the benefits to be grossly inflated.

10. Instead of speculative forecasting, my affidavit highlighted transparent and robust factors which are likely to ensure that, under a range of plausible assumptions, the benefits of delaying BOC entry as necessary to implement the key measures needed to open local markets will significantly outweigh the costs. To reiterate my argument, these key factors are as follows:

Different current conditions in the local and interLATA markets

A. The “local market” refers to the full set of services that require access to LECs’ underlying local network facilities, including basic local service, exchange access, and “vertical” services. The local market, so defined, is considerably larger than the interLATA market. In addition, the local market is a regulated monopoly rife with distortions, while the long-distance market is far more competitive. For both reasons, the scope for improving economic performance by increasing the degree of competition is considerably greater in the local market than in long distance.

Differential impact of Open Market Standard on competition in the two markets

B. The standard would advance local competition much more rapidly and efficiently than would a weaker entry standard that did not insist on significant BOC cooperation as a condition for opening local markets but instead relied largely on post-entry measures.

C. In contrast, the standard need not impose a significant delay of BOC interLATA entry. The extent of delay in BOC entry is largely under BOC control and in most cases could be modest if the BOCs cooperate in implementing the measures required by the Act as important for facilitating local competition.

11. In short, the above logic implies that adhering to the Open Market Standard rather than a more permissive alternative will yield large benefits in advancing local competition at the expense of comparatively modest and short-lived costs in the long distance market; moreover, authorizing BOC entry while failing to open local markets to competition could over time pose growing risks also to long distance competition.

12. This logic also addresses BOC criticisms that delaying BOC entry imposes intolerable costs by delaying the availability of integrated services—the provision by a supplier of local and long distance services (and perhaps other services as well). It is widely acknowledged that integrated services are valuable to consumers (e.g., one-stop shopping) and can reduce retailing costs for suppliers, and I noted in my initial affidavit that delaying BOC interLATA entry and thus BOCs’ ability to offer such services comes at a cost. But this cost is short lived, and is outweighed by the benefit: instead of leaving provision of integrated services as a monopoly of the local BOC, opening the local market enhances the ability of all other providers to compete for providing integrated services. Therefore, if one views integrated services as important, then permitting broad competition in their provision—by making currently monopolized local inputs and services widely and efficiently available to competitors—should be a central goal of good public policy.

13. The remainder of Part I of this affidavit elaborates on points A through C above. In so doing, it addresses the previously mentioned BOC criticisms, and corrects some misconceptions about the DOJ’s Open Market Standard and its implementation. Part II examines more closely some inflated claims about foregone benefits in the long distance markets from delaying BOC entry. Part III concludes that the DOJ Standard indeed is likely to advance the competition goals of the Telecommunications Act more effectively than would a more permissive entry standard..

A. The Larger Potential Gains from Increasing Competition in the Local Market Than in the InterLATA Market

14. My affidavit discussed at length the potentially significant benefits of BOC entry. (Schwartz Aff., ¶¶ 7, 59-61, 82-98.) I noted that these benefits might include: enabling the BOCs to realize savings on retailing costs by jointly offering local and long-distance services; providing consumers the benefits of one-stop shopping and other integrated services (such as new bundles of services); and increasing the degree of competition in long-distance markets. Indeed, various BOCs and their experts have quoted my affidavit extensively on this point, as supposedly confirming that the DOJ standard imposes intolerable costs by delaying the realization of such efficiencies. This inference, however, is incorrect: one must consider not only the costs that the DOJ standard might impose

relative to a more permissive standard, but also its benefits in promoting local competition.

15. The goal of the 1996 Telecommunications Act is to open *all* markets to competition. This includes, in particular, the local market which is both much larger than long-distance and is currently the least open to competition. It is important not to lose track of this point—the key bottleneck that needs to be unclogged is in the local market. As I explained in my affidavit, an appropriate standard for BOC interLATA entry can play a key role in advancing the Act’s local competition objectives: incumbents’ cooperation is vital in opening local markets, and cooperation will be secured more effectively through a Section 271 standard that conditions entry on the prior implementation of key market-opening measures.

16. Thus, in evaluating the DOJ standard it is imperative to address the benefits from permitting accelerated development of competition in local services, and therefore also in integrated services—whose provision requires access to the currently-monopolized local services and inputs of LECs. It is bad policy to consider only the possible costs of delaying BOC entry, without recognizing the tradeoff involved. The remainder of this Section A explains why the potential benefits of increasing competition in the local market are so much greater than the potential losses in the long distance market from delaying BOC entry. Unfortunately, BOC experts are silent on the benefits of local competition, or even contend that the Open Market standard for BOC interLATA entry can play no major role in fostering local competition and could even retard it. I refute these claims in Section B, and in Section C, I refute the claims that the delay in BOC entry is likely to be unduly long.

1. The Local Market Is Much Larger

17. Some BOC experts as well as other commentators frequently refer to the “\$76 billion long-distance market.” This is an unfortunate exaggeration: in 1995, long-distance carriers’ revenues were \$76 billion (\$73 billion was from interLATA services, including international), but \$26 billion was paid to the BOCs and other incumbent local exchange carriers (LECs) in access charges. Including these access charges for interLATA and intraLATA toll calls, LECs’ total revenues exceeded \$100 billion. (Schwartz Aff., ¶ 31 and Table 1.) In revenue terms the local market is

therefore about *twice as large* as long-distance.⁴ The local market is also considerably larger by various other measures, *e.g.*, employment and embedded capital. Thus, the markets from which BOCs are temporarily precluded—interLATA services—are considerably smaller than the local markets which we are attempting to open to competition. The same *percentage* improvement in economic performance in both markets in response to increased competition would therefore generate considerably greater *total* benefits in the local market.

2. The Local Market is Largely a Regulated Monopoly, While the InterLATA Market Is Substantially More Competitive

18. Putting aside the much larger size of the local market, there is much more room to improve economic performance in the local market than in the interLATA market by fostering additional competition—because of the different current competitive conditions in the two markets. The interLATA market is substantially more competitive (though certainly not perfectly competitive) and largely unregulated. Moreover, absent consolidation, long-distance competition will continue to increase even without BOC entry. By contrast, the local market is largely a regulated monopoly rife with distortions. The fundamental tenet of the Telecom Act is that, as a vehicle for delivering good economic performance, competition is far superior to regulated monopoly. Thus, even a modest dose of increased competition in the local market can be expected to generate major benefits—in the form of reduced costs, improved quality, increased variety of offerings, rationalization of the price structure in local markets, as well as spillover benefits in adjacent markets for interexchange and integrated services.

19. The BOCs' own experts, in justifying their estimates of the gains that BOC entry would bring

⁴ In 1996, long-distance carriers' revenues rose to \$82 billion, and \$58.4 billion net of access charges (compared to \$50 billion in 1995). Federal Communications Commission, *Preliminary Statistics of Communications Common Carriers*, at Tables 1.4, 2.9 (1997). Total LEC operating revenues were, according to Table 2.9, \$100.7 billion (\$78.7 billion for the BOCs). The FCC's *TRS* data, however, which was used in computing Table 1 of my earlier affidavit, would likely give the LECs a higher revenue in 1996 than the \$100.7 billion reported by *SCCC* (in 1995, *TRS* put LECs' revenue at the \$102.8 billion cited in my Table 1, while the *SCCC* put it at only \$95.6 billion.) Thus, the two-to-one revenue relationship between the local and long distance markets is approximately preserved in 1996.

by stimulating interLATA competition, identify substantial benefits that increased competition has brought in other industries. Dr. Robert Crandall and Professor Leonard Waverman, in their affidavit on behalf of Ameritech in Michigan (April 1997), survey the effect of increased competition in several previously tight oligopolies (in their view): the U.S. luxury car market; the U.S. carbon steel industry the U.K. mobile telecom market; long distance telecom services in Chile; and interLATA and intraLATA services in Connecticut. In all cases they report impressive gains in economic performance.

20. For example, Japanese entry into the U.S. luxury car markets in the early 1990s led to “quality improvements and innovation...” by all producers (Crandall and Waverman Aff., ¶¶ 19). Competition by steel producing minimills in the U.S. led them to cut prices by about 20% more than the dominant vertically integrated steel producers for “long” products (such as rebars and wire rods) in the 1970s and early 1980s (*id.*, ¶ 27); and served to reduce industry prices for sheet steel products between 1970-1994 by about 9% (*id.*, ¶ 31). Entry by two additional cellular providers into the previous U.K. duopoly since 1993 stimulated innovation in pricing, such as the introduction of “location pricing” (*id.*, ¶ 39) and reduced the effective rate per minute (total fixed and variable charges averaged over the number of minutes) paid by business subscribers in peak periods by about 32% (*id.*, ¶¶ 40-41). In Chile, liberalization was introduced in 1994 and “[b]y September 1996, average long distance rates had fallen by more than 50 percent. . .” (*id.*, ¶ 48). And the entry of SNET into interLATA (interstate) services in Connecticut in 1994 “has resulted in effective reductions in intrastate toll rates of at least 10 percent per year” (*id.*, ¶ 58) as AT&T responded by cutting its intrastate rates rather than interstate rates, which are subject to national geographic averaging requirements. (The SNET experience is discussed further in Part II of this affidavit.)

21. I agree wholeheartedly that increasing competition in an industry is likely to deliver substantial economic benefits to consumers. My only quarrel on this score with BOC experts is this: if additional competition can deliver such impressive gains in oligopolies, why do they not expect even greater benefits from stimulating competition in local BOC markets that today are largely *monopolies*?

22. The objection that fewer gains can be expected because BOC prices are regulated, and in some cases are set perhaps even below incremental cost (e.g., for basic residential service at least

in rural areas), is not persuasive. The very premise of the Telecommunications Act is that regulated monopoly is a vastly inferior institution to competition. The gains from competition can be expected to come from the usual stimulus that competition provides to improve productivity and thereby cut cost; to offer innovative products and services (including new pricing options for existing services); and to improve quality. These benefits can be expected to be at least as large in local telecommunications markets that are starting from a position of far less competition than many if not all the examples cited by Crandall and Waverman. Moreover, competition can deliver still further gains, by reducing the need for cumbersome regulation that can reduce firms' incentives to operate efficiently and their flexibility to do so.

23. While these gains may not show up, at least initially, in lower prices for particular services whose prices are being held below incremental costs (such as may well be the case for basic residential service in some places), competition will deliver substantial benefits overall. *Lower prices* will emerge for services that today are substantially overpriced, thereby benefitting consumers as well as increasing overall welfare by stimulating usage of such services. Such over-priced services include: intraLATA toll; "vertical" services (caller ID, call waiting); high speed lines such as ISDN (in some states); and exchange access for interLATA services. Moreover, as universal service subsidies become competitively neutral and available to entrants and not solely to incumbent LECs, competitive forces should enhance efficiency also in the provision of the currently under-priced services. Consumers will enjoy *better customer service* (such as 24 hour customer service currently offered by IXCs, as opposed to nine-to-five hours offered by many LECs). And consumers will benefit from expanded options of products and services. Indeed, the BOCs themselves have acknowledged that competition from Competitive Access Providers have prompted the BOCs to upgrade their own offerings.⁵

24. Professor David Newbery reports some revealing statistics about the scope for improved

⁵ "This competition (from CAPs) was driving the Bell companies to lower the price *and raise the quality* (emphasis added) of their local exchange services even before the 1996 Act." Joint Response of Bell Atlantic and US West to letter from then acting Assistant Attorney General Joel Klein, December 13, 1996, 32-33.

productivity that competition can spur.⁶ British Telecommunications (BT) was privatized in 1984, but there was little change in its rate of growth of productivity relative to UK manufacturing as a whole after privatization until the entry of a large number of new competitors after the "Duopoly Review" in 1991, which allowed additional entry into long distance (beyond the initial BT and Mercury duopoly), and competitive facilities entry into local markets. Professor Newbery's work suggests that the ratio of BT's productivity per worker relative to that of the UK manufacturing industry rose only a few percent from 1984 to 1991, but about 30 percent from 1992 to 1995.⁷

25. In short, economic theory as well as evidence from other industries lead one to expect substantial gains from introducing more competition into today's heavily regulated and predominantly monopoly local markets, and a subsequent move towards more light-handed regulation. Indeed, the emergence of competition could permit greater efficiencies also from BOC interLATA entry, by making it appropriate to reconsider the design of safeguards such as strict separate affiliate requirements (§ 272) that are deemed necessary in a less competitive environment but that entail certain inefficiencies. Thus, large improvements in economic performance are likely to flow from the accelerated development of local competition made possible by appropriately conditioning BOC interLATA entry on prior implementation of market-opening measures.

⁶ David M. Newbery, "Privatization and Liberalization of Network Utilities," Presidential Address to the Eleventh Annual Congress of the European Economic Association, Istanbul, August 22, 1996, available as Working Paper No. 9620, Department of Applied Economics, University of Cambridge. See also OFTEL, *Consultative Document, Pricing of Telecommunication Services from 1997*, Annex B, Table B2(a) (1997).

⁷ Newbery's Figure 3 also shows that even more dramatic acceleration in the rate of productivity growth was observed in the *electricity* sector, following its privatization—which was coupled with the introduction of competition in both the generation and supply functions (but not transmission or local distribution). Since privatization of BT was not by itself sufficient to generate large productivity improvements, a reasonable inference is that a large part of the gains in electricity also can be attributable to the advent of competition.

B. The Open Market Standard Advances Local Competition More Rapidly and More Efficiently Than Would a Weaker Entry Standard

26. BOC experts maintain that the Open Market Standard may delay local competition; that one could and should permit BOC interLATA entry and rely on post-entry safeguards against BOC conduct to open local markets; and that the Standard entails unnecessary intrusive regulation. This section rebuts these contentions. Subsection 1 addresses claims that the Standard induces potential entrants to strategically delay their own entry into local markets. Subsection 2 explains that local entry requires not only incentives but also ability, and that the ability of entrants to enter rapidly and efficiently hinges on incumbents' cooperation. Subsection 3 notes the dangers of relying primarily on post-entry enforcement to secure opening of local markets, rather than requiring sufficient market opening measures as a precondition for authorizing BOC interLATA entry. Subsection 4 explains why, by insisting on such measures as a precondition, the Open Market Standard will ultimately *reduce* the need for intrusive regulation.

1. Alleged Incentives for Strategic Delay by Local Entrants

27. BOC experts argue that authorizing BOC interLATA entry is likely to accelerate rather than delay local competition, by removing the alleged incentive of the major IXCs to strategically postpone their own local entry for fear that it would trigger approval of BOC interLATA entry. Indeed, various BOC experts cite this strategic incentive rather than BOC-mounted barriers as the main cause of the slow development of local competition. This argument is erroneous for several reasons.

28. First, the Open Market Standard does not require local entry by IXCs. Indeed, the DOJ has made clear that its standard does not require entry by any particular competitor.⁸ As explained in Section C below, the extent and diversity of actual local competition that is observed does establish—and properly so—important presumptions for whether the market indeed is open. But

⁸ See DOJ Oklahoma Section 271 Evaluation at 41, 48-50.

the standard recognizes that lack of entry may be due to independent business decisions unrelated to artificial entry barriers. For this reason, the Open Market Standard can support entry, even if no competitor chooses to enter, so long as the BOC has established that the absence of entry is not due to the artificial barriers to competition that the Act intended to eliminate.⁹

29. Second, whatever the merit of the claim about strategic delay incentives of IXCs, one must distinguish between IXCs and other potential local competitors (“CLECs”) that are absent from the long distance market. Such CLECs have no long-distance base to protect and thus would have considerably weaker incentives to delay their local entry for purposes of delaying BOC interLATA authority.¹⁰ Moreover, it is difficult to believe that such diluted incentives could suffice to induce *all* potential local entrants—including CLECs that have no major initial business in either the long distance or local markets—to hold back on expanding aggressively into the local market. If other entrants were to engage in such strategic delay then, assuming the local market were truly open to competition, it would pay any firm that currently has no presence (or only a small one) in the local and long distance markets to enter the local market aggressively to seize market share and exploit any first-mover advantages.

30. Third, the theory that local entry is delayed primarily due to CLECs’ reluctance to trigger approval of BOC interLATA authority is not supported by the experience in states where non-BOC LECs already offer interLATA services. In Connecticut, SNET has offered interLATA services for several years. Therefore, the strategic delay motive that BOC experts allege should be considerably weaker in SNET’s territories, at least for smaller, non-IXC CLECs. Yet the extent of local entry,

⁹ Among other things, the BOC must demonstrate that at the time of application it has made wholesale support systems legally and practically available at appropriate prices and levels of performance; benchmarked such performance; and demonstrated that such systems can be scaled or extended to meet future demand. On the DOJ Standard, see DOJ Oklahoma Section 271 Evaluation at 27-29, 41, 48-50.

¹⁰ Conceivably, even such entrants may gain somewhat by delaying BOC entry. Delaying BOC entry *might*: (a) allow such CLECs to extract from state commissions additional measures to open local markets prior to authorizing the BOC interLATA entry; or (b) delay IXCs’ entry into local markets (if BOC experts are correct about IXCs’ strategic incentives to refrain from local entry in order to delay BOC’s interLATA authority), for purposes of forestalling the IXCs as competitors to the CLECs in local markets. But such incentives would be rather weak and, as explained in the text, are unlikely to outweigh the benefits to a CLEC of accelerating its own local entry.

including by small, non-IXC CLECs, has, to my knowledge, been no greater than in BOC states. Similarly, to my knowledge local entry into GTE's territories in California has not been greater than into those of Pacific Bell; even though Pacific Bell is still precluded from offering interLATA services, while GTE, like SNET, already may and does offer such services. Nor has there been more entry into GTE's Florida territories than into most other urban regions.

31. In short: (a) the alleged incentives of IXCs to strategically delay their local entry in order to delay triggering BOC interLATA entry would not apply nearly as much to other potential local entrants; (b) the strategic incentive theory is not supported by the facts; and both IXCs and other potential local entrants are equally adamant about BOC-imposed entry barriers and the need to withhold BOC interLATA authority until the local market is opened.¹¹ A reasonable reading of the evidence in the SBC and Ameritech applications is that the respective BOCs have failed to undertake fully the major market-opening measures required by the Act. Thus, the main issue is *ability* to enter.

2. The Ability of Local Entrants to Enter Rapidly and Efficiently Hinges on BOC Cooperation

32. As mentioned, some BOC experts argue that BOC interLATA entry would force IXCs to accelerate their own facilities-based entry into local markets in order to better compete in offering one-stop shopping and other integrated services. But the policy objective articulated in the 1996 Act is not the promotion of facilities-based entry at all costs; forcing entrants to build duplicative facilities, such as local loops everywhere, is neither practical in the foreseeable future nor desirable. Rather, the goal of the Act's local competition sections is to elicit the requisite cooperation from incumbent LECs so that entry can occur as rapidly and efficiently as is dictated by technological

¹¹ See Motion To Dismiss by the Association For Local Telecommunications Services (June 10, 1997), Opposition of Brooks Fiber Communications of Michigan to Ameritech's Application (June 10, 1997), Comments of WorldCom, Inc. in Opposition to Ameritech-Michigan Application for InterLATA Authority (June 10, 1997).

conditions and market opportunities. As I explained in my initial affidavit, BOC cooperation would be vital to all entrants, regardless of which of the three entry modes envisioned in the Act they seek to employ (¶¶ 8, 52-57).

33. Professor Kahn and Dr. Tardiff take exception to the notion that BOC cooperation is important for local entry. They write: “One need look no further than Professor Schwartz’s intraLATA toll example to see why specific requirements may not be necessary for competition to develop. Despite the fact that dialing parity has not been universally required, the IXCs have already captured 22 percent of the market nationwide...”¹² (Schwartz Aff. ¶ 62.) Unfortunately, they neglect the main part of my intraLATA toll discussion (¶¶ 141-143), which demonstrates precisely the reverse of what they claim. The point of that discussion is that intraLATA toll dialing parity offers a compelling case study of incumbents’ ability and incentive to stall the introduction of new arrangements important to local competition.

34. The BOCs repeatedly and successfully delayed the introduction of dialing parity, long after it was determined to be in the public interest. In Minnesota, the delay caused by repeated legal and administrative challenges was close to a decade. Presumably the BOCs would not have resisted dialing parity so bitterly if they had perceived it as inconsequential to entrants’ success. And experience proves them right. In Minnesota, for example, the share of the one major IXC that I checked with approximately tripled within six months after intraLATA dialing parity was introduced. Thus, the issue is not whether IXCs succeeded in capturing 22% of the intraLATA toll revenue nationwide—which is an average figure across states that do have dialing parity and those that do not—even without ubiquitous dialing parity, but what their market share and competitive influence *would have been with ubiquitous dialing parity*. Judging by BOCs’ vigorous resistance and by the Minnesota evidence, the impact would have been considerably greater. Indeed, beyond competitors’ greater success following the introduction of dialing parity, there is also evidence that introducing dialing parity reduces prices substantially.¹³

¹² For the 22 percent figure, they cite p. 11, fn. 4 of my affidavit, which reported 1995 intraLATA toll revenues of about \$3.3 billion to IXCs v. \$10.1 billion for ILECs.

¹³ For example, the Michigan Attorney General said that in Illinois, Ameritech customers pay only 0.4 cents per minute above access charges for intraLATA toll with full dialing parity, whereas they pay 10 cents

35. An additional example of the BOCs' perception of the significance of intraLATA toll dialing parity may be found in Michigan. The Michigan Public Service Commission (MPSC) issued an order requiring Ameritech to implement statewide intraLATA toll dialing parity within 30 days and to implement a 55% discount on access charges in central offices where it failed to provide such parity.¹⁴ Ameritech discounted access charges by 55% instead of expanding dialing parity beyond the 10% of access lines for which parity had already been implemented.¹⁵

3. Pitfalls of Relying Primarily on Post-Entry Measures to Secure BOC Cooperation in Opening Local Markets

36. My discussion of what can be learned from the experience with intraLATA toll was intended to highlight the dangers of relying primarily on post-entry safeguards to secure BOC cooperation in implementing *new* access arrangements, such as those needed to foster local competition. There I

per minute above access charges for intraLATA toll in Michigan without full dialing parity. He also indicated that prices in Illinois fell from 12 cents per minute to 3 cents per minute on the introduction of dialing parity. *Ameritech Michigan v. Michigan Public Service Commission*, Michigan Supreme Court No. 110338, Attorney General Frank J. Kelley's Response at 3, ¶ 6 (Sept. 2, 1997) and statement issued on July 23, 1997 accompanying brief filed in Michigan Supreme Court.

¹⁴ June 26, 1996 Order of the Michigan Public Service Commission. This order considered the effect of the Michigan Telecommunications Act of 1995 ("MTA") on prior-issued MPSC orders dealing with intraLATA toll dialing parity. The MPSC determined that the MTA had amended the prior-ordered conversion schedule but had not voided the earlier orders. This conclusion was repeated in the MPSC's October 7, 1996 Order on Rehearing.

¹⁵ See Ameritech News Release, "Ameritech to cut access rates to long distance companies" (July 26, 1996), and *Ameritech Michigan v. Michigan Public Service Commission and MCI Telecommunications Corporation and AT&T Telecommunications of Michigan, Inc.*, Court of Appeals Case No. 198706, Appellant Ameritech Michigan's Brief on the Merits at 12 ("Ameritech complied with the Commission's June 26, 1996 Order by implementing the 55% access charge discount.") (Jan 2, 1997.) Ameritech also pursued rehearing at the MPSC and appeals at both the federal and state level, arguing that the MPSC orders were unlawful. Ameritech did not challenge the feasibility of implementing toll dialing parity.. On December 4, 1996 the Michigan Court of Appeals granted a stay. Oral argument on the merits of the matter was heard October 14, 1997. Despite the pendency of the appeal, Ameritech has now implemented intraLATA toll dialing parity for 70% of Michigan, consistent with the commitments made to the MPSC in its section 271 checklist compliance case. See Case No. U. 11104, *Ameritech Compliance Filing* at 12 (November 27, 1996).

explained why requiring the prior implementation of such arrangements is an appropriate precondition for BOC interLATA entry.

37. As a general matter, exclusive reliance on policing conduct and on undoing competitive damage *ex post* is problematic; this is why, for example, antitrust merger policy places such weight on preventing anti-competitive mergers rather than allowing all mergers and attempting to address anti-competitive conduct after the fact. In the present context, authorizing BOC entry prematurely and relying solely on post-entry safeguards to attempt to open BOC local markets to competition is especially dangerous.

38. As my affidavit explained, many of the local competition arrangements required by the Act, such as wholesale support services and network unbundling, are novel and hence offer great scope for gaming and delay by incumbents. Post entry enforcement without adequate prior performance benchmarks would be difficult: the great asymmetry of information between a BOC and outsiders about what constitutes unreasonable delay in implementing new systems is likely to make enforcers leery of imposing heavy penalties for perceived foot-dragging. Indeed, BOCs' potential ability to delay the new local competition arrangements is at least as great as for intraLATA toll dialing parity, because arrangements such as loop unbundling and operations support systems are considerably more complex technologically than was dialing parity. The FCC's experience with trying to pursue Open Network Architecture in the face of incumbent LECs' resistance (Schwartz Affidavit, ¶¶ 145-148) illustrates the difficulties involved.

39. Therefore, there is real value on insisting that a BOC establish the main requisite new systems before being allowed entry. A BOC's own incentive to expedite its interLATA entry will then induce it to implement these systems more efficiently and expeditiously than if entry were authorized and regulators had to then force the recalcitrant BOC to implement these systems.

40. This does not mean that one must dot every "i" and cross every "t" prior to allowing BOC entry. And it also does not mean that a BOC has to do competitors' work for them. But it *does* require that the elements which Congress viewed as important for fostering local competition be in place. Loop unbundling and operations support systems are hardly trivial details, and they would

be difficult to enforce if not already in place.¹⁶

4. The Open Market Standard Ultimately Reduces Intrusive Regulation

41. Some have argued that, as a legal matter, the DOJ Standard entails discretion that lies outside DOJ's proper role under the Act; and that such discretion would result in regulatory micro-management by the DOJ, moving us in the direction of more rather than less intrusive regulation. On the role for discretion, it is mystifying why Congress included in the Act the Public Interest test to be conducted by the FCC and a substantial DOJ role in advising the FCC, if it did not intend to give these agencies discretion. The inescapable—and economically correct—conclusion is that one needs a reality check, in the form of agency “discretion”—rather than a formulaic analysis—to verify that local markets indeed are being opened.

42. The more interesting issue is whether, as critics claim, such discretion indeed entails more intrusive regulation than would a more permissive BOC entry standard and reliance on post entry enforcement to open BOCs' local markets. In fact, the reverse is true. Allowing BOC entry before the main systems for local competition are in place and attempting to mandate their implementation ex post would embroil us in a regulatory morass as it has in the past: having little incentive to comply, the BOCs would fight every requirement, and regulators would be hard pressed to dispute them especially as regards implementation of new arrangements. Moreover, attempting to enforce such requirements by specifying very specific measures would itself be highly intrusive.

¹⁶ In his South Carolina Declaration on behalf of BellSouth, Professor Hausman portrays the FCC as insisting on a “standard of regulatory perfection” and criticizes the FCC for denying Ameritech's Michigan application: “If all significant barriers to local entry have been removed, the Commission should permit BOC entry into long distance markets. However, even if say 95% of the barriers to entry had been eliminated and 5% remained, it would not be in the consumers' best interest to forgo the billions of dollars of consumers benefits from long distance competition to achieve the last 5% of entry barrier removal.” (¶ 11, footnote omitted.) I completely agree that one should examine the *marginal* benefits and costs of any policy. But Professor Hausman is wrong in suggesting that only minor details remained to be implemented in Michigan; and he sets up a straw man in stating “I recommend that approval be granted as soon as Sections 271 and 272 have been satisfied.” (¶42.) We all agree that approval should be granted once Sections 271 and 272 have been met. The point is, they have *not* been met in any of the three BOC applications to date, and the remaining barriers cannot be accurately portrayed as minor. (See Section C below.)

43. Judicious use of the § 271 entry authority is superior: the DOJ Standard insists on implementation of certain market-opening measures as a condition for BOC entry, while leaving to the BOCs—whose information on these issues is vastly superior to that of outside enforcers—the flexibility of how to best meet these requirements. The BOCs’ incentives to meet these requirements efficiently and expeditiously will be far greater—hence the need for regulatory micro-management will be less—if BOC interLATA entry is conditioned on the local market first being open to competition.

44. In short, the DOJ’s entry standard will greatly reduce the need for future regulation. By doing more to open local markets to competition now, it permits a more rapid move towards substantially lighter regulation later; indeed, this is the underlying philosophy of the Act’s entire local competition provisions. A more permissive BOC entry standard ultimately would invite far more micro-management.

C. The Open Market Standard Does Not Unduly Delay BOC InterLATA Entry

45. It is important to be clear about the workings of the DOJ Standard, in order to understand why the Standard does not impose undue delay of BOC entry.

1. Assessing Market Openness: No Metric Tests or Other Rigid Markers

46. Kahn and Tardiff portray my standard accurately: “[Schwartz’s] preferred metric is the presence of competition (par. 20). In situations where rapid competitive entry was not economic, he would allow the RBOCs to rebut the presumption that their actions were responsible for the delay (par. 21).” (Kahn and Tardiff, ¶ 60.) This approach is no more than common sense: the best evidence that the local market has indeed been opened to competition through all three entry modes—facilities, resale, and unbundled elements—is to observe such competition on a meaningful scale. Failing to observe this for one or more of the entry modes is not taken as proof that the market has not been opened. Rather, it calls for further inquiry to satisfy oneself that the lack of entry is not due to lingering artificial barriers. The BOCs, who would be in the best position to demonstrate that

they have indeed removed artificial barriers under their control, would bear the burden of proof. Such a shifting of presumptions in light of observed market outcomes is neither novel nor unreasonable.

47. ***No metric tests.*** Contrary to some claims, the DOJ Standard does *not* require incumbents to lose any specified number of customers. It does require adequate demonstration that incumbents' wholesale support systems be capable of permitting large numbers of customers to switch to competitors reasonably rapidly and smoothly should customers wish to switch. Such switching capability is critical. Since the vast majority of local subscribers are currently customers of the incumbent, if switching of customers is impeded then entry—through any of the three modes—would be stopped dead in its tracks. In California, for example, MCI and AT&T's efforts to enter the market were frustrated when PacBell's systems for processing resale orders broke down, causing substantial delays before a customer could be switched to a competitive carrier and leading those companies to end their marketing campaigns.¹⁷

48. A BOC's mere assertion that the relevant systems are ready to go obviously should not suffice. While the best evidence of such systems' capability would come in the form of observing actual competitors making significant use of such systems, both the DOJ and the FCC have made it clear that other evidence also would be acceptable. Such evidence, can include: experience in other states using the same system(s); carrier-to-carrier testing; independent audits; and, if these options are not available, even self testing by the BOCs.¹⁸

49. ***Observing all three entry modes.*** Professors Gilbert and Panzar write:

“We however respectfully disagree (with Schwartz ¶ 20) . . . that ‘*use on a commercial scale of the new access arrangements needed to support all three modes of local entry envisioned in the Act [facilities-based, unbundled elements and resale] demonstrates that competitors are obtaining what they need from the BOC.*’ A requirement to show checklist compliance for all three entry modes would be contrary to conventional economic theory. The dispersion of actual entry between the three modes depends critically on the prices and conditions for

¹⁷ See MCI v. PacBell, Cal. PUC No. 96-12-026 (Sept. 24, 1997), at 27 (finding that MCI ceased marketing after PacBell built up backlogs of 4,000 to 5,000 orders and that, by PacBell's own admission, its systems did not offer their competitors resold services at parity).

¹⁸ See DOJ Oklahoma Evaluation, App. A, 81-89; DOJ Michigan Evaluation 22-23.

the UNEs and resold service from the incumbent. . .” (Gilbert and Panzar Reply, ¶ 9.)

50. I fail to see why there is disagreement. I made it clear in my affidavit that:

“Opening the market does not require evidence of local competition of all forms and in all regions of a state. . . (Schwartz Aff., ¶ 19.) . . . If sufficiently diverse competition fails to develop,...one possibility is simply lack of interest by entrants in pursuing certain entry modes in certain regions. (Schwartz Aff., ¶ 21). . . . if we are successful in ensuring that incumbents make available unbundled network elements at prices reasonably close to incremental cost and if such arrangements work smoothly, then it would be wasteful to insist that entrants build entirely their own facilities.” (¶ 170.)

51. Precisely for these reasons, I said that observing all three entry modes on a significant scale would be *sufficient* to establish that the market has been opened to this mode of entry; I did *not* state that it was *necessary*. Rather, it shifts the presumption: “...we do not expect to see all forms of competition everywhere. However, if sufficiently diverse competition is not observed, . . . it is important to ascertain that competition is not being stifled by artificial barriers. . . Reversing this presumption requires verifying that the main elements of an open market indeed are in place.” (¶ 179.)

52. Professors Gilbert and Panzar also criticize this approach of shifting presumptions, by arguing that one could not hope to observe all three entry modes concurrently: “A requirement to show checklist compliance for all three entry modes would be contrary to conventional economic theory (because only the most profitable mode will be chosen).” But they overstate the case. It is perfectly plausible to observe all three entry modes concurrently, for at least two reasons.

53. First, a given entrant may well find that different entry modes are best suited for serving different classes of customers (*e.g.*, small residential v. large business) or different geographic regions (*e.g.*, rural v. urban). Such a pattern is not unlikely given that the Act stipulates different pricing rules governing unbundled network elements, and resale, and that cost conditions vary for serving different regions or different customer classes. Thus, an entrant may prefer to serve: low

volume users by reselling the incumbent's services; medium volume users through unbundled loops; and high volume users by building its own facilities.¹⁹

54. Second, entrants are heterogeneous in the skills that they bring to the market and in what they require from incumbents. Thus, an entrant whose comparative skills are in retailing may opt to pursue resale, while another who plans to offer innovative vertical services may prefer to provide its own switch and lease other unbundled elements.

55. Indeed, we do observe all three entry modes attempted in the same state. In Michigan, Brooks Fiber serves some customers entirely over its own facilities, and others over unbundled loops leased from Ameritech; and other entrants, such as USN and AT&T, entered through resale.²⁰ Entrants are also employing all three entry paths in New York.²¹

2. Meeting the Standard is Largely Within BOCs' Control

56. Kahn and Tardiff, while accurately characterizing the DOJ Standard, argue that it would be extremely contentious and unworkable: "Rather than requiring regulators to satisfy themselves only that 'the requisite *arrangements* necessary to open the local market are made available...' it would require them additionally to assess the degree to which that availability has *proved effective*—that is, whether 'meaningful local competition' has 'emerged' and, if not, 'why'—both complicated

¹⁹ The greater a customer's volume, the greater the traffic-sensitive charges an entrant would pay the incumbent for leasing its switch; to avoid these charges, the entrant may prefer serving medium volume users not through resale but through its own switch, while leasing the incumbent's loop. For high volume customers, such as large businesses in dense business centers, the entrant may prefer building entirely its own facilities, including loops, *e.g.*, because this allows the entrant better quality control and greater ability to customize and vary services later.

²⁰ Application of Ameritech Michigan Pursuant to Section 271, CC Docket No. 97-137, Evaluation of the Department of Justice at 31-32 and Appendix B (June 25, 1997).

²¹ In the Matter of the Application to the FCC by New York Telephone for Approval to Provide In-Region InterLATA Services in New York, Vol. 1. Filed with the NYPSC February 18, 1997. (As in Michigan, use of unbundled elements was in combination with the entrant's own facilities—no BOC is yet providing a "platform" of all the unbundled elements.)

questions.” (¶ 65.) This alleged vagueness “... gives opponents of RBOC entry into interLATA markets new opportunities to use the regulatory process to delay that entry.” (¶ 63.)

57. To some extent, our disagreements are semantic. The surest way to confidently ascertain that arrangements have truly been made available is to observe meaningful local competition. I know of no other easy way to ascertain this. Thus, if meaningful local competition fails to develop, there is no escaping the admittedly complex inquiry as to whether the market is open..

58. Though I am sympathetic to Kahn and Tardiff’s concerns that complexity and vagueness offer scope for gaming by opponents of BOC entry, it is not opponents who decide whether to authorize BOC entry. One must also remember that a permissive BOC entry standard also would encourage abundant gaming— by the BOCs against local entrants. And whereas delaying BOC interLATA entry will not stop other entities from entering that market, delays by BOCs in opening their local market will substantially impede the development of local competition. Let us not forget—it is the BOCs not the IXCs who control the key bottlenecks in telecommunications.

59. Finally, compliance with the DOJ standard need not unduly delay BOC interLATA entry. It entails steps that are largely under a BOC’s control.

60. To the extent BOCs are complaining about their interLATA entry being delayed, experience to date shows that it is *not solely* because of the public interest standard and the DOJ’s examination of whether local markets are fully and irreversibly open to competition. SBC’s Oklahoma application was denied because SBC failed to meet the Track A or B threshold tests; Ameritech’s Michigan application was denied because Ameritech failed to meet checklist requirements such as OSS for resale and for unbundled elements, adequate nondiscriminatory interconnection, and provision of unbundled transport. I recognize that future situations may arise where a BOC has met the other minimum legal criteria but, because of the continued existence of *significant* additional entry barriers, its local markets are not fully and irreversibly open to competition. If such a situation arose, I would conclude that denial of the application would still be justified, for reasons discussed in my original affidavit (Section V.D, especially ¶¶ 189-190). But to date, there is no basis for suggestions that the DOJ’s entry standard is to blame for denial of BOC interLATA entry.

II. INFLATED ESTIMATES OF GAINS IN INTERLATA MARKET FROM BOC ENTRY

61. In my original affidavit I stressed that, all other things equal, there were likely benefits from earlier authorization of BOC entry. A BOC in its region enjoys certain advantages over many other potential entrants into interLATA services, notably its established reputation and relations with virtually all customers. These advantages may enable it to economize on retailing costs by offering integrated services, and to provide consumers with the benefits of one-stop shopping. And since long-distance competition is not perfect, BOC entry could further benefit consumers by forcing down IXCs' margins.

62. As explained in Part I of this affidavit, however, the existence of potential benefits from BOC entry does not imply that early authorization is desirable on balance, as one also must consider the potential costs from delayed opening of local markets. I now wish to address two issues raised by BOC experts: (1) that by virtue of also providing exchange access, a BOC has stronger incentives than do other interLATA competitors to reduce interLATA prices, because stimulating calling volume would also increase its profits from *access*; and (2) that, for this and other reasons, the benefits of BOC entry are likely to be enormous. For instance, Professor Jerry Hausman, in his Michigan Declaration on behalf of BellSouth, forecasts nationwide benefits of \$6.7 billion annually to residential consumers alone (Hausman 1, ¶ 13); and Professor Paul MacAvoy “conservatively” projects \$1.9 billion annually to long-distance consumers (residential and business) in just Ameritech's region (MacAvoy Michigan Reply Aff., ¶ 35).

63. Section A below examines BOC incentives to cut interLATA prices, demonstrating that the analytic basis for expecting large reductions of the magnitude predicted by Professors Hausman or MacAvoy is dubious. Moreover, the same argument Professor Hausman uses to justify BOC entry—reduction of “double marginalization”—also supports a standard that speeds up local competition. Section B shows that the evidence from interLATA entry by two major non-BOCs, SNET and GTE, also does not support dramatic gains of the size projected by Professors Hausman and MacAvoy.

A. BOCs’ “Unique Incentives” to Cut Prices Are Far Weaker Than Asserted, and Such Incentives Do Not Support Early BOC Entry If That Would Retard Local Competition

1. Increasing Access Profits by Stimulating InterLATA Minutes Through Reducing “Double Marginalization”

64. Professor Hausman argues that a BOC has far stronger incentives to cut prices in an imperfectly competitive interLATA market than do existing IXCs or any interLATA entrants that are not integrated into providing exchange access services. Each additional long-distance minute increases access use and thus BOC profit from access. Since this consideration is absent for providers that lack their own access facilities, a BOC’s incentive to cut long-distance prices is stronger.

65. It is worth noting at the outset that Section 272 of the Act requires a BOC to charge to an affiliate or to impute to itself an access charge no lower than what is charged to IXCs. This requirement would seem to restrict BOCs’ ability to behave in the manner stipulated by Professor Hausman and some other BOC experts.. Nevertheless, let us consider this argument as it relates to BOC *incentives*. While there is an element of validity to the argument, one should recognize its serious limitations: (a) IXCs and other carriers would have similar pricing incentives if they were able to provide *local* services, an ability that the Act aims to ensure by promoting local competition; (b) in the absence of significant local competition, BOCs would have incentives to attempt access discrimination against long distance carriers (raising their costs of accessing local networks or degrading their quality), for purposes of *raising* interLATA prices; and © even if such behavior could be adequately prevented, BOC incentives to cut prices would be considerably less than claimed, since BOC margins on access are falling and—according to BOC experts—are already lower than interLATA retail margins, margins that would be threatened by aggressive BOC price cutting.

66. ***Incentives for others to vertically integrate into local services.*** The argument that BOCs would have uniquely powerful incentives to cut interLATA prices by virtue of being vertically integrated overlooks the incentive of others, such as IXC, to vertically integrate into the provision of exchange access. Like BOC interLATA entry, such integration also could eliminate the “double marginalization” which arises today because access is priced well above marginal cost (and because the interLATA market is not perfectly competitive). Just as a BOC, if allowed interLATA entry, would recognize the positive impact on its access business from stimulating interLATA output, so would an IXC if it could integrate into providing exchange access. Indeed, it is inaccurate to couch the “double marginalization” distortion as arising solely due to imperfect competition in interLATA services. Rather, the distortion arises whenever non-integrated and imperfectly competitive firms at *both* stages—exchange access and interLATA retail—choose their prices ignoring the beneficial impact that a price cut would have on sales and profits at the other stage. One could just as accurately portray “reduction of double marginalization” as requiring entry by IXCs into exchange access to reduce inflated access prices. The key to reducing double marginalization is vertical integration, in either direction, and firms would have incentives to do so if they had the ability.

67. The *ability* of IXCs and other non-BOCs to accomplish such vertical integration, however, depends heavily on obtaining adequate cooperation from the BOCs in providing interconnection to and unbundling of their local networks. Consequently, a consideration of double marginalization does not necessarily suggest a more lenient standard for BOC entry, in large part because such a standard is less likely to elicit adequate BOC cooperation. Moreover, to stress a BOC’s unique ability to operate as an integrated provider would be to concede that the prospects for local competition in access are not rosy, a far cry from positions taken by BOCs in various proceedings.

68. ***BOC incentives to attempt non-price access discrimination against IXCs.*** The argument that the BOCs would like to see a lower average interLATA price than currently prevailing assumes that a BOC can compete only by lowering price, not by increasing competitors’ costs or degrading their quality through network access discrimination. (It also assumes, as discussed shortly, that a BOC would not capture a large share of the interLATA market.) Since the average elasticity of demand for long-distance services is estimated to be well below 1 (0.7 is a consensus figure),

interLATA industry revenue would be increased by raising price and accepting the reduction in output, hence profits would also be increased (as costs would decrease due to reduced output). Thus, an integrated monopolist over both access and downstream long-distance sales *would prefer to raise, not to lower, the average interLATA retail price* from today's level. (A perfect cartel of IXCs—if it existed as some BOC experts claim—would prefer an even higher price, since IXCs do not collect access profits and thus perceive higher marginal cost of offering interLATA service than would an integrated monopolist that would collect such profits.)

69. Following this logic, a BOC entering interLATA retail services and that was capable of expanding its own output rapidly would have incentives to nudge the industry towards the higher monopoly price, by using technological access discrimination to inflate competitors' costs or degrade their quality, thus enabling the BOC to raise its own price. (It would have a similar incentive also for purposes of shifting sales from competitors to itself if competitors were earning supra-competitive margins, but the current discussion does not require the existence of such margins.) Hausman's contrary argument, that a BOC would prefer *lower* prices, assumes away the ability of a BOC to undermine IXCs through such access discrimination. (It also assumes that a BOC would capture only a relatively small share of the IXC market unless it cut price vigorously, an assumption questioned below.)

70. My affidavit noted that regulatory and other safeguards can render the threat to IXCs' access arrangements tolerable, at least in the short run (Schwartz Aff., ¶ 14). However, if local competition fails to develop exchange access alternatives, then BOC interLATA entry is likely, over time, to pose a growing threat to the ability of IXCs to compete (Schwartz Aff., ¶ 160), since IXCs' access needs will change over time and preventing discrimination in the establishment of new access arrangements is considerably harder than preventing the degradation of established arrangements. In the longer run, therefore, the BOCs would have strong incentives and perhaps also the ability to raise interLATA prices by impeding IXCs' access to local networks.²²

²² For these reasons, Professor Hausman, in his Declaration on behalf of BellSouth in South Carolina, mischaracterizes my initial affidavit somewhat when he writes: "Indeed, Professor Marius Schwartz . . . concluded that no competitive problems are likely to exist from BOC entry into long distance, . . ." (¶ 41).

71. *Profit from BOC interLATA entry may come largely from diverting sales from IXCs than from expanding access use.* Assume for the sake of argument that a BOC would not be able to raise competitors' costs of providing interLATA services via access discrimination, as discussed above. BOC incentives to cut retail interLATA prices aggressively would still be more muted than suggested by BOC experts. This is because a BOC's increase in profit from expanding access minutes is likely to be considerably smaller than its profit from retail long-distance sales, hence BOC behavior is likely to be guided primarily by the latter rather than by access profits.

72. To see this, let us do some simple calculations using Professor Hausman's own figures from his Michigan Declaration on behalf of BellSouth. He estimates that BOC entry would reduce interLATA price to residential customers by about 18%. To be generous to Hausman, assume that this reduction would apply also to business customers.²³ Using his 0.7 estimate of long distance demand elasticity an 18% price reduction implies an increase in interLATA minutes of about 12.6%. The revenue to all BOCs from usage-sensitive access charges in 1995 was about \$16.7 billion (Schwartz Affidavit, Table 1). With an unchanged access price, the implied increase in access revenue from the 12.6% increase in minutes is \$2.1 billion. Hausman's figure for the *margin* of access above cost, 3 cents/minute, puts the access margin at about half of the average national access price in 1995. Thus, the implied increase in BOC annual *profit* from increased access minutes is less than \$1.05 billion.

73. By comparison, let us apply Hausman's projected price reduction of 18% to the entire interLATA market and assume that the BOCs market share within a few years would be 20%.²⁴ The

²³ In fact, the likely decrease is far smaller for business customers, as well as for many high volume residential customers, since competition for such customers is generally acknowledged to be stronger, leaving far less room for price reductions than in the case of low volume residential customers.

²⁴ For example, Professor Schmalensee cites a Yankee Group study indicating that BOCs could capture 10-15% of the market within 18 months of entry (Schmalensee Declaration on behalf of BellSouth in the South Carolina application, at paragraph 21). Within 18 months of its interLATA entry in 1996, GTE has already captured close to 10% of presubscribed long distance lines in their service areas, and without being a vigorous price competitor. SNET is said to have captured about 30% of long-distance lines and about 20% of revenues.

BOCs' resulting interLATA retail revenue would be \$7.1 billion.²⁵ The BOCs' profit from this \$7.1 billion in interLATA retail revenue is likely to exceed the extra \$1.05 billion profit from increased access minutes. For the ranking to be reversed, two things would have to hold: (a) typical IXC costs of providing interLATA services would have to be high relative to revenues; *and* (b) the BOCs' cost of providing interLATA retail services would have to be not significantly lower than those of a typical IXC. Condition (a) contradicts claims of certain BOC experts (such as Professor MacAvoy) that IXCs earn enormous profits; condition (b) contradicts BOC claims that their entry would realize substantial economies of scope from joint provision of local and interLATA services. Thus, if the BOCs' increased profit hinged primarily on expanded access usage, the implied conditions would undermine other BOC arguments for the great benefits that their interLATA entry would deliver. However, I believe that, even today, profit from BOC interLATA entry would come mainly from interLATA retail revenues. More importantly, looking ahead the profit contribution from BOC interLATA retail revenues is likely to outweigh considerably the additional profit from expanded access minutes. This is because the FCC's Access Charge Reform Order will reduce usage sensitive (i.e., per minute) access charges substantially over the coming years.²⁶

74. The key point in stressing that the bulk of BOC interLATA profits are likely to come from retail revenues rather than from increased access minutes is this: an increase in BOCs' share of interLATA revenues might be achieved largely by *diverting* output away from IXCs *not by expanding industry output*. Therefore, it need not hinge on reducing industry price significantly; and

²⁵ Long-distance revenue net-of-access in 1995 was \$50 billion (Schwartz Affidavit, Table 1). Since only 77% of interLATA minutes originate in BOC regions, suppose that so does 77% of the revenue, or \$38.5 billion. Assuming Hausman's price reduction of 18% and output increase of 12.6% due to BOC entry, the new revenue would be about 92% of the old figure ($0.82P \times 1.126Q = 0.92PQ$), or \$35.4 billion. A 20% share of this is \$7.1 billion.

²⁶ For example, see the May 8, 1997, presentation of Professor Joseph Farrell, at that time Chief Economist at the Commission. Average usage-sensitive charges affected by the Order were predicted to fall from 2.8 cents per minute at each end of an interstate call to approximately 1.2 cents per minute at the terminating and approximately 1.4 cents per minute at the originating end by January 1, 1999.

²⁷ Indeed, if a BOC could capture a sufficient share of the interLATA market without cutting price, it would seek a higher price than prevailing today. This follows from the earlier discussion showing that an integrated monopolist's preferred long-distance price exceeds the current average interLATA price.

hence a BOC may not have strong incentives to cut interLATA prices.²⁷

2. Disrupting an Allegedly Non-Competitive InterLATA Oligopoly

75. The extent of price reductions (if any) following BOC entry will depend on the competitive interactions in the interLATA market. One view offered by Bell affiants is that IXC's are tacitly colluding to some degree. This view has been espoused repeatedly by Professor Paul MacAvoy. The hypothesis of perfect collusion is inconsistent with estimates of long-distance demand elasticity of 0.7, that is, significantly less than 1; as noted previously, a perfect cartel in such case would have raised price in order to increase revenue and profit. However, assuming for the sake of argument that IXCs are engaging in imperfect tacit collusion, it is not obvious why the addition of one player should destroy such collusion. An alternative outcome is that IXCs would choose to accommodate the BOC. Indeed, there is evidence that the BOCs would like to avoid a price war, including the fact that BellSouth has announced that its prices will be at least 5% below AT&T's, but has not promised the 15-20% price cuts that Professor Hausman predicts.²⁸

76. Dr. Crandall and Professor Waverman, while not claiming that IXCs are colluding, argue that much of IXCs' currently high margins are being dissipated by wasteful non-price competition such as advertising, and that BOC entry would reduce margins and therefore also the incentive to engage in wasteful non-price competition. Putting aside the question of just how much of the non-price expenditures are truly wasteful as opposed to valuable to consumers, it is again not obvious why adding a competitor would so drastically alter the nature of competition.²⁹

77. I am not suggesting that BOC entry will yield no price reductions. I expect price reductions, and said so in my affidavit. However, the analytical basis for expecting *dramatic* reductions is weak, and I therefore believe that any price reductions would be considerably more modest than projected by some BOC experts such as Professors Hausman or MacAvoy.

²⁸ Brief in Support of Application by BellSouth for Provision of In-Region InterLATA Services in South Carolina, September 30, 1997, at 4, 78.

²⁹ Indeed, conceivably even more would be spent on advertising and other forms of non-price competition in order to "be heard" above the increased noise.

B. Other Reasons Why Estimates of Gains From BOC Entry Are Inflated

78. Professor Hausman's and Professor MacAvoy's figures are likely to overstate the benefits for several important additional reasons, beyond those discussed in Section A above.

1. Not All InterLATA Traffic Originates in BOC Regions

79. Professor Hausman assumes that BOC entry would bring about a price reduction of about 18% and applies this figure to *all* interLATA revenues from residential customers. But in 1995 only 77% of all interLATA minutes originated in BOC service areas (Schwartz Affidavit, ¶ 31). A BOC's impact on interLATA competition is likely to be far less outside its service regions, e.g., in regions served by other LECs such as GTE or SNET; moreover, the BOCs already are allowed to offer interLATA service originating out-of-region.³⁰ It is therefore inappropriate to extrapolate whatever interLATA price reduction one expects to emerge in a BOC's region—about 18% according to Hausman—also to regions served by non-BOC LECs. Making this correction would deflate Hausman's projected benefits to consumers by about one quarter—even assuming, counter factually, that his projected percentage price reduction in region is accurate.³¹

2. High-Volume Customers Already Enjoy Substantial Competition

80. Second, Professors Hausman and MacAvoy overestimate the scope of the likely price reduction in BOC regions. Even if BOC entry might plausibly yield price reductions of the order of 15% to *low-volume* residential customers that do not participate in IXCs' discount plans, the majority

³⁰ The fact that BOCs have made remarkably few attempts to enter out of region also casts doubt on claims by some BOC experts that interLATA markets are so hugely profitable today.

³¹ It is certainly true that when evaluating the benefits from increased local competition made possible by a suitable § 271 entry standard one also should focus primarily on BOC regions, not on those served by other LECs. But my affidavit did not attempt to present quantitative estimates of such gains extrapolated to all regions, and therefore is not subject to the criticism that I too "over-counted" the benefits from local competition.

of interLATA *expenditures* are made by higher-volume customers who do participate in discount plans and for whom competition already is more intense. For example, AT&T already offers 10 cents/minute anytime, anywhere with a relatively low flat monthly fee.³² High-volume residential customers subscribing to such plans are likely to see considerably smaller price reductions than those assumed by Professor Hausman.

3. Lessons from the Experiences of SNET and GTE

81. *Extent of price reductions.* The significant shares of interLATA residential customers migrating to SNET and GTE in their regions suggest the potential for welfare gains from BOC interLATA entry. However, the 17-18% average residential rate reductions predicted by Professor Hausman based on his interpretation of the SNET and GTE experiences overstates this potential substantially, for at least two reasons.³³

82. First, Professor Hausman selectively focuses on certain relatively high-priced AT&T rate plans and fails to consider lower rate plans already offered by AT&T and other IXCs. These low

³² A \$25-\$50/month residential customer on SNET's best rate plan pays 12 cents/minute for anytime, interstate calling. (The same SNET customer would have paid more in the January 1997 time frame used in Professor Hausman's affidavit because this favorable rate schedule was not available at the time.) An MCI customer with the same bill and "anytime" calling plan pattern also pays 12 cents/minute (less on Sundays); an AT&T customer between pays 11-13 cents/minute. For off-peak calling, Sprint's dime-a-minute rates beat SNET's rates for all but the largest residential customers (to whom SNET offers a dime-a-minute), and LCI's 9 cents/minute beats both of them.

³³ As explained shortly, even the price reductions projected based on the SNET record are exaggerated. However, Professor Hausman does not offer good support for his claims that GTE has priced competitively to the same degree as SNET. In fact, available evidence indicates that GTE has not priced aggressively against the major IXCs, but relied more on its in-region brand name recognition. For example, GTE's initial entry pricing strategy was simply to offer volume discounts of 10% off competitors' basic rates for bills of \$10/month and 25% for bills of at least \$25/month. (See Merrill Lynch, Telecom Services - Long Distance, August 12, 1996.) These discounts are comparable to the volume discounts off basic rates that customers could already get from AT&T. GTE today has only two long distance rate plans: one is the flat rate of 14 cents/minute under Total Call, which is only one cent below AT&T's 15 cent flat rate, and is above AT&T's 10 cents flat rate and MCI's 12 cent flat rate available to users who meet some basic volume requirements or pay a monthly fee. The other is the Easy Savings plan, with discounts from AT&T's basic rate for customers with bills of at least \$10/month and 25% for bills of at least \$25/month. As noted, such customers can obtain similar discounts from AT&T.

rate plans should induce customers to migrate from the particular, relatively high-priced AT&T schedules that Professor Hausman selected for his LEC/AT&T rate comparison, even absent the availability of SNET or GTE interLATA service.³⁴ In fact, for the *off-peak* callers that make up the bulk of the residential market, SNET and GTE do *not* offer the best interLATA rates available in their respective territories, *for any customer calling volume*.³⁵ For *on-peak* calling, competing carriers also have lower rates than GTE *for most service levels*, while the comparison of their rates with those of SNET's is mixed.³⁶

83. Second, although Hausman's submissions do not state how he weighted the rate schedules that he does compare, his 17-18% projected average price reduction appears to be based on initial average prices that are computed by weighting prices in discount and non-discount plans according to the number of customers in each. This ignores the fact that customers in discount plans tend to be the heavier users and account for a much higher share of both minutes and total expenditure.

84. This is not to deny that some SNET and GTE customers may well be enjoying better rates as a result of interLATA entry by these LECs. A likely benefit of in-region interLATA entry by the incumbent LEC is its marketing access to its broad customer base. Incumbent LECs that marketed

³⁴ In his submission in the present BellSouth proceeding, Professor Hausman does mention two of the more competitive standard AT&T calling plans. However: (a) he only compares the least favorable of these with SNET rates; (b) he makes the unrealistic assumption that the average call duration is only four minutes (thereby exaggerating the impact of SNET's shorter billing increments); and (c) he also applies discounts to the SNET rates that, according to SNET's customer representative, are not available on that schedule.

³⁵ As mentioned, GTE's best off-peak rate plan is a straight 14 cents/minute, anytime rate. For off-peak callers, AT&T, Sprint, and LCI all offer rates that beat GTE's by 30-35%. Sprint's and LCI's respective off-peak rates of 10 cents and 9 cents/minute dominate SNET's offers. (Sprint rebates a further 10% off the bill for customers spending at least \$25/month who maintain service for a year.) AT&T's 10 cents per minute off-peak rate matches SNET's.

³⁶ MCI beats SNET's best on-peak offer for customers with lower calling volumes. Sprint's, AT&T's, and LCI's respective off-peak rates of 10 cents, 10 cents, and 9 cents/minute dominate SNET's offers. (Sprint rebates a further 10% of the bill for customers that maintain service for a year.) For customers using under \$25 per month, MCI's 12 cents/minute anytime beats SNET's 15 cents/minute anytime rate. At calling volumes over \$50 per month, SNET's rates are the best of the major players' *standard* offers for callers with heavy on peak use, with the advantage around 10% at \$50 per month; less at greater calling volumes. However, SNET's penetration at high calling volumes is disproportionately small, perhaps because of the competitive importance of IXC's promotional calling plans offering very substantial additional savings at these calling volumes.

attractive interLATA rates would over time win some customers from incumbent IXCs, improving these customers' welfare directly. Indirectly, such ILEC offers ultimately would be a factor in inducing incumbent IXCs to improve their own offers or speed up the penetration of their more attractive current calling plans among their customer base. However, these effects are not measured well by Professor Hausman's comparisons; he does not distinguish the effect of ILEC entry from the effects of rate schedules already on the market.

85. ***Increased competition even absent BOC entry.*** Competition has been increasing in long-distance services to a significant extent even in the absence of BOC entry. AT&T's market share erosion has accelerated over the over the past 3 years as MCI, WorldCom, and particularly the smaller carriers have gained market share.³⁷ AT&T and its rivals have introduced residential rate plans that have reduced generally available rates.³⁸ Various Wall Street analysts refer to long-distance service as becoming increasingly a "commodity," and cite increased competitive pressures from resellers and smaller carriers.³⁹ Thus, it is misleading to argue that prices with BOC entry would be lower than without it by about 15-20% *in steady state*.⁴⁰ Rather, BOC entry would accelerate and perhaps deepen the already intensifying competition. Barring consolidation, this competition would bring interLATA prices lower even without BOC entry. The added reduction in

³⁷ See FCC "Long Distance Market Shares " Chart 2 and preceding tables, October 10 1997.

³⁸ Nonpromotional plans available to all residential customers include *One Rate Plus* (\$4.95 per month plus 10 cents/minute, anytime [AT&T]); *Simple Rate* (10 cents/minute, 7pm-7am, weekends; 25 cents/minute, 7am-7pm [AT&T]); *MCI One Rate Plan* (12 cents/minute, anytime, for customers using more than \$15 a month, and 15 cents/minute, anytime, for smaller customers; 5 cents/minute on Sundays for both type of customers); *Sprint Sense* (10 cents/minute, 7pm-7am, weekends; 25 cents/minute, 7am-7pm); *The LCI Difference* (\$3 per month, waived if the bill is more than \$15; 9 cents/minute, 7pm-7am, weekends; 15 cents/minute, 7am-7pm).

³⁹ See, for example, Merrill Lynch, Telecom Services - Long Distance, 12 August, 1996.

⁴⁰ For example, Professor MacAvoy lists "conservative" estimates of annual consumer benefits in Michigan of \$0.4 billion (\$1.9 billion for all of Ameritech's region) and puts the present value of this benefit stream at \$5.5 billion (\$23 billion for all region). This presumes that BOC entry gives a *permanent* increase in competition, as opposed to merely accelerating its evolution, as it presumes that consumers would get an additional \$0.4 billion *each year* with Ameritech entry than without it (MacAvoy Michigan Reply Affidavit, July 2, 1997, p. 5).

prices that hinges on BOC entry is therefore likely to diminish over time.

III. CONCLUSION

86. My purpose in this affidavit is not to engage in skirmishes over quantification of the exact benefits and costs of BOC entry, an exercise that I view as quite speculative. Rather, my purpose is twofold. First, I want to suggest—based on the analysis of Part I—that there is a broad range of plausible assumptions under which the gains from increased local competition will comfortably outweigh any likely loss due to delayed BOC interLATA entry. Second, I want to identify the numerous and serious exaggerations in some of the figures that have been touted.

87. The Section 271 entry authority is a key, if not the key, tool for prying open local markets. Therefore, it is also the key to ensuring that all providers are able to compete on an equal footing in offering integrated services that require the now-monopolized local inputs and services. The Department of Justice's Open Local Market Standard strikes a good balance between the costs and benefits of delaying BOC entry as needed to accomplish the competition goals of the Telecommunications Act, and is likely to accelerate considerably the development of competition in local and in integrated services compared with a more lax standard. It need not impose an onerous delay in BOC entry. And it ultimately will result in less intrusive regulation than would a policy that authorizes BOC entry prior to full implementation of the main new systems required for local competition and instead counts on regulators to disentangle the mess later.

I hereby swear, under penalty of perjury, that the foregoing is true to the best of my knowledge and belief.

Marius Schwartz

Subscribed and worn before me this _____ day of _____, 1997.

Notary Public

EXHIBIT 3

Disaggregated UNE-Loop Data for May through September 1999

May Loop

NEW YORK

NEW YORK UNE

	Prod	Num	Denum
UNE % Flow Through	18.32	383	2090
UNE % Flow Through Simple	20.69	383	1851
UNE % Flow Through Complex	0.00	0	239
UNE Completion Notification - Average Response Time	0.00	62	2737
UNE Completion Notification - % On Time	100.00	2737	2737
UNE Submission per Order Ratio	1.23	2274	1849

UNE POTS SERVICES:

Mechanized Orders:

Average Order Confirmation Response Time	1.53	43342	383
% Order Confirmation within 2 Hrs	98.43	377	383
Average Reject Response Time	0.00	27	74
% Reject within 2 Hrs	100.00	74	74

Electronically Received Non-Mechanized Orders < 10 Lines

Average Order Confirmation Response Time	36.05	3081277	1423
% Orders Confirmed within 24 Hrs	58.46	832	1423
Average Reject Response Time	44.42	649001	242
% Reject within 24 Hrs	43.80	106	242

Electronically Received Non-Mechanized Orders ≥ 10 Lines

Average Order Confirmation Response Time	36.53	99564	45
% Orders Confirmed within 72 Hrs	77.77	35	45
Average Reject Response Time	26.14	20456	13
% Reject within 72 Hrs	84.61	11	13

UNE SPECIAL SERVICES:

Electronically Received Non-Mechanized Orders < 10 Lines

Average Order Confirmation Response Time	34.24	107330	52
% Orders Confirmed within 48 Hrs	78.84	41	52
Average Reject Response Time	0.00	0	0
% Reject within 48 Hrs	0.00	0	0

Electronically Received Non-Mechanized Orders ≥ 10 Lines

Average Order Confirmation Response Time	46.30	8369	3
% Orders Confirmed within 72 Hrs	100.00	3	3
Average Reject Response Time	3.53	233	1
% Reject within 72 Hrs	100.00	1	1

UNE POTS COMPLEX SERVICES

Electronically Received

Average Order Confirmation Response Time	37.32	414376	184
% Orders Confirmed On Time	82.60	152	184
Average Reject Response Time	21.55	43379	33
% Reject on Time	90.90	30	33

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June Loop

NEW YORK

NEW YORK UNE

	Prod	Num	Denum
UNE % Flow Through	13.90	288	2071
UNE % Flow Through Simple	17.01	288	1693
UNE % Flow Through Complex	0.00	0	378
UNE Completion Notification - Average Response Time	0.00	68	3271
UNE Completion Notification - % On Time	100.00	3271	3271
UNE Submission per Order Ratio	1.24	2309	1864

UNE POTS SERVICES:

Mechanized Orders:

Average Order Confirmation Response Time	8.49	152381	288
% Order Confirmation within 2 Hrs	94.09	271	288
Average Reject Response Time	0.05	489	90
% Reject within 2 Hrs	98.88	89	90

Electronically Received Non-Mechanized Orders < 10 Lines

Average Order Confirmation Response Time	42.29	3482238	1366
% Orders Confirmed within 24 Hrs	51.09	698	1366
Average Reject Response Time	34.29	515245	249
% Reject within 24 Hrs	50.60	126	249

Electronically Received Non-Mechanized Orders ≥ 10 Lines

Average Order Confirmation Response Time	77.51	182188	39
% Orders Confirmed within 72 Hrs	84.61	33	39
Average Reject Response Time	37.19	17911	8
% Reject within 72 Hrs	87.50	7	8

UNE SPECIAL SERVICES:

Electronically Received Non-Mechanized Orders < 10 Lines

Average Order Confirmation Response Time	31.06	82100	44
% Orders Confirmed within 48 Hrs	77.27	34	44
Average Reject Response Time	22.00	2640	2
% Reject within 48 Hrs	100.00	2	2

Electronically Received Non-Mechanized Orders ≥ 10 Lines

Average Order Confirmation Response Time	62.41	3761	1
% Orders Confirmed within 72 Hrs	100.00	1	1
Average Reject Response Time	0.00	0	0
% Reject within 72 Hrs	0.00	0	0

UNE POTS COMPLEX SERVICES

Electronically Received

Average Order Confirmation Response Time	39.02	779953	333
% Orders Confirmed On Time	85.58	285	333
Average Reject Response Time	38.57	65425	28
% Reject on Time	85.71	24	28

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July Loop

NEW YORK

NEW YORK UNE

	Prod	Num	Denum
UNE % Flow Through	15.75	970	6156
UNE % Flow Through Simple	20.28	968	4773
UNE % Flow Through Complex	0.14	2	1383
UNE Completion Notification - Average Response Time	0.00	109	4954
UNE Completion Notification - % On Time	100.00	4954	4954
UNE Submission per Order Ratio	1.43	7740	5411

UNE POTS SERVICES:

Mechanized Orders:

Average Order Confirmation Response Time	1.53	109221	968
% Order Confirmation within 2 Hrs	95.66	926	968
Average Reject Response Time	0.10	3676	358
% Reject within 2 Hrs	97.76	350	358

Electronically Received Non-Mechanized Orders < 10 Lines

Average Order Confirmation Response Time	30.42	6687882	3630
% Orders Confirmed within 24 Hrs	58.70	2131	3630
Average Reject Response Time	30.44	1331584	722
% Reject within 24 Hrs	56.64	409	722

Electronically Received Non-Mechanized Orders ≥ 10 Lines

Average Order Confirmation Response Time	31.54	334963	175
% Orders Confirmed within 72 Hrs	84.57	148	175
Average Reject Response Time	34.37	118410	57
% Reject within 72 Hrs	84.21	48	57

UNE SPECIAL SERVICES:

Mechanized Orders:

Average Order Confirmation Response Time	95.32	11463	2
% Order Confirmation within 2 Hrs	0.00	0	2
Average Reject Response Time	0.00	0	0
% Reject within 2 Hrs	0.00	0	0

Electronically Received Non-Mechanized Orders < 10 Lines

Average Order Confirmation Response Time	36.38	615562	280
% Orders Confirmed within 48 Hrs	70.35	197	280
Average Reject Response Time	38.42	20898	9
% Reject within 48 Hrs	88.88	8	9

Electronically Received Non-Mechanized Orders ≥ 10 Lines

Average Order Confirmation Response Time	38.00	18239	8
% Orders Confirmed within 72 Hrs	87.50	7	8
Average Reject Response Time	0.00	0	0
% Reject within 72 Hrs	0.00	0	0

UNE POTS COMPLEX SERVICES

Electronically Received

Average Order Confirmation Response Time	31.23	2058016	1093
% Orders Confirmed On Time	85.36	933	1093
Average Reject Response Time	20.50	265041	212
% Reject on Time	91.50	194	212

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August Loop

NEW YORK

NEW YORK UNE

	Prod	Num	Denum
UNE % Flow Through	16.96	1583	9331
UNE % Flow Through Simple	19.78	1581	7990
UNE % Flow Through Complex	0.14	2	1341
UNE Completion Notification - Average Response Time	0.00	293	8234
UNE Completion Notification - % On Time	100.00	8234	8234
UNE Submission per Order Ratio	1.29	11259	8720

UNE POTS SERVICES:

Mechanized Orders:

Average Order Confirmation Response Time	0.29	45190	1581
% Order Confirmation within 2 Hrs	99.55	1574	1581
Average Reject Response Time	0.10	3828	400
% Reject within 2 Hrs	98.25	393	400

Electronically Received Non-Mechanized Orders < 10 Lines

Average Order Confirmation Response Time	23.03	8652383	6255
% Orders Confirmed within 24 Hrs	71.62	4480	6255
Average Reject Response Time	23.28	1225957	871
% Reject within 24 Hrs	67.50	588	871

Electronically Received Non-Mechanized Orders ≥ 10 Lines

Average Order Confirmation Response Time	36.37	338289	154
% Orders Confirmed within 72 Hrs	81.16	125	154
Average Reject Response Time	35.06	136890	65
% Reject within 72 Hrs	86.15	56	65

UNE SPECIAL SERVICES:

Mechanized Orders:

Average Order Confirmation Response Time	67.42	8124	2
% Order Confirmation within 2 Hrs	0.00	0	2
Average Reject Response Time	0.00	0	0
% Reject within 2 Hrs	0.00	0	0

Electronically Received Non-Mechanized Orders < 10 Lines

Average Order Confirmation Response Time	31.16	364027	194
% Orders Confirmed within 48 Hrs	77.31	150	194
Average Reject Response Time	26.07	9402	6
% Reject within 48 Hrs	83.33	5	6

Electronically Received Non-Mechanized Orders ≥ 10 Lines

Average Order Confirmation Response Time	31.16	9382	5
% Orders Confirmed within 72 Hrs	100.00	5	5
Average Reject Response Time	0.00	0	0
% Reject within 72 Hrs	0.00	0	0

UNE POTS COMPLEX SERVICES

Electronically Received

Average Order Confirmation Response Time	45.06	3084646	1140
% Orders Confirmed On Time	75.61	862	1140
Average Reject Response Time	27.22	599290	365
% Reject on Time	89.31	326	365

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NY Sep-99
Loop Ordering Metrics

NEW YORK	Prod	Num	Denum
UNE Loop			
UNE % Flow Through Total	17.35	1587	9146
UNE % Flow Through Simple	19.75	1587	8035
UNE % Flow Through Complex	0.00	0	1111
UNE % Reject Total	18.90	1675	8859
UNE % Reject Simple	16.04	1285	8009
UNE % Reject Complex	45.88	390	850
UNE Completion Notification - Average Response Time	0.0000	291	8410
UNE Completion Notification - % On Time	100.00	8410	8410
UNE Submission per Order Ratio	1.24	10945	8859
UNE POTS SERVICES:			
<i>Mechanized Orders:</i>			
Average Order Confirmation Response Time	1.05	100425	1587
% Order Confirmation within 2 Hrs	99.30	1576	1587
Average Reject Response Time	0.21	6488	508
% Reject within 2 Hrs	97.63	496	508
<i>Electronically Received Non-Mechanized Orders < 10 Lines</i>			
Average Order Confirmation Response Time	16.37	6226855	6336
% Orders Confirmed within 24 Hrs	87.56	5548	6336
Average Reject Response Time	17.70	760631	716
% Reject within 24 Hrs	75.27	539	716
<i>Electronically Received Non-Mechanized Orders ≥ 10 Lines</i>			
Average Order Confirmation Response Time	32.01	215159	112
% Orders Confirmed within 72 Hrs	89.28	100	112
Average Reject Response Time	38.77	141914	61
% Reject within 72 Hrs	91.80	56	61
UNE SPECIAL SERVICES:			
<i>Electronically Received Non-Mechanized Orders < 10 Lines</i>			
Average Order Confirmation Response Time	33.21	191347	96
% Orders Confirmed within 48 Hrs	77.08	74	96
Average Reject Response Time	35.56	34147	16
% Reject within 48 Hrs	75.00	12	16
<i>Electronically Received Non-Mechanized Orders ≥ 10 Lines</i>			
Average Order Confirmation Response Time	24.74	13364	9
% Orders Confirmed within 72 Hrs	100.00	9	9
Average Reject Response Time	0.00	0	0
% Reject within 72 Hrs	0.00	0	0
UNE POTS COMPLEX SERVICES			
<i>Electronically Received < 10 Lines</i>			
Average Order Confirmation Response Time	60.06	3625758	1006
% Orders Confirmed On Time within 72 Hrs	62.52	629	1006
Average Reject Response Time	30.38	681944	374
% Reject on Time within 72 Hrs	89.03	333	374

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EXHIBIT 4

Disaggregated UNE-Platform Data for May through September 1999

May Platform

NEW YORK	Prod	Num	Denum
NEW YORK UNE			
UNE % Flow Through Simple	55.89	14065	25165
UNE Completion Notification - Average Response Time	0.00	1362	34786
UNE Completion Notification - % On Time	100.00	34786	34786
UNE Submission per Order Ratio	1.03	24926	24091
UNE POTS SERVICES:			
<i>Mechanized Orders:</i>			
Average Order Confirmation Response Time	1.30	1262004	14065
% Order Confirmation within 2 Hrs	97.28	13683	14065
Average Reject Response Time	0.37	22655	611
% Reject within 2 Hrs	89.52	547	611
<i>Electronically Received Non-Mechanized Orders < 10 Lines</i>			
Average Order Confirmation Response Time	36.29	24298480	11099
% Orders Confirmed within 24 Hrs	65.27	7245	11099
Average Reject Response Time	36.43	1449798	658
% Reject within 24 Hrs	66.71	439	658
<i>Electronically Received Non-Mechanized Orders ≥ 10 Lines</i>			
Average Order Confirmation Response Time	108.19	6499	1
% Orders Confirmed within 72 Hrs	0.00	0	1
Average Reject Response Time	0.00	0	0
% Reject within 72 Hrs	0.00	0	0

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June Platform

NEW YORK

NEW YORK UNE

	Prod	Num	Denum
UNE % Flow Through	55.26	23201	41979
UNE % Flow Through Simple	55.26	23201	41978
UNE % Flow Through Complex	0.00	0	1
UNE Completion Notification - Average Response Time	0.00	2102	57006
UNE Completion Notification - % On Time	100.00	57006	57006
UNE Submission per Order Ratio	1.04	43243	41551

UNE POTS SERVICES:

Mechanized Orders:

Average Order Confirmation Response Time	0.27	627569	23201
% Order Confirmation within 2 Hrs	98.06	22753	23201
Average Reject Response Time	4.57	419962	1413
% Reject within 2 Hrs	72.89	1030	1413

Electronically Received Non-Mechanized Orders < 10 Lines

Average Order Confirmation Response Time	17.50	20097481	18776
% Orders Confirmed within 24 Hrs	81.36	15278	18776
Average Reject Response Time	14.38	1027102	1170
% Reject within 24 Hrs	85.12	996	1170

Electronically Received Non-Mechanized Orders ≥ 10 Lines

Average Order Confirmation Response Time	73.07	4387	1
% Orders Confirmed within 72 Hrs	0.00	0	1
Average Reject Response Time	23.17	1397	1
% Reject within 72 Hrs	100.00	1	1

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July Platform

NEW YORK

NEW YORK UNE

	Prod	Num	Denum
UNE % Flow Through	59.40	28021	47172
UNE % Flow Through Simple	59.40	28021	47172
UNE % Flow Through Complex	0.00	0	0
UNE Completion Notification - Average Response Time	0.00	1512	47143
UNE Completion Notification - % On Time	100.00	47143	47143
UNE Submission per Order Ratio	1.06	52720	49827

UNE POTS SERVICES:

Mechanized Orders:

Average Order Confirmation Response Time	0.39	1104045	28021
% Order Confirmation within 2 Hrs	96.67	27089	28021
Average Reject Response Time	3.10	612818	3227
% Reject within 2 Hrs	86.14	2780	3227

Electronically Received Non-Mechanized Orders < 10 Lines

Average Order Confirmation Response Time	17.32	20137207	19148
% Orders Confirmed within 24 Hrs	84.88	16253	19148
Average Reject Response Time	22.28	3035979	2253
% Reject within 24 Hrs	75.36	1698	2253

Electronically Received Non-Mechanized Orders ≥ 10 Lines

Average Order Confirmation Response Time	18.06	3259	3
% Orders Confirmed within 72 Hrs	100.00	3	3
Average Reject Response Time	124.01	7441	1
% Reject within 72 Hrs	0.00	0	1

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August Platform

NEW YORK	Prod	Num	Denum
NEW YORK UNE			
UNE % Flow Through	67.13	33780	50319
UNE % Flow Through Simple	67.13	33780	50319
UNE % Flow Through Complex	0.00	0	0
UNE Completion Notification - Average Response Time	0.00	1816	50237
UNE Completion Notification - % On Time	100.00	50237	50237
UNE Submission per Order Ratio	1.05	54601	52084
 UNE POTS SERVICES:			
<i>Mechanized Orders:</i>			
Average Order Confirmation Response Time	0.11	385521	33780
% Order Confirmation within 2 Hrs	98.95	33428	33780
Average Reject Response Time	0.40	110737	2773
% Reject within 2 Hrs	93.43	2591	2773
<i>Electronically Received Non-Mechanized Orders < 10 Lines</i>			
Average Order Confirmation Response Time	12.14	12135575	16535
% Orders Confirmed within 24 Hrs	94.16	15571	16535
Average Reject Response Time	13.05	1268555	1617
% Reject within 24 Hrs	92.02	1488	1617
<i>Electronically Received Non-Mechanized Orders ≥ 10 Lines</i>			
Average Order Confirmation Response Time	24.59	5996	4
% Orders Confirmed within 72 Hrs	100.00	4	4
Average Reject Response Time	0.00	0	0
% Reject within 72 Hrs	0.00	0	0

**Produced to Department of Justice by Randal
Milch of Bell Atlantic via electronic mail on
October 11, 1999**

NY Sep-99
Platform Ordering Metrics

NEW YORK	Prod	Num	Denum
UNE Platform			
UNE % Flow Through - TOTAL	71.02	36006	50697
UNE % Flow Through Simple	71.02	36006	50697
UNE % Flow Through Complex	0.00	0	0
UNE % Reject Total	18.55	9768	52649
UNE % Reject Simple	18.55	9768	52649
UNE % Reject Complex	0.00	0	0
UNE Completion Notification - Average Response Time	0.0000	2099	50414
UNE Completion Notification - % On Time	100.00	50414	50414
UNE Submission per Order Ratio	1.10	58145	52649
UNE POTS SERVICES:			
<i>Mechanized Orders:</i>			
Average Order Confirmation Response Time	1.47	3183367	36006
% Order Confirmation within 2 Hrs	94.64	34079	36006
Average Reject Response Time	1.07	429769	6680
% Reject within 2 Hrs	92.63	6188	6680
<i>Electronically Received Non-Mechanized Orders < 10 Lines</i>			
Average Order Confirmation Response Time	13.32	11743226	14686
% Orders Confirmed within 24 Hrs	94.27	13845	14686
Average Reject Response Time	11.74	2172356	3082
% Reject within 24 Hrs	94.93	2926	3082
<i>Electronically Received Non-Mechanized Orders ≥ 10 Lines</i>			
Average Order Confirmation Response Time	18.67	5602	5
% Orders Confirmed within 72 Hrs	100.00	5	5
Average Reject Response Time	9.07	3266	6
% Reject within 72 Hrs	100.00	6	6

**Produced to Department of Justice by Randal
Milch of Bell Atlantic via electronic mail on
October 25, 1999**

EXHIBIT 5

Department of Justice Table of Bell Atlantic Electronically and Manually Processed Order Confirmation Times for June through August 1999

Electronically and Manually Processed Order Confirmation Times¹

Metric	June	July	August
NYPSC Metric OR-1-01 ² Average time to return flow-through UNE POTS order confirmations (LSRCs)	31 minutes	42 minutes	13 minutes
UNE-P only ³	27 minutes	39 minutes	11 minutes
UNE-L only ⁴	8 hours 49 minutes	1 hour 53 minutes	29 minutes

NYPSC Metric OR-1-03 ⁵ Average time to return manually processed LSRCs for UNE POTS orders of less than 10 lines	18 hours 40 minutes	19 hours 38 minutes	15 hours 23 minutes
UNE-P only ⁶	17 hours 50 minutes	17 hours 32 minutes	12 hours 14 minutes
UNE-L only ⁷	42 hours 29 minutes	30 hours 42 minutes	23 hours 3 minutes

NYPSC Metric OR-1-02 ⁸ Percentage of flow-through UNE POTS LSRCs returned within 2-hour standard	98.06%	96.64%	98.98%
UNE-P only ⁹	98.06%	96.67%	98.95%
UNE-L only ¹⁰	94.09%	95.66%	99.55%

NYPSC Metric OR-1-04 ¹¹ Percentage of manually processed UNE POTS LSRCs returned within 24-hour standard for orders of less than 10 lines	80.15%	80.70%	87.69%
UNE-P only ¹²	81.36%	84.88%	94.16%
UNE-L only ¹³	51.09%	58.70%	71.62%

Electronically and Manually Processed Rejection Notices

Metric	June	July	August
NYPSC Metric OR-2-01 ¹⁴ Average time to return flow-through UNE POTS rejection notices	1 hours 48 minutes	2 hours 25 minutes	36 minutes
UNE-P only ¹⁵	4 hours 57 minutes	3 hours 10 minutes	40 minutes
UNE-L only ¹⁶	5 minutes	10 minutes	10 minutes

NYPSC Metric OR-2-03 ¹⁷ Average time to return manually processed rejection notices for UNE POTS orders of less than 10 lines	31 hours 10 minutes	24 hours 30 minutes	17 hours 4 minutes
UNE-P only ¹⁸	14 hours 38 minutes	22 hours 28 minutes	13 hours 5 minutes
UNE-L only ¹⁹	34 hours 29 minutes	30 hours 44 minutes	23 hours 28 minutes

NYPSC Metric OR-2-02 ²⁰ Percentage of flow-through UNE POTS rejection notices returned within 2-hour standard	85.79%	87.30%	94.04%
UNE-P only ²¹	72.89%	86.14%	93.43%
UNE-L only ²²	98.88%	97.76%	98.25%

NYPSC Metric OR-2-04 ²³ Percentage of manually processed rejection notices returned within 24-hour standard for UNE POTS orders of less than 10 lines	71.32%	70.73%	82.90%
UNE-P only ²⁴	85.12%	75.36%	92.02%
UNE-L only ²⁵	50.60%	56.64%	67.50%

Endnotes

1. The data found in this Table are taken from the Dowell/Canny Declaration attached to Bell Atlantic's Brief at the pages noted below. The UNE-loop and UNE-platform data found in this Table are taken from the disaggregated reports supplied to the Department by Bell Atlantic and appended to this Evaluation as Exhibits 3 and 4.
2. Dowell/Canny Decl., Tab 3D at 78 (June), 90 (July), and 102 (August).
3. UNE-P Disaggregated Data at 2 (June), 3 (July), and 4 (August).
4. UNE-L Disaggregated Data at 2 (June), 3 (July), and 4 (August).
5. Dowell/Canny Decl., Tab 3D at 78 (June), 90 (July), and 102 (August).
6. UNE-P Disaggregated Data at 2 (June), 3 (July), and 4 (August).
7. UNE-L Disaggregated Data at 2 (June), 3 (July), and 4 (August).
8. Dowell/Canny Decl., Tab 3D at 78 (June), 90 (July), and 102 (August).
9. UNE-P Disaggregated Data at 2 (June), 3 (July), and 4 (August).
10. UNE-L Disaggregated Data at 2 (June), 3 (July), and 4 (August).
11. Dowell/Canny Decl., Tab 3D at 78 (June), 90 (July), and 102 (August).
12. UNE-P Disaggregated Data at 2 (June), 3 (July), and 4 (August).
13. UNE-L Disaggregated Data at 2 (June), 3 (July), and 4 (August).
14. Dowell/Canny Decl., Tab 3D at 78 (June), 90 (July), and 102 (August).
15. UNE-P Disaggregated Data at 2 (June), 3 (July), and 4 (August).
16. UNE-L Disaggregated Data at 2 (June), 3 (July), and 4 (August).
17. Dowell/Canny Decl., Tab 3D at 78 (June), 90 (July), and 102 (August).
18. UNE-P Disaggregated Data at 2 (June), 3 (July), and 4 (August).
19. UNE-L Disaggregated Data at 2 (June), 3 (July), and 4 (August).
20. Dowell/Canny Decl., Tab 3D at 78 (June), 90 (July), and 102 (August).
21. UNE-P Disaggregated Data at 2 (June), 3 (July), and 4 (August).
22. UNE-L Disaggregated Data at 2 (June), 3 (July), and 4 (August).
23. Dowell/Canny Decl., Tab 3D at 78 (June), 90 (July), and 102 (August).
24. UNE-P Disaggregated Data at 2 (June), 3 (July), and 4 (August).
25. UNE-L Disaggregated Data at 2 (June), 3 (July), and 4 (August).

EXHIBIT 6

CLEC Aggregate Performance Data for September 1999

Carrier to Carrier
Performance Standards and Reports
Interim Guidelines September 1999
Bell Atlantic - New York

LEGEND

UD = Performance metric is under development
N/A = No Activity
TBD = Performance standard is to be determined
I/C/W MRAs = Parity to be assessed in conjunction with missed appointments
1-9=5, 10+=Negotiated = 1-9 Loops, 5 days
10+ Loops, Negotiated
95% Completed Within
Window = Standard for Cut-Over Window
1 to 9 lines: 1 hour
10 to 49 lines: 2 hours
50 to 99 lines: 3 hours
100 to 199 lines: 4 hours
200 plus lines: 8 hours
EEL = 1-9 Loops, 15 days
10+, Negotiated
No Facilities, ECCD+15 Days
Disconnects, 2 Days
IOF = Facilities Check, 72 Hours
Facilities Available (Quantity 1-8), 15 Days
Facilities Available (Quantity > 8), Negotiated
Facilities not available, Negotiated
Jeopardy = 100% at least 24 hours before due date with facilities
100% at least 48 hours before due date without facilities

EXHIBIT 7

**Excerpt from Panel Testimony of
Bell Atlantic-New York on Costs
and Rates for ADSL/HDSL-
Compatible Loops and Digital-
Designed Loops, *In re: Proceeding
on Motion of the Commission to
Examine New York Telephone
Company's Rates for Unbundled
Network Elements, New York Public
Service Commission, Case 98-C-
1357 (Oct. 18, 1999)***

**STATE OF NEW YORK
PUBLIC SERVICE COMMISSION**

Proceeding on Motion of the Commission to Examine New York Telephone Company's Rates for Unbundled Network Elements

Case 98-C-1357

**PANEL TESTIMONY OF BELL ATLANTIC - NEW YORK
ON COSTS AND RATES FOR
ADSL/HDSL-COMPATIBLE LOOPS AND DIGITAL-DESIGNED LOOPS**

**Members of Panel:
Carmelo R. Curbelo
Richard L. Fowler
James Schafer
John White**

October 18, 1999

CASE 98-C-1357
PANEL TESTIMONY OF BELL ATLANTIC – NEW YORK
ON COSTS AND RATES FOR
ADSL/HDSL-COMPATIBLE LOOPS AND DIGITAL-DESIGNED LOOPS

1 DSL that BA-NY submitted to the FCC, and are covered by general
2 Infospeed rates, not in separately identified qualification charges.
3 The extent to which CLECs will incur conditioning costs depends
4 upon the terminating electronics that they choose to use and the ex-
5 tent to which they are willing to limit their offerings to customers
6 whose loops meet certain requirements. BA-NY has chosen, at least
7 for the present, to limit its own retail offering to loops of 15,000 feet or
8 less that do not require any conditioning, and accordingly does not in-
9 cur any conditioning costs. Other carriers may choose to offer their
10 DSL-based services to a wider range of customers, and if they do,
11 they may incur conditioning costs that BA-NY does not incur.

12 **A. THE QUALIFICATION PROCESS**

13 Q. Please provide an overview of the loop qualification process.

14 A. The primary means by which CLECs can obtain loop qualification in-
15 formation is by submitting queries to BA-NY's automated loop qualifi-
16 cation database (the "Database"). This Database supports both BA-
17 NY's retail service and the provision of unbundled ADSL/HDSL-
18 compatible links to CLECs.

19 Since the Database is still in the process of being built on a central-
20 office-by-central-office basis, in some cases a loop on which a CLEC

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1 wishes to offer an xDSL-based service may not yet be included in the
2 Database. Alternatively, if the Database shows that the loop does not
3 qualify, the CLEC may wish to determine *why* it is not qualified (e.g.,
4 the presence of load coils, the presence of Digital Loop Carrier
5 ["DLC"] equipment, or excessive loop length). (The particular infor-
6 mation that a CLEC may need to qualify a loop for its own services
7 depends on the nature of those services, and in particular on the
8 technical characteristics of the terminating electronics that the CLEC
9 chooses to use.) In such case, additional information can be
10 provided through a Manual Loop Qualification process. Further
11 information that may be of interest to CLECs offering specialized
12 services, such as cable gauges and the location of load coils, is
13 available through the Engineering Query process.
14 A CLEC that is offering services comparable to BA-NY's retail serv-
15 ices should be able to get all of the qualification information it needs
16 from the Database (provided that the Database has been created for
17 the central office in question). The Manual Loop Qualification and
18 Engineering Query processes recognize the fact that CLECs may
19 wish to offer services with more stringent technical requirements than
20 Infospeed DSL.

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**PANEL TESTIMONY OF BELL ATLANTIC – NEW YORK
ON COSTS AND RATES FOR
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1 Q. What charges are proposed for the qualification function?

2 A. A recurring Mechanized Loop Qualification charge, applicable to all
3 loops used to offer xDSL-based services, is proposed to recover a
4 pro rata share of the costs incurred in the creation and maintenance
5 of the Database. Non-recurring charges imposed on the requesting
6 carrier are proposed to recover the costs of Manual Loop
7 Qualification and Engineering Query.

8 **1. Mechanized Loop Qualification**

9 Q. What information can a CLEC obtain from the Database and how is it
10 obtained?

11 A. A CLEC can submit a query to the Database through BA-NY's stan-
12 dard Operations Support System wholesale interfaces, including both
13 EDI and the Web GUI. The query may identify the loop in question
14 by telephone number or address. The principal loop qualification
15 information that is available from the Database and that would be of
16 interest to CLECs is the total metallic loop length (including bridged
17 taps), as determined by an MLT test.¹³ The Database will also

¹³ An MLT test determines the effective length of a loop by measuring its capacitance. The process involves sending a voltage pulse from testing equipment located in an MLT test center, through a central office switch port, and down the loop being tested. Only working loops, *i.e.*, loops connected to a switch port and provided with dialtone, can be MLT-tested.

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1 Database will also indicate, however, whether or not the loop is
2 qualified for the offering of Infospeed DSL service. (A loop is deemed
3 qualified for Infospeed DSL if the total loop length, including bridged
4 tap, is less than 15,000 feet, if the loop is *not* served by DLC, and if
5 T1 is absent from the loop's binder group.¹⁴)

6 It should be noted that although the Database is accessed by
7 entering a particular telephone number or address, the loop
8 qualification information is generated and stored on a terminal-by-
9 terminal basis. The information returned from the Database indicates
10 whether qualified loops are available within the terminal serving the
11 specific location in question.

12 Q. How is the Database being created?

13 A. The creation of the Database for a particular terminal involves MLT
14 testing of a sample of the loops in that terminal. The testing is carried
15 out on an automated, bulk-testing basis that greatly reduces the time
16 and cost per test. The loop-length information obtained from the MLT

¹⁴ A "binder group" is a bundle of pairs, typically twenty-five, that are adjacent to each other within a cable. Transmission of T1 signals can interfere with xDSL transmission in nearby pairs, and *vice versa*.

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- 1 test is then associated in the database with the telephone number
2 and address of each of the loops served by that terminal.¹⁵
3 On an ongoing basis, the Database will be updated to reflect any
4 changes in loop qualification information resulting from modifications
5 or rearrangements to loop facilities (e.g., the upgrading of a particular
6 loop from copper to DLC).
- 7 Q. How many offices are currently included in the Database?
- 8 A. By the end of 1999, over 90 percent of offices with a CLEC collocation
9 presence are scheduled to be included in the Database. The effort
10 of including *all* New York offices in the Database is expected to
11 be completed within five years. Priority is being given to offices
12 based on BA-NY's proposed roll-out of retail Infospeed service, the
13 presence of CLEC collocation, and specific CLEC forecasts for the
14 offering of their own xDSL-based services.
- 15 Q. Is BA-NY considering the inclusion of additional loop qualification information
16 in the Database?

¹⁵ A preliminary step in the bulk testing process is generating a file listing the loops to be tested. Terminals that contain T1 in the binder group or that have less than a specified percentage of non-DLC loops are excluded from these files. Thus, loops in such terminals are not MLT-tested, and the terminals are simply recorded in the Database as non-qualified.

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1 A. Yes. As currently configured, the Database does not indicate why a
2 particular loop is unqualified for Infospeed (*i.e.*, whether the lack of
3 qualification is due to excessive length, or the fact that the loop con-
4 tains a DLC system, or the fact that the loop is in a binder group with
5 a cable being used for T1 transmission). Starting in the first quarter
6 of 2000, the Company plans to add additional fields to the Database
7 to include this information. These fields will be populated for newly-
8 qualified offices on an ongoing basis. For offices already in the Data-
9 base, the fields will be populated for terminals tested pursuant to the
10 Manual Loop Qualification process, as such manual testing is com-
11 pleted.

12 Q. Why doesn't the Database include *all* information that might be of in-
13 terest to CLECs intending to offer ADSL/HDSL-based services, and
14 that currently must be obtained through the Manual Loop
15 Qualification or Engineering Query processes?

16 A. Obtaining information on cable gauges, load coil locations, etc., for *all*
17 of BA-NY's loops — and using it to populate a greatly expanded da-
18 tabase — would require a massive and highly expensive effort.

19 Paper records ("cable plats") would have to be reviewed for literally
20 millions of loops. This would greatly expand the cost of the Database

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1 for all carriers, including those whose chosen technologies do not
2 require such detailed information. In contrast, under BA-NY's less
3 extravagant approach, unnecessary costs are not incurred to review
4 cable plats for loops that may never be used to offer xDSL-based
5 services. Moreover, under BA-NY's approach, the costs of paper-
6 record-review would be imposed in a cost-causative manner only on
7 those CLECs whose services require the additional information.

8 Q. What charges are associated with the Database?

9 A. BA-NY has proposed a Mechanized Loop Qualification Charge. This
10 is a recurring charge, imposed on all ADSL-capable loops ordered by
11 CLECs. (The associated cost is also identified as a cost of all loops
12 used to provide Infospeed DSL service, and is covered by the retail
13 rate for such service.)¹⁶
14 The Mechanized Loop Qualification Charge would not be imposed on
15 loops served by central offices that are not included in the Database

¹⁶ The charge is not based on the actual (*i.e.*, historical) costs of creating and maintaining the Database, but rather on the estimated, forward-looking costs of the functions involved in Database creation and maintenance. Moreover, with respect to Database creation, *only* the costs associated with MLT testing are recovered in the charge. Any additional costs (for example, the costs associated with excluding from MLT test files loops equipped with DLC technology or loops located in binder groups with T1 facilities) are not recovered in the wholesale charge.

The development of the Mechanized Loop Qualification charge is discussed in detail later in this testimony.

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1 at the time of the CLEC request. It also would not be imposed on
2 CLECs that choose not to consult the Database prior to ordering an
3 ADSL/HDSL-compatible loop or DDL.

4 Q. What activities are involved in Database maintenance?

5 A. The activities involved in Database maintenance are related to pro-
6 gram changes, loading and extracting data, and the updating of the
7 records in the database performed by engineers in the Facilities Man-
8 agement Center ("FMC"). In general, these activities will be con-
9 ducted on an ongoing basis as a consequence of changes in
10 facilities, growth in loop plant, and CLEC requests for additional
11 information not originally included in the Database.

12 This expense is in no way related to the computer-operations, soft-
13 ware-development, and database management type expenses as-
14 signed for recovery through Annual Cost Factors ("ACFs") under such
15 USOA Accounts as 6724 (Information Management).

16 **2. Manual Loop Qualification**

17 Q. What information is available through the Manual Loop Qualification
18 process?

19 A. Information available through Manual Loop Qualification process in-
20 cludes: (a) total metallic loop length (inclusive of bridged tap), (b)

EXHIBIT 8

**CLEC Aggregate Performance Data
on UNE Complex Services for June
through September 1999,
Disaggregated According to 2-Wire
Digital (ISDN) and ADSL Services**

Carrier to Carrier
Performance Standards and Reports
Bell Atlantic - New York
CLEC Aggregate Performance
UNE COMPLEX SERVICES
Supplemental Data

Metric #		Performance		Volume	
		BA	CLEC	BA	CLEC
Jun-99					
Ordering Performance					
<i>2 Wire Digital Loops</i>					
OR-1-03 & 05	Average Order Confirmation Response Time		39.40		935
OR-1-04 & 06	% Orders Confirmed On Time		69.19		935
OR-2-03 & 05	Average Reject Response Time		30.21		140
OR-2-04 & 06	% Reject on Time		72.85		140
<i>ADSL Loops</i>					
OR-1-03 & 05	Average Order Confirmation Response Time		61.56		5
OR-1-04 & 06	% Orders Confirmed On Time		40.00		5
OR-2-03 & 05	Average Reject Response Time		50.52		5
OR-2-04 & 06	% Reject on Time		60		5
Provisioning Performance					
<i>2 Wire Digital Loops</i>					
PR-2-01 & 02	Average Interval Completed (Disp. & No Disp.)		4.70		431
PR-4-04 & 05	% Missed Appointment - BA (Disp. & No Disp.)		0.70%		713
PR-6-01	% Installation Troubles within 30 Days		12.23%		777
<i>ADSL Loops</i>					
PR-2-01 & 02	Average Interval Completed (Disp. & No Disp.)	9.00	6.00	27	7
PR-4-04 & 05	% Missed Appointment - BA (Disp. & No Disp.)	3.57%	0.00%	28	7
PR-6-01	% Installation Troubles within 30 Days		UD		9

Jul-99					
Ordering Performance					
<i>2 Wire Digital Loops</i>					
OR-1-03 & 05	Average Order Confirmation Response Time		29.38		1490
OR-1-04 & 06	% Orders Confirmed On Time		78.85		1490
OR-2-03 & 05	Average Reject Response Time		21.26		292
OR-2-04 & 06	% Reject on Time		83.56		292
<i>ADSL Loops</i>					
OR-1-03 & 05	Average Order Confirmation Response Time		64.45		51
OR-1-04 & 06	% Orders Confirmed On Time		45.09		51
OR-2-03 & 05	Average Reject Response Time		39.28		30
OR-2-04 & 06	% Reject on Time		66.66		30
Provisioning Performance					
<i>2 Wire Digital Loops</i>					
PR-2-01 & 02	Average Interval Completed (Disp. & No Disp.)		5.91		505
PR-4-04 & 05	% Missed Appointment - BA (Disp. & No Disp.)		2.20%		998
PR-6-01	% Installation Troubles within 30 Days		14.27%		1051
<i>ADSL Loops</i>					
PR-2-01 & 02	Average Interval Completed (Disp. & No Disp.)	10.63	6.09	342	44
PR-4-04 & 05	% Missed Appointment - BA (Disp. & No Disp.)	0.88%	0.00%	342	56
PR-6-01	% Installation Troubles within 30 Days		3.57%		56

Aug-99					
Ordering Performance					
<i>2 Wire Digital Loops</i>					
OR-1-03 & 05	Average Order Confirmation Response Time		31.50		687
OR-1-04 & 06	% Orders Confirmed On Time		86.89		687
OR-2-03 & 05	Average Reject Response Time		25.38		152
OR-2-04 & 06	% Reject on Time		87.50		152
<i>ADSL Loops</i>					
OR-1-03 & 05	Average Order Confirmation Response Time		63.03		480
OR-1-04 & 06	% Orders Confirmed On Time		59.37		480
OR-2-03 & 05	Average Reject Response Time		28.43		222
OR-2-04 & 06	% Reject on Time		88.73		222
Provisioning Performance					
<i>2 Wire Digital Loops</i>					
PR-2-01 & 02	Average Interval Completed (Disp. & No Disp.)		7.82		169
PR-4-04 & 05	% Missed Appointment - BA (Disp. & No Disp.)		4.00%		350
PR-6-01	% Installation Troubles within 30 Days		12.66%		403
<i>ADSL Loops</i>					
PR-2-01 & 02	Average Interval Completed (Disp. & No Disp.)	7.19	7.21	637	332
PR-4-04 & 05	% Missed Appointment - BA (Disp. & No Disp.)	3.02%	6.90%	637	449
PR-6-01	% Installation Troubles within 30 Days		4.64%		453

NOTE: WFA used for August ADSL Missed Appt. and Interval Data.

= Interval metrics revised to exclude customer caused misses.

Carrier to Carrier
Performance Standards and Reports
Bell Atlantic - New York
CLEC Aggregate Performance
UNE COMPLEX SERVICES
Supplemental Data

Metric #

Performance		Volume	
<i>BA</i>	<i>CLEC</i>	<i>BA</i>	<i>CLEC</i>

Sep-99

Ordering Performance

2 Wire Digital Loops

OR-1-03 & 05	Average Order Confirmation Response Time		40.08		328
OR-1-04 & 06	% Orders Confirmed On Time		78.35		328
OR-2-03 & 05	Average Reject Response Time		20.46		131
OR-2-04 & 06	% Reject on Time		93.12		131

ADSL Loops

OR-1-03 & 05	Average Order Confirmation Response Time		67.29		805
OR-1-04 & 06	% Orders Confirmed On Time		55.40		805
OR-2-03 & 05	Average Reject Response Time		34.06		332
OR-2-04 & 06	% Reject on Time		81.02		332

Provisioning Performance

2 Wire Digital Loops

PR-2-01 & 02	Average Interval Completed (Disp. & No Disp.)		9.69		157
PR-4-04 & 05	% Missed Appointment - BA (Disp. & No Disp.)		1.30%		231
PR-6-01	% Installation Troubles within 30 Days		22.53%		182

ADSL Loops

PR-2-01 & 02	Average Interval Completed (Disp. & No Disp.)	7.69	7.88	586	328
PR-4-04 & 05	% Missed Appointment - BA (Disp. & No Disp.)	2.10%	3.22%	856	653
PR-6-01	% Installation Troubles within 30 Days		4.12%		655

NOTE: WFA used for September ADSL Missed Appt. and Interval Data.

EXHIBIT 9

**Excerpt from Bell Atlantic
Presentation to Assistant Attorney
General Joel I. Klein (Oct. 15, 1999)**

Bell Atlantic-New York 271 Application

October 15, 1999

“As the Act conceives it, the Bells must offer new entrants an equal opportunity to compete for local telephone service customers. And, once they have achieved this goal, the Act allows for Bell entry into the long distance markets in their respective regions.” Speech, The Race for Local Competition: A Long Distance Run, Not a Sprint, Nov. 5, 1997.

**Bell Atlantic Presentation to Assistant
Attorney General Joel I. Klein (October 15,
1999)**

Page 1

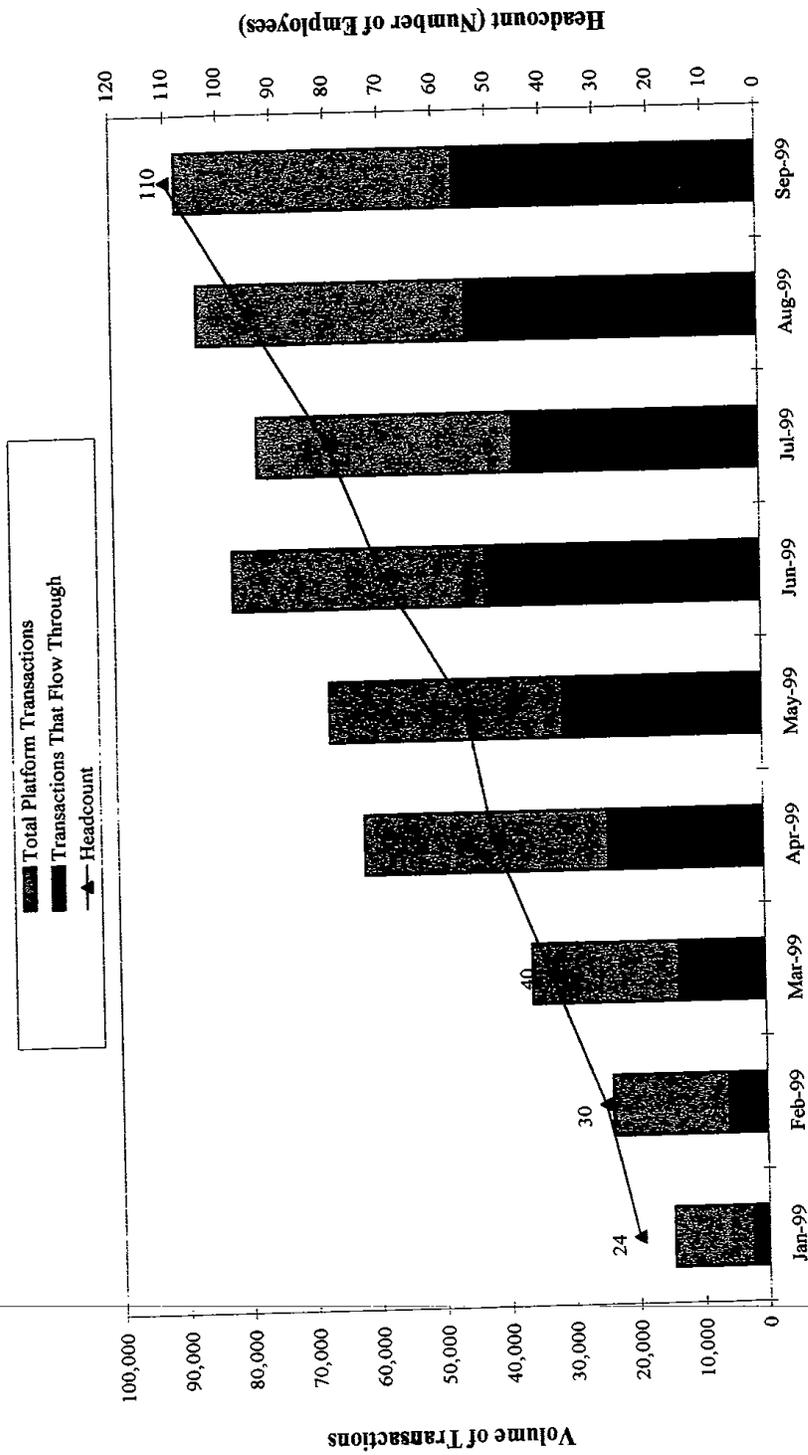
DOJ Ex. 9

Flowthrough

- Current flowthrough is sufficient.
 - Addressed in April 1998 Pre-Filing Statement.
 - All orders come in electronically (no PacBell situations).
 - All parties, including DOJ and CLECs, agreed to a list of transactions that BA should develop the capability to flow through.
 - KPMG tested and found that more than 99% of these transactions flowed through and that BA's systems are scalable (see Application at 42, 43).
- In practice, not all the orders that BA is capable of flowing through do flow through. This is overwhelmingly because:
 - CLEC errors (30% of orders that don't flow through).
 - Certain order types are designed not to flow through, and for good reason (62% of orders that don't flow through).

Bell Atlantic Presentation to Assistant
Attorney General Joel I. Klein (October 15,
1999)

Platform Transactions That Fall Out Are Handled With A Modest Workforce That Is Easily Scalable To Meet Increased Volume



Bell Atlantic Presentation to Assistant Attorney General Joel I. Klein (October 15, 1999)

- At DOJ's urging, we have committed to specific flowthrough improvements and to new performance standards administered by the NY PSC.

	of completed platform orders	of all orders
Current flowthrough	67%	52%
10/99 improvements (if CLECs waive notice period)	77%	67%
end of 1999 improvements	82%	74%
2Q2000 improvements	89%	85%

- New flowthrough standards:
 - 95% for order types designed to flow through
 - 80% overall
- **Even at current flowthrough levels, we complete 99% of orders on time.** See Application at 16.

-
- These numbers show the New York market is irreversibly open.
 - Presence of facilities-based competition means we have to make our own network open to competitors. Otherwise, we lose the business entirely. See Application at 57, quoting Schwartz Aff.
 - Other protections:
 - Performance Assurance Plan, administered by a very determined state commission.
 - BA needs to file other 271s to bring in GTE assets, particularly the BBN Internet backbone. That means we have to keep our record clean.
 - The next ramp up in local competition will occur when AT&T gets serious. Granting this 271 will force that.