COMMONWEALTH OF MASSACHUSETTS

DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

Investigation by the Department of Telecommunications and Energy upon its own motion pursuant to Section 271 of the Telecommunications Act of 1996 into the Compliance Filing of New England Telephone and Telegraph d/b/a Bell Atlantic – Massachusetts as part of its application to the Federal Communications Commission for entry into the in-region interLATA (long distance) telephone market	)	D.T.E. 99-271

MEASUREMENTS AFFIDAVIT

TABLE OF CONTENTS **PAGE**

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MEASUREMENTS AFFIDAVIT

1. My name is Beth A. Abesamis. I am the Director for Wholesale Performance Assurance. I am responsible for developing, implementing, and reporting the performance measurements for wholesale services provided to Resellers and Competitive Local Exchange Carriers ("CLECs") by Bell Atlantic-Massachusetts ("BA-MA") and the other Bell Atlantic-North telephone companies.

2. I have worked in the telecommunications industry since 1981. Prior to assuming my present position in January 2000, I was Director - OSS Planning. In that position, I directed a team responsible for planning Bell Atlantic's Network Engineering and Provisioning systems. From 1995 to 1998, I directed teams that developed and implemented the customer care and provisioning processes for Resale services and Unbundled Network Elements ("UNEs"). From 1992 to

1994, I had an international assignment with NYNEX in Bangkok, Thailand for a start-up telephone company in which I was the Director of Operations and Maintenance Support. My responsibilities in that position involved developing and analyzing the systems, processes, measurements and performance, associated with operations and maintenance functions. I was also responsible for training operations and maintenance technicians. Between 1981 and 1992, I held various positions of increasing responsibility in the following organizations: Business Office Operations, Asset-Inventory Management, Purchasing, and Capital Budgeting and Planning.

3. I have a Bachelors of Arts Degree in Psychology from the State University of New York at Stony Brook and an Executive Masters of Business Administration from Baruch College in New York City.

4. My name is Julie A. Canny. I am Executive Director – Operations Support and Implementation of Legal and Regulatory Requirements for Bell Atlantic Network Services, Inc. I am responsible for developing, implementing, and reporting the performance measurements for wholesale products and services provided to Resellers and CLECs by Bell Atlantic's local operating telephone companies. I am Bell Atlantic's principal representative regarding service performance metrics and remedies and represented Bell Atlantic in the Carrier-to-Carrier ("C2C") service performance collaborative conducted under the guidance of the New York Public Service Commission ("New York PSC") in its *Proceeding on Motion of the Commission to Review Service Quality Standards for Telephone Companies*, Case 97-C-0139 (hereafter "C2C"). I have testified before the Department in

various proceedings, most recently at the Technical Sessions held late last year in this proceeding.

5. I assumed my present position in August 1997, following the merger of Bell Atlantic and NYNEX. I had similar responsibilities for NYNEX from 1995 until the merger. From 1989 to 1995, I was Director of Quality for NYNEX. In that position, I developed performance measurements for business processes and supported all staff departments to implement quality processes. From 1985 to 1989, I held positions of increasing responsibility in Installation, Maintenance, and Construction Engineering in Boston and New Hampshire. From 1980 to 1985, I held various positions in Planning and Budgeting. Before joining New England Telephone and Telegraph Company, I was a Senior Statistician at Liberty Mutual Insurance Company, where I was responsible for the integrity of Workers Compensation experience filings with various regulatory bodies.

6. I hold a Bachelor of Science degree in Mathematical Economics and Management from Simmons College in Boston and a Master of Business Administration degree, with a concentration in Finance, from Babson College in Wellesley, Massachusetts.

7. There are six Exhibits associated with this Affidavit labeled A through F.

I PURPOSE

8. The purpose of this Affidavit is to describe the C2C performance measurements that BA-MA is presenting to support its compliance with the Section 271 checklist. The measurements cover the areas of Pre-Ordering, Ordering, Provisioning, Maintenance and Repair, Network Performance, Billing, and

Operator Services. The specific measurements were adopted by the Department in its Letter Order of January 14, 2000 ("Metrics Letter Order") and are the same metrics the New York PSC adopted in its C2C proceeding.[1] Exhibit A to this Affidavit contains descriptions of the measurements and associated standards. As described below, the only measurement calculated by a different methodology than the New York C2C Guidelines is PR-4-07 – the on-time measurement for Local Number Portability ("LNP"). BA-MA has developed this measurement in accordance with the Department's directives in the MediaOne arbitration, D.T.E. 99-42/43 (August 25, 1999).

9. This Affidavit presents the results of the C2C measures from July 1999 through February 2000 (Exhibit B1 (Summary), Exhibit B2 (Monthly)) and analyzes the performance data for that period. We also explain several instances in which the reported results do not appropriately reflect BA-MA's actual performance because of product and data issues. The Checklist Affidavit and the OSS Affidavit also address BA-MA's performance. The C2C results clearly show that BA-MA is consistently providing service to Resellers and CLECs at or above C2C standard levels for every measurement category, although particular individual measures may not meet the objective.

[1] The C2C metrics were developed over a period of several years through a collaborative process guided by the New York PSC. The New York PSC established interim metric guidelines in February 1998, and permanent metric guidelines in February 1999, June 1999, November 1999, and, most recently, February 2000. The New York PSC orders also require Bell Atlantic and CLECs to continue the collaborative process in a working group to keep pace with changes in the marketplace.

10. Finally, the Affidavit reports on the role that KPMG will play in validating the reported results. BA-MA expects that KPMG will confirm that it accurately records and reports the performance data.

II BACKGROUND

11. Several significant events regarding service performance measurements have occurred since the Technical Sessions were held in this proceeding last year. The first is the Federal Communications Commission's ("FCC's") approval of Bell Atlantic–New York's ("BA-NY") 271 application. ("FCC Approval Order"). In its ruling, the FCC noted the value of the New York C2C performance measurements and found that BA-NY's performance met its obligations under the Act.

12. Second, the Department adopted the C2C measurements for the purpose of evaluating BA-MA's performance in providing services to Resellers and CLECs. (*Metrics Letter Order* at 2) The C2C metrics adopted by the Department include the most recent version of measures adopted by the New York PSC on February 16, 2000. Moreover, the Department ordered that subsequent C2C developments in New York would apply here in Massachusetts. BA-MA has filed C2C performance reports for each month back to July 1999 in accordance with the Department's *Metrics Letter Order*, and will continue to file monthly reports with the Department.

13. Finally, on April 25, 2000, BA-MA proposed a self-executing Performance Assurance Plan ("PAP") that is currently being evaluated by the Department on a separate track in this Section 271 proceeding. BA-MA's PAP proposal is

modeled after the BA-NY "Amended Performance Assurance Plan" approved by the New York PSC in connection with BA-NY's entry into the long distance market. The FCC found that the BA-NY PAP was a comprehensive plan that would provide, together with other regulatory and legal remedies, a meaningful incentive for BA-NY to continue providing quality service to CLECs following Section 271 authorization and thereby ensure that the New York local exchange marketplace remains open to competition. (*FCC Approval Order* ¶ 429)

III PERFORMANCE MEASUREMENTS

14. The C2C Guidelines contain two types of performance standards. Where there is a retail analogue to a wholesale product or service, BA-MA's wholesale performance is compared to the retail analogue. This provides the Department with the ability to determine whether BA-MA provides service to CLECs "in substantially the same time and manner" as it does to its retail customers. This standard is referred to as a "parity" standard. Alternatively, where comparable products, services, or functions do not exist, the C2C Guidelines include numeric standard levels or benchmarks (often referred to as "absolute standards") for measuring the service BA-MA provides to CLECs. These benchmarks are not intended – and were not used by either the New York PSC or the FCC – as minimum performance levels necessary for BA-NY to satisfy its Section 271 responsibilities, rather, they serve as objectives for providing excellent service.

15. As shown in Exhibit A, the C2C Guidelines define measurements and performance standards for the following categories: Pre-Ordering, Ordering, Provisioning, Maintenance and Repair, Network Performance, Billing, Operator

Services and Directory Assistance. Within the applicable section of Exhibit A for each category, there are detailed definitions of each measurement (including a description of the products for which the measurement is reported), the relevant standards, and exclusions, if any. Exhibit A also includes a Glossary of terms that provides other significant definitions and references.

16. A series of Appendices to the C2C Guidelines provides additional information regarding processes, coding, methodologies, and status reports. For example, Appendix N notes the availability of each metric, and for those under development (labeled "UD" on reports) gives the expected availability date. The availability dates are the same for Massachusetts and New York. Generally speaking, the "UD" metrics are measures that require the disaggregation of existing C2C data by service or technology. To accurately accomplish the disaggregation of results, Bell Atlantic must address a range of issues, such as data collection and identifying appropriate comparison groups. Until the necessary analyses are complete, Bell Atlantic reports the aggregated performance, so that no wholesale product is excluded from performance reporting.

A. Pre-Ordering

17. The C2C Pre-Ordering measurements include: (i) the response times of BA-MA's Operations Support Systems ("OSS"); (ii) the availability of access to OSS; (iii) the availability of support functions (*e.g.*, Contact Center); and (iv) the timeliness of Change Management notices.

18. "Response time" measures the elapsed time between the transmission of request for Pre-Ordering information by a service representative (BA-MA, Reseller or CLEC) and the receipt of the information in a specific field and screen. BA-MA measures Pre-Order response time for the following transaction types: Customer Service Records, Due Date Availability, Address Validation, Product and Service Availability, Telephone Number Availability and Reservation, Facility Availability, rejected query, percent timeouts, and parsed CSR. Each of these is described in detail in Exhibit A.

19. Bell Atlantic has not historically collected or maintained actual OSS response-time data for its own retail Pre-Ordering operations. It has, therefore, developed a system to determine the response times experienced by BA-MA representatives for comparable Pre-Ordering inquiries performed by CLECs. This system – EnView (previously called Sentinel) – was described in Mr. Garbarino's May 24, 1999 affidavit (Garbarino Aff. ¶ 13).

20. The C2C standard for Pre-Ordering response times processed through Bell Atlantic's application-to-application interface is "parity plus not more than four seconds" for all Pre-Ordering transactions, except for percent Timeouts and Parsed CSR. That is, the average response time for Pre-Order queries sent by Resellers/CLECs should take no more than four seconds longer than the average response time experienced by BA-MA representatives for the same type of query. This four-second differential allows for variations in functionality and the security

requirements of the interface and was adopted by the Department in the *Consolidated Arbitrations*.[2].

21. The majority of the carriers in Massachusetts utilize a Graphical User Interface ("GUI") for Pre-Ordering inquiries. The results of actual GUI production response times are provided in Exhibit C. GUI response times are not included in the C2C Guidelines, and therefore, no standard has been established. The web-based logic for a GUI interface is different from the more efficient application-to-applications (EDI or CORBA), and the response time should be longer. In one Bell Atlantic state, Pennsylvania, the commission adopted an interim standard of a seven-second difference for GUI response time.

22. Recently, a response time metric was added to the C2C guidelines for an additional application-to-application interface – CORBA. Only one carrier currently accesses Bell Atlantic's OSS via the CORBA interface to perform its Pre-Order transactions. Bell Atlantic is developing an EnView procedure for this interface, which is expected to be implemented in June 2000. Bell Atlantic is able, however, to capture actual performance data from live production for CORBA. This data is contained in Exhibit D and shows that CORBA is meeting the OSS response time standards in all cases.

23. Bell Atlantic is developing the EnView scripts necessary to measure UNE Loop Qualification transactions placed via the EDI interface. To date, few actual transactions have, however, been placed over EDI. Significant activity exists on the GUI interface for this transaction type.

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[2] Phase III-E Order, dated September 25, 1998.

24. "OSS Interface Availability" measures the percent of time that the Pre-Ordering, Ordering, and Maintenance interfaces are available to carriers. BA-MA representatives and Reseller/CLEC service representatives obtain Pre-Ordering information from the same underlying OSSs. If the OSS itself is unavailable, it is equally unavailable for Resellers, CLECs and BA-MA. Any difference in the ability of a CLEC to reach an underlying OSS will, therefore, be caused by the unavailability of the interface by which Resellers/CLECs obtain access to the OSS. The interfaces offered to Resellers/CLECs are scheduled to be available 24 hours per day, 7 days per week. Advance notice of scheduled outages for system upgrades is provided to Resellers/CLECs in advance based on Change Management guidelines. This is described in the OSS Affidavit.

25. There has been one change to EnView since Mr. Garbarino's testimony. The EnView measurement period has been reduced from 15-minute segments to 6-minute segments. The effect of this change is to increase the number of monitoring points in the hour from 4 to 10 for a more accurate measure of OSS availability.

26. "Contact Center Availability" measures the speed of answer for the Telecommunications Industry Services Operations Center ("TISOC") and the Regional CLEC Maintenance Center ("RCMC"). BA-MA has designed its systems and processes so that Resellers/CLECs can enter orders and trouble tickets electronically. The ordering and repair assistance centers are not high-volume call centers for placing orders or reporting troubles, as are BA-MA's

retail centers. Instead, they are designed to provide information and assistance to Resellers/CLECs using the electronic interfaces.

27. For Resale and UNE ordering, when Resellers/CLECs call the order-processing assistance "800" number, the call is directed to the next available representative through an Automatic Call Distributor. The measurement begins when the call enters BA-MA's system. BA-MA measures the calls to the Resale/UNE centers separately and reports the average speed of answer and the percent of calls answered within 30 seconds. C2C Guidelines established a benchmark of 80% of calls answered within 30 seconds, since Bell Atlantic does not measure its own retail operations in this manner.

28. The C2C Guidelines include a number of metrics associated with Change Management, including the timeliness of Change Management notices and documentation, the timeliness of interface outage notices, the accuracy of new software releases, and timeliness of "debugging" new software releases. As discussed in the OSS Affidavit, these measurements focus on different aspects of the Change Management process and new release testing. The Change Management processes and procedures, which are common to all Bell Atlantic-North states, were attached to the initial BA-MA filing as part of Exhibit 6.

29. The "Average Notification of Interface Outage" metric measures the average elapsed time between Bell Atlantic's identification of an interface outage and Bell Atlantic's notification to Resellers/CLECs of the outage. Bell Atlantic provides notice to Resellers/CLECs using electronic mail. The C2C Guidelines establish a standard for notification of interface outages at 20 minutes.

30. The "Software Validation" metric measures the quality of new Bell Atlantic software releases that affect Reseller/CLEC transactions over the OSS interfaces. As indicated in the OSS Affidavit, Bell Atlantic, in consultation with the Resellers/CLECs, has developed a "test deck" of transactions designed to test new software releases. Bell Atlantic has committed that it will conduct all test-deck transactions in the production environment on the business day following the release of the new software to production and will report the number of test-deck transactions that are rejected or fail in this metric. Each failed transaction is weighted as specified in Exhibit A, Appendix O to the C2C Guidelines and the sum of the failed weighted transaction is compared to the total of all weighted transactions. The standard established by the C2C Guidelines is a failure rate of 5% or less. This metric and the one described below are unprecedented in the software industry and will be subject to review after six months of experience.

31. The "Software Problem Resolution Timeliness" metric measures the percent of rejected Pre-Order and Order transactions reported to the Help Desk within 30 days following a software release that are resolved within the target intervals. The C2C target intervals are 48 hours for rejected orders where there is no work-around, and 10 days for rejected orders where there is a work-around. These metrics are still under development as shown in Exhibit A, Appendix N.

32. The standard established by the C2C Guidelines is 95% timely resolution of these matters. In addition, BA-MA reports the cumulative delay hours or days (as appropriate) beyond the target interval if a problem is not resolved within the interval.

33. The "Timeliness of Change Management Notice" metric measures the percent of Change Management notices and documentation sent within the timeframes specified in the Change Management processes and procedures. Bell Atlantic also measures the cumulative delay days (days between when the notice or documentation should have been sent and when it is actually sent) for late notices and documentation.

34. The standard established by the C2C Guidelines is 95% of notices and documentation sent on-time, with no delays over eight days.

B. Ordering

35. Ordering measurements include: (i) the timeliness of order status notices, such as confirmations, reject notices, and completion notices provided to CLECs; (ii) the percent of orders that are rejected and that flow-through for CLECs; and (iii) service order accuracy. Order confirmations (Local Service Request Confirmations or "LSRCs" for Resale and UNE orders; Firm Order Confirmations or "FOCs" for interconnection trunks) and reject notices are returned to the CLEC over the same interface used to submit the order. The timeliness of order confirmations and reject notices for Resale and UNE orders is measured in hours from the time BA-MA receives the order until the confirmation or reject notice is distributed to the CLEC. BA-MA also measures the timeliness of FOCs, Design Layout Records ("DLRs"), and reject notices in days from when BA-MA receives the order until the FOC, DLR or reject notice is returned to the CLEC.

36. BA-MA reports separate measurements for the following types of Resale orders: POTS, Complex Services (2-wire digital and 2-wire DSL), and Special Services. POTS measurements, including pre-qualified Complex POTS orders, are reported separately for flow-through orders, for orders requiring manual handling that have fewer than 10 lines, and for those that have 10 lines or more. Measurements for Complex and Special Services are separated between orders that have fewer than 10 lines and those that have 10 lines or more.

37. BA-MA also reports separate measurements for the following types of UNE orders: POTS, Complex (2-wire digital and 2-wire DSL), and Special Services (*i.e.*, HDSL loops, IOF and other designed circuits). As with Resale, POTS measurements are reported separately for flow-through orders, for orders requiring manual handling that have fewer than 10 lines, and for those that have 10 lines or more. Measurements for Complex and Special Services are separated between orders that have fewer than 10 lines and those that have 10 lines or more. For UNE Special Services orders, BA-MA also reports separately on the confirmation and reject notice timeliness for faxed orders.

38. For interconnection trunks, BA-MA measures the timeliness of FOCs and DLRs and the timeliness of reject notices in business days, beginning from receipt of the Access Service Request ("ASR") to distribution of the FOC, DLR, or reject notice.

39. The time it takes to return each of these notices and the way it is provided to the CLEC depends on the type and volume of the wholesale product ordered, and the

method used to submit the service request. For example, with individual flow-through orders, electronic confirmation or rejection is completed within minutes.

40. If a CLEC accumulates orders and submits them in batches, however, it may take up to two hours to process the orders. Moreover, the order confirmations and reject notices described above are not received by BA-MA representatives as part of the retail ordering process. As a result, benchmarks were set in the C2C Guidelines for the timeliness of returning each type of notice for each product or service category identified above. These standards are set forth in Exhibit A. BA-MA reports both the average time to return each type of notice and the percent of notices that are returned within the established benchmark.

41. BA-MA also measures the timeliness of returning completion notices to CLECs for Resale and UNE orders. Timeliness is the elapsed time between actual order completion in the billing system and distribution of the order completion notice. When a BA-MA technician completes an order requiring physical work either in the field or in the central office, he or she notifies the administrative system that assigns jobs and manages the work force – Work Force Administration or "WFA." For most orders requiring physical work, WFA updates the Service Order Processing system ("SOP") to show that the work has been completed. For orders requiring no physical work, such as feature/translation changes, SOP is automatically updated during night-time processing. SOP then passes completion information to the billing system. The update to the billing records generally occurs overnight, and the completion notice is sent the next day.

42. Completion notices for Resale or UNE orders submitted electronically are returned electronically over the same interface used to submit the order. The C2C Guidelines establish a standard of 95% of completion notices returned by noon of the next business day. Interconnection trunks are completed with oral acceptance from the CLEC and are not included in the completion notice metric.

43. BA-MA has also implemented a provisioning completion notification that is provided to CLECs following SOP completion. For most orders requiring physical work, completion in WFA automatically generates a completion in SOP, and SOP generates a notice to CLECs from BA-MA's gateway system immediately. For orders that do not involve physical work, the notice is generated when SOP goes on-line in the morning, after system processing occurs at night. A measure of performance for this additional completion notification is under development.

44. BA-MA also measures the percent of orders it receives that are rejected by the system because of an error in, or the omission of, required information. Orders that are rejected may be directed to the TISOC for correction of certain errors or may be queried back to the CLEC for resubmission. BA-MA reports the percent of orders rejected separately for Resale and for UNEs. The C2C Guidelines do not establish a standard since the provision of correct information on an order is within the CLEC's control. The OSS Affidavit describes the training and assistance that BA-MA provides to CLECs to help them reduce the number of orders that are rejected.

45. "Flow-through" measures the percent of valid orders (orders not rejected or queried) received through the electronic ordering interfaces that are processed directly into the SOP without manual intervention. The denominator in this case is all electronically confirmed orders, whether or not they are of a type that is designed to flow-through to the SOP. BA-MA reports the overall flow-through percent and the percent of "simple" orders that flow-through. Simple orders are defined as orders for basic POTS services, excluding Centrex.

46. An additional metric adopted by the New York PSC in June 1999, measures "achieved flow-through," which is the percent of orders designed to flow-through that actually do flow-through. The standard developed was 95% achieved flow-through.

47. Bell Atlantic has worked collaboratively with members of the New York PSC staff and the Resellers/CLECs in the C2C Working Group to fine tune appropriate exclusions for this metric. BA expects closure on this issue in time for the six month review process ordered by the New York PSC.

48. Bell Atlantic has developed measures of "Order Accuracy" in compliance with the C2C Guidelines. Order Accuracy measures whether electronically submitted orders that are manually entered into the SOP match the CLEC's service request. In New York and New England, Bell Atlantic's review team manually audits a random sample of 20 Resale orders, 20 UNE-Platform ("UNE-P") orders, and 20 UNE Loop orders from each business day for each work center, and compares up to twelve (depending on the order type) required fields on the latest version of the LSR submitted by the Reseller/CLEC to the completed BA-MA service orders.

BA-MA reports both the percent of orders without mismatches ("Percent Accurate Orders") and the percent of audited fields on the orders that are not mismatched ("Percent Opportunities"). Orders that have at least one "mismatch" are scored as being inaccurate. Bell Atlantic then compares the total number of mismatched fields to the total number of audited fields (or opportunities) to provide an accuracy percentage for the audited fields. Finally, BA-MA measures the "Percent Accurate LSRCs" returned to the CLEC by reviewing up to nine required fields (depending on order type) on the confirmation notices sent to the CLECs. The C2C guidelines establish a standard of 95 percent for service order accuracy

49. The fact that particular audited fields are scored as a mismatch does not necessarily mean that the order cannot be processed or that service cannot be provided accurately. For example, a correction made to the service order where the Reseller/CLEC provided incorrect information (*i.e.*, zip code data) would be scored as a mismatch when the service order was compared to the LSR, even if the order was now correct. Also, the order in the SOP system may have information in an alternative field that the reviewer had not checked. This would be scored as a mismatch and yet have no impact on the service provided. The review team is working with the TISOC management team to modify procedures to ensure that all of the scored mismatches reflect real inaccuracies.

50. In addition, during a recent review of the key fields that were scored as mismatches, Bell Atlantic found operational issues that cause mismatches in the application date and due date fields.

51. Bell Atlantic discovered two main causes for mismatches in the application date field. First, in the Resale Center, Bell Atlantic representatives use the Direct Order entry system to input many orders. When orders are input on a day that differs from the application date on a valid LSR, the system automatically populates this field with the current date. The review team met with the TISOC Management and determined that this system constraint should not be scored as a mismatch. Additionally, this system constraint is being investigated in order to determine corrective action.

52. Second, in the Resale and UNE centers, a number of representatives were inputting the application date based upon the day they entered the LSR confirmation and not the date when the valid LSR was received. The TISOC management is currently addressing this situation with revised Methods and Procedures and retraining. Further discussion on this is found in the OSS Affidavit.

53. With respect to the due date field, Bell Atlantic again discovered two main sources of the mismatches. First, in the Platform Center, for orders requiring dispatch, the representatives were using the available SMARTS Clock date at the time they were preparing the order rather than checking to see what the available SMARTS Clock date was at the time an error-free LSR was received in the center. In the UNE Loop/Hot cut Center, representatives were calculating due dates from the LSRC date, rather than from the date of receipt of an error-free LSR. The TISOC management has addressed these problems with revised

Methods and Procedures and retraining. This is further discussed in the OSS Affidavit.

54. The fact that the results of this measure do not reflect BA-MA's true performance is further confirmed by the results for installation quality. Since customers would submit trouble reports if services they ordered were not installed, or were not installed correctly, if Bell Atlantic were actually generating inaccurate orders, installation quality measures (*e.g.*, percent troubles reported within 30 days of installation) would reflect this performance, and they do not.

55. In reviewing the results for LSRC Accuracy on Resale orders, only one field appeared to frequently show as a mismatch – ATN (account telephone number). Upon review, Bell Atlantic discovered that certain service representatives were under the impression that this field was automatically populated by SOP, and, therefore, did not populate it on the LSRCs. A revised method was issued to service representatives in May 2000, instructing them to take corrective action. The ATN on the LSRC does not impact order processing or completion. The UNE LSRC Accuracy has achieved 95% or better for all the reported months.

C. Provisioning

56. Provisioning measurements include: (i) intervals in which BA-MA provides service; (ii) the percent of missed installation appointments; (iii) installation quality; and (iv) percent of missed installation appointments for specified order types that were given jeopardy notices.

57. BA-MA measures the "Average Offered Interval" and the "Average Completed Interval" for retail, Resale, UNE, and trunk orders. In addition, BA-MA measures

the "Percent Completed within Interval" for POTS orders with five or fewer lines. The established C2C standard for these measures is "parity"– that is, BA-MA's performance for CLECs should be comparable to BA-MA's retail performance. With respect to interconnection trunks, there is no comparable function to offering appointments or determining due dates for the trunks BA-MA installs in its own network. Instead, the provisioning of CLEC trunks is most like the provisioning of trunks for interexchange carriers ("IXCs"). The C2C standard, therefore, uses IXC trucking as the "retail" comparison for CLEC trunk measurements. Standard provisioning intervals have been established for interconnection trunk orders that vary based upon the size and nature of the order as well as whether it was timely forecasted by the CLEC. These intervals are discussed in the Checklist Affidavit.

58. The "Average Offered Interval" metric is something of a misnomer. It is not the interval "offered" by BA-MA, but instead is the number of business days between the date a valid order is received and the committed due date (sometimes called the "appointed interval"). BA-MA confirms the due date to CLECs on the LSRC or FOC, but CLECs actually select the due date during the Pre-Order process. Depending on the type of service ordered, CLECs can select the next available appointment from BA-MA's SMARTS Clock, the standard interval from the CLEC Handbook, or a later appointment, depending on the needs of their customer and their business. SMARTS Clock is a feature in the SOP system that identifies available force by work group, compares it to the pending work-load, and determines the next available provisioning appointment. As orders are added or deleted, the work queue is modified and the appointment clock is changed

accordingly. This is the same system used to establish provisioning appointments for Bell Atlantic's retail customers.

59. The "Average Completed Interval" is the number of business days between the date a valid order is received and the actual work is completed. The "Percent Completed within Interval" is the percent of POTS orders for one to five lines completed within the specified number of days.

60. BA-MA measures Average Offered and Completed Intervals consistent with the way it performs and manages work for itself. As a result, for orders to install new service or change existing service, BA-MA reports average intervals separately for retail, Resale, and UNE orders requiring a dispatch and those that involve no dispatch. Intervals for dispatched orders for POTS services are further disaggregated by number of lines ordered. In addition, BA-MA reports average offered and completed intervals for disconnect orders for POTS and Special services. These reports are separated between dispatch and no-dispatch orders.

61. Within the above categories, BA-MA reports separately on the following product groups: POTS – residence Resale, business Resale, hot cut UNE loops, UNE-P, other UNE (switch and interim number portability), Complex Services (both Resale and UNE),[3] and Special Services (total, DS-0, DS-1, and DS-3 for both Resale and UNE). In addition, BA-MA reports on the following types of circuits: unbundled interoffice facilities ("IOF") and Enhanced Extended Links ("EELs"), IXC Feature Group D trunks, and CLEC interconnection trunks.

[3] Beginning with March 2000 results, 2-wire digital and 2-wire xDSL loops will be disaggregated.

62. "Percent within Interval" measures the percent of POTS orders for one to five lines completed within a specified number of days for retail, Resale, and UNE orders. The specified number of days reported are one, two, three, four, five, and six days. These are redundant and cumulative measures, *i.e.*, the completions included in the 2-day measure are also included in the 3-day measure. Similarly, an order not completed in four days was also not completed in one, two, or three days.

63. Two factors outside of BA-MA's control can affect reported results for the interval measures. First, BA-MA does not control the due date that is requested by CLECs. CLECs may offer their customers the due date that BA-MA offers for a service or they may offer a longer due date. Second, BA-MA does not have control over the types of services that are requested. That is, BA-MA does not control the proportions of different types of services (the "order mix") that a CLEC sells to its customers.

64. CLECs are offered intervals based on the same product interval that would apply to a BA-MA retail customer for similar or identical products. BA-MA's Product Interval Summary, which sets out the standard intervals for different types of products and services, is contained in Exhibit A, Appendix L. Where analogous functions exist, these intervals are the same for retail and for wholesale customers. For example, a migration of a customer to a Reseller can be completed on a "same day" interval. This type of transaction is very similar to a change-of-billing party in a retail transaction. Similarly, a CLEC that sells Call Waiting to one of its customers can offer its customer "same day" service, which is identical to the BA-

MA retail offered due date. A CLEC ordering a new line installation that requires dispatch can check available appointment dates in the same SMARTS Clock system that BA-MA representatives use, and can offer the customer the first available SMARTS Clock appointment date, just as a BA-MA representative would do. On the other hand, because a hot cut UNE loop has no retail equivalent, a C2C standard interval of five days has been established to allow for the coordination between BA-MA and the CLEC using an agreed-upon process.

65. The Product Interval Summary illustrates that different products can have very different provisioning intervals. Generally, the intervals reflect the amount of work effort involved to provision a product, the number of work steps, the complexity of the service, and the size of the order. Despite the fact that BA-MA is offering the same interval for the same products, a CLEC's average interval may appear different if the CLEC has a substantially different mix of orders than BA-MA. For example, if a CLEC sells high volumes of Call Waiting, and only a few basic feature changes, the average interval for that mix of orders will be longer than the average interval for BA-MA, which has a higher proportion of orders for basic feature changes, and a lower proportion of orders for Call Waiting. In other words, a CLEC that orders proportionately more products with longer intervals than BA-MA's retail customers order will have a longer average interval even though the CLEC is receiving "parity" service, because it receives the same intervals as BA-MA's retail customers for the same products.

66. Another factor that affects the Completion Interval results is the due date requested by CLECs. Even though BA-MA offers CLECs the same interval for

the same product as it does its own retail customers, the CLEC may request a longer interval (later due date), either because the end user wants the requested service at a later specified date or because the CLEC wants more time than the offered interval to prepare to provide service to the end user. If a CLEC requests longer intervals, its average completion interval will appear longer, even though it was offered the same intervals as BA-MA's retail customers. Bell Atlantic's experience is that CLECs frequently request intervals longer than the standard interval and that these requests, while perhaps only for a small number of additional days, can substantially distort the average results because the standard interval provided is itself only a small number of days. For example, adding two days to a five-day interval is a 40% increase in that interval. When a 40% increase is applied across 25% of the total orders, the result is a 10% overall increase in the interval.

67. To address this issue, the average offered and completion interval metrics permit BA-MA to exclude from the calculation orders where the due date is longer than the standard interval or first available SMARTS Clock appointment. The ability to exclude such orders from the calculation, however, depends on the CLEC correctly indicating when it has requested an interval longer than the offered interval. Under the established business rules, orders should be coded with an "X" when the customer (whether a CLEC or a retail end user) requests a specific due date that is later than what is offered by BA-MA. Orders coded with a "W" indicate the order requested the offered or standard due date. All W-coded orders are included in the calculation of the average completed interval. Therefore, if a

CLEC miscodes longer requested intervals as "W," those incorrectly coded orders will distort the reported completion interval results for comparison purposes, even though BA-MA provided service by the due date the CLEC requested.

68. BA-MA conducted an interval study for the months of January and February 2000 to assess the effects of CLEC order miscoding. In the study, 600 "W"-coded no-dispatch Resale orders and 600 retail orders were randomly selected. More than one-third (33.5%) of the Resale orders in the sample were incorrectly appointment coded by the Resellers as if they were standard interval orders. In reality, they were actually orders with longer requested intervals. These orders should have been identified by the Resellers as "X"-coded orders. In other words, 33.5% of the orders should have been excluded from the interval measurement because they carried longer CLEC-requested due dates. These caused the reported "offered" interval (and thereby the "completed intervals") to appear longer than the available appointment interval. The average interval before the orders were excluded was 1.41 days. However, when the orders were recalculated to exclude the CLEC requested longer interval, the average interval dropped to 0.36 of a day or less than half-a-day for no-dispatch orders. The retail comparison showed that the average interval was 0.50 of a day -after miscoded retail orders were similarly removed. An analysis of appointment coding for dispatch orders could not be completed without being able to replicate historic data from the SMARTS clock. However, for the eight months of data provided, the average difference between retail and Resale was again less than one-third of a day. These small differences are neither surprising nor significant.

69. For UNEs, BA-MA randomly selected 100 UNE-P orders that did not require a dispatch. BA-MA found that over 40% included appointment codes that should have been excluded since the CLEC requested a due date longer than the standard. When the interval was re-calculated excluding those orders, the interval went down significantly from 4.28 days to 0.80 of a day. This again is in the same range as its retail-analogue interval of half-a-day.

70. BA-MA also reviewed 144 randomly selected "W" appointed UNE Loop orders from January and February. The study orders were comprised entirely of xDSL, which have a fixed six-day interval after loop qualification. Since loop qualification is targeted for three days, nine days is the overall standard. The average interval for the loops in this study was 7.6 days, well within the standard interval.

71. BA-MA also reviewed 52 UNE non-dispatched orders comprised of hot cut loops with LNP that have a standard interval of 5 days for less than 10 lines. The interval for hot cuts is consistent with that agreed upon by the CLECs in collaborative sessions. Although there is no retail comparison for hot cut orders, the miscoding effect was again considerable. Here, 23% of the non-dispatched orders sampled had intervals requested by the CLECs that were longer than the standard available interval. These should have been "X"-coded and excluded from the performance measure. If these "X"-coded orders are removed from the sample, the interval drops almost 1 day – from 4.9 days to 4.1 days. Both of these results are consistent with the 5-day hot cut standard interval.

72. Similarly, CLEC miscoding was observed for LNP orders not requiring a hot cut. Here, a random sample of 188 orders was evaluated. Of these, 51% were actually longer requested intervals than the 3-day standard. These should not have been included in the performance measure. The interval for these orders went from 4.5 days down to 2.8 days when these orders were excluded, clearly within the standard interval. Again, there is no retail comparable service for LNP.

73. Overall the study shows that the C2C interval "offered," and therefore completed (*see* BA-MA's low missed appointment data), is substantially distorted by CLEC-requested intervals longer than those made available by BA-MA. This largely renders meaningless comparisons made either to retail orders or to fixed standard service intervals. Indeed, when the effects of such coding errors are removed, wholesale orders come into line with comparable retail orders or the applicable standard service intervals.

74. BA-MA has taken a number of steps to ensure orders are coded correctly. Specifically, product intervals are communicated to CLECs via the ordering processes and interfaces that are described in the OSS Affidavit. BA-MA has given written instructions to CLECs and held workshops with them regarding improper coding and correct product intervals. TISOC managers have reviewed coding and appointment interval issues with their CLEC counterparts. In March 2000, BA-MA implemented a system change for CLECs using LSOG 4 that compares the requested interval to the available interval and automatically populates the correct appointment code. This will diminish the effect of miscoded orders over time as CLECs begin to use LSOG4. However, even when the order

interval coding issue is overcome, differences in order mix will still cause absolute differences between order intervals for Resale/UNE CLECs and BA-MA for its retail customers.

75. Importantly, BA-MA also measures the percent of installation appointments missed for retail, Resale, UNEs, and trunk orders. This measure captures any orders which, because of BA-MA's fault, were not completed by the due date to which BA-MA committed. The factors of CLEC order mix and longer requested intervals discussed above, do not affect the results for these measures. This metric shows whether BA-MA met the installation appointment.

76. If the results for "Percent Missed Appointments" are good – and the reports attached to Affidavit show that BA-MA generally meets the wholesale due dates more often than it meets the retail due dates – this means that the CLECs are getting service when they request it. The Percent Missed Installation Appointments metrics thus provide a more meaningful measure of BA-MA's performance for CLECs than do the average interval metrics.

77. BA-MA measures missed installation appointments consistent with the way it performs and manages work for itself. As a result, BA-MA reports missed installation appointments separately for orders requiring a dispatch and those that involve no dispatch for retail, Resale, and UNE. Within the appropriate category, BA-MA reports on the following product groups: POTS, Complex Services, Special Services, and Trunks.

78. BA-MA also reports the "Average Delay Days" for the same product groups. This metric, which reports the number of business days between the committed

due date and the actual work completion date, measures the length of the delay for missed installation appointments. The standard for this metric is "parity." Until December 1999, BA-MA counted any delay associated with the order in the delay days, whether caused by BA-MA or the CLEC. This did not accurately identify BA-MA-caused delays. Accordingly, BA-MA implemented a system change to exclude CLEC and customer-caused delays from this metric. The data BA-MA now is reporting reflects its performance more accurately and allows a meaningful comparison between retail and wholesale performance. The system change took effect in January 2000, and is reflected in the January results. The results for previous months could not be corrected because of system constraints in retrieving historic data.

79. As a subset of missed installation appointments, BA-MA measures the percent of installation appointments missed because BA-MA lacked the necessary facilities. Measurements are reported for retail, Resale, and UNE orders for the following product types: POTS, Special Services, and Trunks. In addition, BA-MA reports the percent of orders missed for lack of facilities that are held for more than 15 and 60 days at the same level of disaggregation.

80. Finally, BA-MA reports the percent of installation appointments missed for customer reasons, for example, because the CLEC or its end user were not ready on the due date or because the BA-MA technician could not gain access to the CLEC customer's premises on the due date. Installation appointments missed for customer reasons are excluded from the missed installation appointment

measurement because these are not within BA-MA's control. This measure is provided in the C2C reports for informational purposes only.

81. BA-MA also separately reports the percent on-time performance for hot cuts and for LNP orders. The hot cut measure deals with coordinated cut-overs of the local loop from BA-MA to a CLEC which are completed within an agreed-upon cut-over window. The "window" is a fixed period of time ranging from one hour to eight hours, based on the number of lines involved in the hot cut. The "window" establishes the time within which the entire hot cut must be completed; no individual line is out of service for more than 5 minutes. The C2C Guidelines establish a standard of 95% completed within the window. Both the New York PSC and the FCC recognized that this service level was a performance objective, not a requirement of the Act.

82. The methodology used for percent on time for LNP is an interim measure in the C2C guidelines. This metric measures orders to port telephone numbers that do not require physical coordination between Bell Atlantic and the CLEC, and is designed to capture late placement of trigger orders or premature disconnects that could cause service interruption for the end user. Hot cuts and other coordinated porting of telephone numbers and network elements are not included in this metric; they are captured in the % on time Hot Cuts measure discussed above. Upon review of this methodology, Bell Atlantic found that the interim measure did not define all the necessary transactions required to complete these LNP orders.

83. BA-MA has modified the measure to include these transactions and to take into account the Department's ruling in the BA-MA/MediaOne arbitration case. The events that would cause an LNP order to fail because of BA-MA are its late placement of the LNP trigger or its premature disconnection of customer service from the BA-MA network. The modified measurement considers both of these events by measuring whether BA-MA has placed the LNP trigger before the CLEC activity on the due date and whether BA-MA disconnected service after the frame due time on the committed due date. Exhibit B contains reports based on the modified measurement methodology for the months of October through February.

84. Three CLECs specifically commented on BA-MA's ability to provision LNP at the Technical Sessions held last year. The results of BA-MA's performance for these carriers under the new methodology is included in our Exhibit E. Further discussion of LNP performance is contained in the Checklist Affidavit.

85. In addition to measuring the timeliness of provisioning, BA-MA measures provisioning quality. BA-MA measures installation quality by measuring the percent of trouble reports within 7 days and 30 days of service installation. These measures serve two purposes: (1) they track provisioning quality, since an end user will report a trouble if a newly installed service is not working properly; and (2) they are additional measures of service order accuracy, since an end user will report a trouble if a service ordered is not installed accurately. BA-MA measures installation quality for retail, Resale, UNE, and trunk orders for the following

product types: POTS, Special Services, interexchange carrier trunks, and CLEC interconnection trunks. The established standard for this measurement is "parity."

86. BA-MA has a measure under development to determine the percent of orders for EELs on which BA-MA gave a jeopardy notices to CLECs indicating the possibility of a missed appointment. BA-MA does not perform any comparable function for its retail operations[4].

D. Maintenance and Repair

87. Maintenance and Repair measurements include: (i) response time of the maintenance interface; (ii) trouble report rate; (iii) repair intervals; (iv) the percent of missed repair appointments; and (v) repair service quality.

88. "Response time" is the time that elapses between a representative (BA-MA or CLEC) sending a maintenance transaction and receiving a response. BA-MA measures response time for the following transaction types: (i) Create Trouble, (ii) Status Trouble, (iii) Modify Trouble, (iv) Request Cancellation of Trouble, (v) Trouble Report History (by telephone number or circuit), and (vi) Test Trouble (POTS only). The C2C standard for this metric is parity plus no more than 4 seconds.

89. BA-MA measures the repair OSS response times for its retail operations. The OSS system, "Caseworker," replaced another system that was not Y2K compliant in mid-1999. Actual CLEC transactions are measured at the access platform used by CLECs (for maintenance transactions, this is the Repair Trouble

[4] Generally, retail representatives do not receive any notice that an order is in jeopardy, and do not notify customers of a jeopardy. If a representative needs to respond to a customer inquiry, he or she can check the status of the order in the service order processor. A CLEC representative has

Administration System, or RETAS), and the results are the actual response time reported by RETAS.

90. The "Trouble Report Rate" is the number of troubles reported per 100 lines (or circuits or trunks) in service that are found to be in BA-MA's network. BA-MA measures the trouble report rate for retail, Resale, UNEs, and interconnection trunks. BA-MA reports separately for POTS, Special Services, and Trunks, consistent with the way BA-MA assigns and manages its work. For POTS, BA-MA disaggregates the measurement between trouble reports where the trouble is found in the loop (either the drop wire or outside plant) and those where the trouble is found in the central office.

91. BA-MA also reports the percent of "subsequent" reports – additional customer calls concerning a trouble that has already been reported and is pending – for POTS. In addition, BA-MA reports the percent of trouble reports that are found to be in customer premises equipment ("CPE") or that are not found ("found o.k." or "test o.k.") for POTS and Special Services. Both of these measures are reported separately for retail, Resale services, and UNEs. Neither measure is within BA-MA's control – indeed, percent CPE, "found o.k.," and "test o.k." reflect CLEC performance in diagnosing the trouble before reporting it – and therefore these measures are reported in the C2C Guidelines for informational purposes only.

92. "Missed Repair Appointments" measures the percent of POTS network troubles not repaired and cleared by the date and time committed. Appointments are not

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the same ability through the Service Order Inquiry or Order Status Inquiry functions in the Pre-Ordering interface.

given for Special Services or trunk troubles. Thus, there are no comparable measurements for those services. BA-MA disaggregates the missed appointment measures between troubles found to be in the loop and those found to be in the central office.

93. BA-MA reports a number of different measures concerning the duration of reported troubles. "Mean Time to Repair" measures the time, in hours, from receipt of a trouble report until it is cleared. For POTS services, the duration is measured on a "running clock" basis, which includes weekends and holidays. For Special Services and trunks, duration is measured on a "stop clock" basis, *i.e.,* the time during which CLEC testing takes place, BA-MA is waiting for carrier acceptance, or BA-MA is unable to obtain necessary access to perform repairs is excluded from the reported duration

94. BA-MA measures mean time to repair for retail, Resale services, UNEs and interconnection trunks for the following product categories: POTS, Special Services, interexchange carrier trunks, CLEC interconnection trunks. In addition, for POTS services, BA-MA disaggregates the measurement between troubles found in the loop and troubles found in the central office. BA-MA also measures the percent of all troubles cleared within 24 hours of being reported.

95. BA-MA also reports on the duration of troubles where the customer is out-of-service. For POTS, "out-of-service" means that there is no dial-tone, the customer cannot call out, or the customer cannot be called. For Special Services, "out-of-service" is defined on initial contact with the customer when it is determined that the circuit is completely out-of-service. BA-MA reports the

percent of troubles causing an out-of-service condition that remain out of service for more than a specified number of hours as follows: (a) for trunks – the percent out-of-service for more than two, four, twelve, and twenty-four hours; (b) for POTS services – the percent out of service for more than four, twelve, and twenty-four hours; and (c) for Special Services – the percent out of service for more than four and twenty-four hours.

96. Finally, BA-MA measures the quality of its maintenance and repair service by measuring the percent of reported troubles cleared – whether the initial disposition indicates a fault in BA-MA's network or not – that have another trouble reported within 30 days where the later trouble is found to be in the network. BA-MA measures the percent repeat reports for retail, Resale services, UNEs, and interconnection trunks for the following product categories: POTS, Special Services, and Trunks.

97. The performance standard established by the C2C Guidelines for the maintenance and repair measurements (other than the response time measurements, discussed above) is "parity." As is the case with provisioning measurements, the "retail" comparison for interconnection trunks is IXC Feature Group D trunks.

E. Network Performance

98. Network Performance measurements include blockage of final trunk groups and the timeliness of fulfilling collocation requests.

99. "Blockage" is a measure of calls that cannot be completed because trunking capacity is not available at the precise time a call is placed. Blockage can occur at many places both within and outside of BA-MA's network. "Common trunks"

carry local traffic, including both BA-MA and CLEC end user calls, between a BA-MA end office and a BA-MA tandem switch. "Dedicated trunks" carry traffic from a BA-MA tandem switch to the CLEC's switch. "High usage" trunks carry traffic between a BA-MA end office and the CLEC's switch and are designed to overflow to dedicated "final" trunks when capacity is reached. A "Final" trunk (whether dedicated or common) will not overflow to another trunk. When capacity is reached on a final trunk, blockage of calls occurs. BA-MA therefore measures blockage on final trunk groups – both common and dedicated.

100. Final trunk groups are designed to experience an acceptable level of blocked calls during the busy hour of the day. BA-MA's trunk groups are engineered using industry standard B.005 blocking tables. Based on data collected throughout the day, BA-MA determines the busy hour for each trunk group and records any blockage during that busy hour. BA-MA performs monthly trunk-group studies measuring actual busy hour blockage on both common and dedicated final trunk groups using the same underlying systems, processes and methods that have been used to engineer and monitor trunks in its network for years.

101. BA-MA reports the average percent of final trunk groups that exceed the engineered blocking design threshold each month, both with and without exceptions. CLECs are notified of trunk group measurement exceptions, such as trunk groups exceeding their designed blocking because of a CLEC network failure, trunk groups exceeding their designed blocking where an order to the CLEC for augmentation is overdue, trunk groups exceeding their designed blocking where the CLEC has not responded to or has denied a BA-MA request

for augmentation, and trunk groups exceeding their designed blocking as a result of other CLEC trunk network rearrangements.

102. Like other C2C measures, the results reported are aggregate CLEC averages. Here, because the average is a composite of 21-26 individual CLEC networks in the report period, the results for these individual carrier networks better depict the CLEC blocking experience. These data are provided with the Checklist Affidavit.

103. Actions by both BA-MA and the CLECs are required to prevent and correct trunk groups that exceed their blocking design. The Network Performance metrics included in the C2C Guidelines relate to trunks BA-MA must order from the CLEC. BA-MA monitors dedicated final trunk groups (carrying traffic from BA-MA to the CLEC). If BA-MA determines that additional trunk capacity is needed, based on the performance of the trunk group, the historical traffic trend, CLEC specific input (when provided) and engineering judgment, BA-MA issues a request to the CLEC to initiate trunk additions. BA-MA is dependent on the CLEC for expeditious processing of the request. In some cases in 1999, Massachusetts CLECs have run out of spare trunk switch hooks. This delays trunk relief jobs and causes individual trunk groups to exceed their blocking design for as long as it takes the CLECs to deliver and provision the order. The role of CLECs in the completion of interconnection trunking orders is discussed in detail in the Checklist Affidavit.

104. Moreover, CLECs have a substantial role to play in planning for interconnection because BA-MA is not aware of CLEC marketing plans. Stated another way, trend data alone may not allow BA-MA adequately to predict the quantities of

trunks that will be needed. The CLEC must add what it knows about unusual events, such as the addition of a new Internet Service Provider, to the trend data. In these situations, only the CLEC – not BA-MA – has sufficient knowledge of its plans to avoid trunk blocking.

105. Because of the CLECs' role in forecasting trunking needs and completing orders, sustained call blocking provides a better representation of BA-MA's performance than does a single month's report (which could be caused by a one-time aberration). Therefore, BA-MA also reports the number of dedicated final trunk groups that exceed their blocking design for two consecutive months and for three consecutive months.

F. Collocation Performance

106. BA-MA reports the following measures for both physical and virtual collocation requests from CLECs: the percent of on-time responses to requests for collocation, the average interval to complete collocation arrangements, the percent of arrangements completed on-time, and the average delay days – the interval between the committed due date and actual completion.

107. The standards established by the C2C Guidelines for percent on-time Response is 95% within 8 days for physical collocation and 95% within 14 days for virtual collocation in New York. However, the performance standard set by the Department is 10 days for each. The C2C standard for Average Interval is 76 days for physical collocation and 105 days for virtual collocation. Here again, the Department set a Massachusetts-specific interval requirement for providing virtual collocation arrangements at 76 business days, with a "stopped clock"

feature to account for delays caused by CLECs. (D.T.E. 98-57, Phase I Order) The standard for percent On-time Installation is 95% for both physical and virtual collocation.

G. Billing

108. Billing measurements include measures of timeliness for usage information and carrier bills provided to Resellers/CLECs. To comply with this requirement BA-MA measures the timeliness of delivery to Resellers/CLECs of Daily Usage Feed ("DUF") and of the carrier bill. The DUF provides Resellers/CLECs with each day's usage records for their end user customers. The carrier bill is the monthly invoice provided to Resellers/CLECs that incorporates charges for all of the products and services provided to the Reseller/CLEC by BA-MA.

109. BA-MA's central office switches collect and record usage data as calls are processed. BA-MA retail and Reseller/CLEC usage is captured at the same time, on the same tape, and delivered to the billing data center in the same way. Since usage data are captured for the entire switch, any delay in the capture or delivery of the data will affect both BA-MA and the Resellers/CLECs equally. Reseller/CLEC usage is identified by the account information and by the Operating Company Number ("OCN") and sent to the Reseller/CLEC each processing day via its choice of media "Connect:Direct" (formerly called Network Data Mover or NDM), tape, or cartridge.

110. In addition to DUF processing, BA-MA collects and holds a copy of the usage until the monthly bill generation. BA-MA then sends each Reseller/CLEC a bill including all recurring and non-recurring charges for services and products,

together with all usage associated charges that occurred for the CLECs' customers during the month.

111. BA-MA measures the timeliness of providing the DUF and the carrier bill to Resellers/CLECs. For usage, "Timeliness" measures the number of business days from the creation of a message to the date that the usage information is made available to the Reseller/CLEC on the DUF. This measurement is reported as the percent of usage records transmitted within three, four, five, and eight business days of creation. The report covers usage from both Resale and UNE customers.

112. The timeliness of the carrier bill is measured as the percent of carrier bills that are sent to the carrier within ten business days of the bill date (the end of the billing period for recurring, non-recurring and usage charges). Resellers/CLECs have a choice of receiving their bills by Connect:Direct, magnetic tape, cartridge, CD-ROM or paper. Resellers/CLECs have the same media options excluding paper. Accordingly, this measure excludes the time associated with the CLEC's choice of delivery method and focuses on the aspects of billing delivery BA-MA controls. The C2C Guidelines establish a standard of 95% within four days for daily usage feed timeliness. The standard established for delivery of the carrier bill is that 98% of bills should be sent within ten business days of the bill date.

113. "Bill Timeliness" is currently reported using an interim metric. The calculations are done manually for both New England and New York. Currently, carriers operating in New England are billed on a regional basis, and state-specific results are not available. During 1999, the metric results reported represented a combined New England/New York result. The 1999 reports have now been

recalculated to include only the New England results. Bell Atlantic expects to complete the development work to mechanize this metric in May 2000. The completion of this development effort will allow BA-MA to report on the timeliness of all carrier bills specific to Massachusetts.

114. "Billing Accuracy" is defined as the percent of carrier bill charges adjusted due to billing errors. The metric is designed to measure the percent of dollars adjusted and number of adjustments by calculating the dollar amount of adjustments for billing errors over total dollars billed, and the count of adjustments for billing errors over total bills. The standard established by the C2C Guidelines for Billing Accuracy is parity. This measure is under development by Bell Atlantic. Since November 1999, Bell Atlantic has manually calculated an approximate value for this metric by comparing all of the dollars adjusted to all of the dollars billed. This provides a comparison of the total adjustments to wholesale accounts versus retail accounts, but it does not measure only the adjustments made due to billing errors.

H. Operator Services and Directory Assistance

115. BA-MA reports the average speed of answer for its Operator Services (call completion) centers and its Directory Assistance centers.

116. Operator Services calls for Resellers/CLECs are handled in the same work centers, by the same operators and call distributors, as calls from BA-MA's end users. Bell Atlantic retail and Reseller calls are in separate call queues from CLEC calls for metric reporting purposes and are answered in a nondiscriminatory manner. Identification of the Reseller/CLEC for branding or

billing purposes does not affect call distribution. BA-MA reports separate retail/Reseller calls and CLEC call results based on actual call handling.

117. Directory Assistance calls for CLECs are handled in separate work centers. BA-MA measures the average speed of answer for these centers separately. Calls for all Massachusetts CLECs in these centers are handled by the same operators, call distributors and the same call queue. BA-MA cannot separate calls within the same queue by carrier in order to measure separate averages. Therefore, individual CLEC results are not available. Reseller directory assistance calls are handled in the same work centers, by the same operators and call distributors, as calls from BA-MA's end users and are answered in a non-discriminatory manner and are reported as part of retail.

IV DETERMINING PARITY

118. As discussed above, for products and functions where there is a retail equivalent to what is provided to the CLEC, the standard for performance is "parity with retail," The C2C Working Group has agreed on a statistical methodology for determining the statistical significance of performance differences. The statistical methodology, which is the Local Competition Users Group (LCUG) modified z-score, is set forth in Appendix K of Exhibit A to our Affidavit. The NY PAP includes a statistical method which we are using here.

119. The same statistical methodology is used to populate the tables in Exhibit G. A modified Z score of below -1.645 provides a 95% confidence level that the variables are different, or that they come from different processes. When the modified Z score is less than –1.645, a comparison of the performance difference

between BA-MA and the CLECs is used to determine a score of –1 or –2. A difference of more than 5% results in a –2 score. The modified Z statistic is used for measures where "parity" is the standard, unless there is an insufficient sample size. For small sample sizes of measures with parity as the standard, a Permutation Test is applied to obtain the statistical scores, which are then converted into a performance score. For small sample sizes of measures with an absolute standard of 95%, a small sample size table is then applied to obtain the performance scores. Measures with absolute standards will be given a performance score of 0, -1, or -2 depending on the performance for that measure.

V BA-MA'S PERFORMANCE RESULTS

120. Overall, as the Checklist and OSS Affidavits explain, BA-MA's performance for CLECs is strong. The performance reports attached to our Affidavit bear this out. BA-MA has, nevertheless, missed some of the metrics. In what is fundamentally a parity process – that is, BA-MA is doing the same type of work for the CLECs and for its retail operations – it is not surprising that the results are sometimes better for CLEC customers and sometimes better for retail customers.

121. For those metrics where the performance standard is not parity, BA-MA is subject to very high absolute standards – 95% in most instances, and occasionally even higher. In these cases, BA-MA can be providing very good service to the CLECs (91% or 92%) – grade A service – but still miss the standard.

122. Both the New York PSC and the FCC recognized that a missed metric was not a failure of BA-NY to meet its obligations under the Act. Instead, a missed metric is a flag that the underlying process or performance needs to be examined to

understand whether there is a problem. BA-MA managers review these performance reports regularly so that measurement or performance issues can be addressed in a timely way.

123. We have examined BA-MA's reported performance results for the last several months, and we have found that the metrics themselves can in some cases provide a misleading picture of BA-MA's performance if simply taken at face value. For example, a large proportion of the "missed" C2C metrics are redundant "interval" measures – Average Offered Interval and Average Completed Interval for various types of orders. These metrics are distorted by the measurement issues we discussed above in the Provisioning section.

124. Moreover, not all measurements are of equal importance. Therefore, we have focused our review on the results of metrics included in the Performance Assurance Plan ("PAP"), because those are the measurements that the New York PSC has determined are the most significant for monitoring competition.

125. As BA-NY did in its Section 271 application to the FCC, we have grouped the metrics from the PAP into families based on the competitive "checklist" item to which they relate. These groupings were based on discussions with the New York PSC staff. The grouping is shown in Exhibit F. The data confirm that BA-MA is providing high quality service in Interconnection, Collocation, Unbundled LNP, UNE Platform, and Resale. In three categories, results show that BA-MA missed several metrics – UNE Loops, UNE Transport, and UNE OSS, but is still providing good service overall.

126. With respect to provisioning UNE Loops, BA-MA appears to have missed one limited subset of the metrics in February, the "Average Delay Days" for complex orders. As noted earlier, the measurement system counted all delay following a BA-MA missed installation appointment against BA-MA, even those days that were attributable to the CLEC. Thus, the measurement tends to overstate the delay caused by BA-MA. This effect has been corrected in the results beginning in January 2000. In addition, the Average Delay Days for Complex Loops included DSL and 2-wire digital services in February, while the retail comparison group consisted mostly of retail ADSL, which is a very different product. When both of these factors are accounted for in the preliminary March data, this metric seems to be in parity with its retail counterpart.

127. With respect to the maintenance and repair measurements for UNE Loops, three measures show retail results consistently more favorable than wholesale results (Missed Appointments, Mean Time To Repair, and % Out Of Service >24 hours). BA-MA has reviewed the results and finds that these are caused in part by BA-MA conduct and in part by CLEC conduct, as discussed further in the Checklist Affidavit. BA-MA is working on modifications to the UNE repair process to improve the results, as discussed in the Checklist Affidavit. It should also be noted that, while the statistical "parity" results for Network Trouble Report Rate (Loops) are uncertain, the BA-MA performance levels for both UNE and retail customers have been excellent (roughly 1%-1.5%).

128. For UNE Transport ("IOF"), the absolute level of performance has been strong. The apparent parity "miss" in missed appointments in February and January is

simply the result of measuring against a retail standard that is not currently comparable to IOF. The currently used retail comparison of Special Services was reviewed and, in the month of January, we found that only 21% of the retail Special Services orders were comparable to UNE IOF. When we looked at the missed appointment rate for those 45 retail orders, we found the missed appointment rate to be 22.5%. Although the data was not available to exclude customer misses, the UNE IOF performance would have been substantially better than retail service even if a 50% customer miss rate had been assumed for the retail comparison group.

129. Finally, for UNE OSS, BA-MA has "missed" one metric for timeliness of reject notices on LSRs less than ten lines for POTS and one metric for timeliness of confirmation on LSRs less than ten lines for POTS. However, the on-time performance for manually-handled orders has been improving and has been very strong in 2000, for the reasons discussed in the OSS Affidavit.

VI METRICS VALIDATION

130. The validation of BA-MA's performance reporting is included as part of the independent, third-party OSS test being conducted by KPMG. The purpose of the metrics review is to examine and evaluate BA-MA's reporting of wholesale performance results. The KPMG Master Test Plan ("MTP") includes a test domain specific to metrics, the Performance Metrics Reporting Test Domain, and defines the testing process employed to evaluate BA-MA's reporting performance. The MTP defines in detail the scope, test process, inputs, outputs, and test entrance and exit criteria used by KPMG in assessing BA-MA's

performance metrics reporting. The scope of the test includes evaluating "the metrics contained in the C2C Guidelines that will be in effect when the preorder, order, and provisioning transaction testing begins, and a sample of the Departments' *Consolidated Arbitrations* metrics." (Master Test Plan, Section 8) The test also includes an evaluation of "those metrics that are still under development. KPMG will review and comment on BA-MA's ability to collect the necessary data and report on them." (Master Test Plan, p.162) Further, the scope of the test includes evaluating "the procedures used by BA-MA to gather and process source data as well as internal procedures to implement changes to the reported metrics." (Master Test Plan, p. 162)

131. At the conclusion of the metrics evaluation, KPMG will report on: the results of the data integrity evaluation; the replication results, including metric-by-metric analysis and results; and those transaction test metrics that are required by KPMG domain leads. (Master Test Plan, p. 166)

VII CONCLUSION

132. Bell Atlantic, in conjunction with the New York PSC and the CLECs, has developed a comprehensive set of performance measurements for timeliness, reliability, and quality. Bell Atlantic's procedures and systems for collecting and reporting results for those performance measurements have been subjected to extensive review by KPMG in New York and are subject to extensive review again in Massachusetts. The resulting performance reports that BA-MA provides enable both regulators and CLECs to monitor the service BA-MA provides to CLECs and its own customers. In addition, the C2C Guidelines will continue to

evolve, under the auspices of the New York PSC, to meet changing marketplace conditions. Therefore, the Department will be in a position to determine that BA-MA is currently in compliance with checklist requirements and to assure continued compliance in the future.

133. This concludes the Measurements Affidavit.

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Beth A. Abesamis Julie A. Canny

Sworn to before me
This 25th day of May 2000

Sworn to before me
this 25th day of May 2000

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Notary Public Notary Public