III. Relationship Management and Infrastructure Domain Results and Analysis Section

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A.   Test Results: Change Management Practices Verification and Validation Review (PPR1)

1.0   Description
The Change Management Practices Verification and Validation Review (PPR1) evaluated aspects of Verizon's Change Management process. The objectives of this test were to determine the existence and functionality of procedures for developing, evaluating, and implementing change proposals. In addition, this test focused on change management intervals, notifications, and tracking mechanisms.

2.0   Methodology
This section summarizes the test methodology.

2.1   Business Process Description
The change management process provides the framework for interested parties to communicate desired changes and for Verizon to communicate subsequent alterations to its systems and processes. Verizon's five types of changes include the following:

♦   Type 1: Maintenance Change;
♦   Type 2: Regulatory Change;
♦   Type 3: Industry Guidelines Change;
♦   Type 4: Verizon-Originated Change; and
♦   Type 5: Competitive Local Exchange Carrier (CLEC)-Originated Change.

Changes to documentation, interfaces, business rules, and other functions, excluding metrics,[1] are subject to the timeframes, tracking, logging, and methods of notification and coding of the change management process.

The process begins when a change request (CR) of any one of the five types listed above is submitted. Type 1 CRs are maintenance-related changes as determined by Verizon. This type of change is categorized by severity level and implemented on an expedited basis. Type 2 and 3 CRs have priority and implementation schedules that are governed by regulatory or industry requirements. The CLECs determine the overall priority of Type 4 and Type 5 CRs at the Prioritization Working Group meetings. Verizon takes the CLEC priortization into account when making implementation decisions.

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[1] The change management process governs all aspects of the relationship between CLECs and Verizon, excluding changes related to metrics that are covered in Metrics Change Management Verification and Validation Review (PMR5).

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Notification intervals are based on the type of CR and severity. The intervals for notification of Type 1 CRs are determined on a case-by-case basis. Intervals for notification of Type 2 CRs are determined as a result of applicable law/regulatory rules. Type 3 CRs have intervals for notification based upon mutual agreement between Verizon and the CLEC community in conjunction with the rollout of national guidelines, which are subject to any overriding regulatory obligations. The Change Management process defines a standard interval for Type 4 and 5 CRs. For these CRs, documentation for draft business rules follows a 73-day notification interval and draft technical specifications follow a 66-day notification interval. The CLEC has 15 business days from publication of draft documents to provide comments about the documentation. Change confirmation occurs 45 days prior to implementation through the publication of final business rules, technical specifications, and error message documentation. During a Change Management meeting, Verizon and the CLEC community can decide to shorten or lengthen the intervals of notification associated with Type 4 and 5 CRs.

The Verizon Wholesale Markets Group's Change Management Manager and Change Management Director manage the Change Management process.

2.2   Scenarios
Scenarios were not applicable to this test.

2.3   Test Targets & Measures
The test target, the Verizon change management process, included reviews of the following processes:

♦   Developing Change Proposals;
♦   Evaluating Change Proposals;
♦   Implementing Change;
♦   Intervals;
♦   Documentation; and
♦   Tracking Change Proposals.

2.4   Data Sources
The sources of data for this test include:

♦   The Verizon CLEC Handbook (on the Verizon website at
    http://128.11.40.241/east/wholesale/customer_docs/master.htm);
♦   The Verizon Resale Handbook (on the Verizon website at
    http://128.11.40.241/east/wholesale/customer_docs/master.htm);

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♦ Wholesale Network Services (WNS) OSS Interface Change Management Process documentation;

♦ Prioritization Process documentation;

♦ Change Management Notification process;

♦ Interviews with Verizon's Change Management Managers;

♦ Meeting minutes, transcripts, and material from monthly industry Change Management meetings; and

♦ Verizon's Change Control Database.

The data collection performed for this test centered on interviews, process walk-throughs, and reviews of documentation supplied by Verizon at KPMG Consulting's request.

This test did not rely on data generation or volume testing.

2.5   Evaluation Methods
Verizon's change management function was evaluated for compliance with stated notification and documentation intervals set forth in the WNS OSS Interface Change Management Process (April 2001), Prioritization Process (November 2000), and Change Management Notification Process (February 2000) documents. The period of the notification process analysis was from October 1, 2000 through October 31, 2001. The test included a review of Verizon change management correspondence, the Verizon Change Control Database, and Verizon Industry Change Management meeting minutes and transcripts. Also, CRs during the test period were examined and an assessment was performed to determine whether the appropriate change notifications and requisite documents were sent to the CLECs. Specifically, CRs that had the following attributes were included in the assessment:

♦ Implementation date between October 1, 2000 and October 31, 2001;

♦ Implementation region of Verizon East or Verizon South, including Virginia; and

♦ CRs not categorized as 'tentative'.

2.6   Analysis Methods
The Change Management Practices Verification and Validation Review included a checklist of evaluation criteria developed by KPMG Consulting during the initial phase of the Verizon Virginia, Inc. OSS Evaluation Project. These evaluation criteria provided the framework of norms, standards, and guidelines for the Change Management Practices Verification and Validation Review.

The data collected were analyzed employing the evaluation criteria detailed in Section 3.1 below.

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3.0   Results
This section identifies the evaluation criteria and test results.

3.1   Results Summary
The results of this test are presented in the table below.

Table 1-1: PPR1 Evaluation Criteria and Results

Test Reference	Evaluation Criteria	Result	Comments
PPR1-1	Change management process responsibilities and activities are defined.	Satisfied	CLEC and Verizon responsibilities and activities for the change management process are defined in the Verizon Wholesale Network Service OSS Interface Change Management Process document. Additional information on how CRs are prioritized is included in the Prioritization Process document.
PPR1-2	Essential elements of the change management process are in place and documented.	Satisfied	The change management process elements are defined in two documents available to CLECs and Resellers on the Verizon Wholesale website: ♦ Prioritization Process document; and ♦ Wholesale Network Service OSS Interface Change Management Process document. These documents describe the change management process and provide guidelines for how CLECs and Verizon communicate and process changes.

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Test Reference	Evaluation Criteria	Result	Comments
PPR1-3	The change management process has a framework to evaluate, categorize, and prioritize proposed changes.	Satisfied	The WNS OSS Interface Change Management Process Document defines the five different types of changes and the notification timeline for each of the five change types. Once Verizon receives a CR from a CLEC, a unique CR number is assigned to it. Verizon hosts monthly Industry Change Management and Prioritization meetings where CLECs are asked to evaluate and prioritize Type 4 and 5 CRs. Verizon takes this CLEC priortization into account when determining implementation schedules for Type 4 and 5 CRs. Type 1, 2, and 3 CRs are externally driven and are not prioritized by the CLECs. The Prioritization Process document provides additional information on how CRs are prioritized.
PPR1-4	The change management process includes procedures for allowing input from all interested parties.	Satisfied	CLEC input is obtained through the monthly Industry Change Management and Prioritization meetings. In addition, Verizon holds collaboratives and workshops to discuss specific changes under consideration. The CLECs can either attend in person or call into the meetings. Comments may also be sent to Verizon via email.
PPR1-5	The change management process defines intervals for considering and notifying customers about proposed changes.	Satisfied	The types of CRs and intervals associated with each CR category are defined in the WNS OSS Interface Change Management Process document. More detail on the change management intervals and timelines is included in Table 1-2 below under Additional Data.

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Test Reference	Evaluation Criteria	Result	Comments
PPR1-6	Verizon complies with notification intervals and documentation release requirements.	Satisfied	Table 1-2 displays the results of analysis on a CR sample between October 2000 and October 2001. The table documents Verizon's compliance with the notification intervals and documentation release requirements defined in the WNS OSS Interface Change Management Process document. ♦ For Type 1 CRs, Verizon notified CLECs on time 100% of the time for both notification and documentation issuance. ♦ For Type 2 and 3 CRs, Verizon notified CLECs on time 100% of the time for both notification and documentation issuance. ♦ For Type 4 CRs, Verizon notified CLECs on time 94% of the time for both notification and documentation issuance. The one incident of the notification and issuance of the documentation that was missed, CR #367854, was discussed and agreed upon with the CLECs during the monthly Change Management meeting in July 2001. ♦ For Type 5 CRs, Verizon notified CLECs on time 88% of the time for both notification and documentation issuance. The one incident of the notification and issuance of the documentation that was missed, CR #2049, was discussed and agreed upon with the CLECs during the monthly Change Management meeting in August 2001.

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Test Reference	Evaluation Criteria	Result	Comments
PPR1-7	Procedures and systems are in place to track information such as descriptions of proposed changes, notification dates, and change request status.	Satisfied	Verizon maintains an internal Change Management Database in order to monitor and track all CRs by their CR tracking number. Dates, content, and status of the CRs are stored in the database.
PPR1-8	Criteria are defined for the prioritization system and for severity coding.	Satisfied	The WNS OSS Interface Change Management Process document defines the five different change types. Type 1 CRs are considered maintenance-related changes and are not prioritized by the CLECs; Verizon handles these immediately. Type 2 CRs are considered regulatory changes and are not prioritized by the CLECs due to the set implementation timeframes. Type 3 CRs are industry standard changes and are implemented following industry discussions that determine intervals. Thus, Type 3 CRs are also not prioritized by the CLECs. Verizon initiates Type 4 CRs and CLECs initiate Type 5 CRs. Verizon hosts monthly prioritization meetings where CLECs may evaluate and rate the priority of Type 4 and 5 CRs. Verizon takes this priortization into account when determining implementation schedules for Type 4 and 5 CRs.

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3.2   Additional Data

Table 1-2: Interval Compliance

Change Type	Applicable Intervals and Timelines	Met Notification Interval	Met Documentation Interval
Type 1- Maintenance	Verizon or a wholesale customer may initiate Type 1 CRs. Changes are processed on an expedited basis (typically within hours to one or two days). Processing includes impact analysis, requirement definition, industry notification, and system modification (implementation). Notification and confirmation timelines for Type 1 are determined on an individual case basis according to the severity of the problem.	59 of 59	59 of 59
Type 2 - Regulatory	Timelines for Type 2 CRs are determined based on applicable law/regulatory rules. If timelines are not specified by the regulatory action and business rules are impacted, reasonable efforts will be made to follow the same notification intervals for Type 4 and 5 CRs. Verizon will use reasonable efforts to provide at least 45 days notification prior to implementation of Type 2 CRs that do not impact business rules.	59 of 59	59 of 59
Type 3 - Industry Standard	Type 3 timelines are based upon mutual agreement in conjunction with the rollout of national guidelines subject to any overriding regulatory obligations. Verizon will supply a high-level overview of how Verizon intends to implement major changes in the new industry guideline 180 days in advance of implementation. Subject to regulatory requirements, implementation notification will be no less than the timeline used for Type 4 and 5 CRs.	25 of 25	25 of 25

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Change Type	Applicable Intervals and Timelines	Met Notification Interval	Met Documentation Interval
Type 4 - Verizon Initiated	Notification of the scheduled implementation of Type 4 CRs will follow the schedule below: ♦ Seventy-three (73) days prior to implementation, draft business rules are published. ♦ Sixty-six (66) days prior to implementation, draft technical specifications are published. ♦ CLEC/Resellers have 15 business days from publication of documents to provide comments. ♦ Forty-five (45) days prior to implementation, change confirmation occurs through the publication of final business rules, technical specifications, and error message documentation. For Type 4 CRs, in some instances, it will make sense to provide more notification, or less notification, based upon the severity and the impact of the change.	17 of 18 The one incident where the notification was missed, CR #367854, was discussed and agreed upon with the CLECs during the monthly Change Management meeting in July 2001.	17 of 18 The one incident where the issuance of the documentation was missed, CR #367854, was discussed and agreed upon with the CLECs during the monthly Change Management meeting in July 2001.

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Change Type	Applicable Intervals and Timelines	Met Notification Interval	Met Documentation Interval
Type 5 - CLEC Initiated	Notification of the scheduled implementation of Type 5 changes will follow the schedule below: ♦ Seventy-three (73) days prior to implementation, draft business rules are published. ♦ Sixty-six (66) days prior to implementation, draft technical specifications are published. ♦ CLEC/Resellers have 15 business days from publication of documents to provide comments. ♦ Forty-five (45) days prior to implementation, change confirmation occurs through the publication of final business rules, technical specifications, and error message documentation. For Type 5 CRs, in some instances, it will make sense to provide more notification, or less notification, based upon the severity and the impact of the change.	7 of 8 The one incident where the notification was missed, CR #2049, was discussed and agreed upon with the CLECs during the monthly Change Management meeting in August 2001.	7 of 8 The one incident where the issuance of the documentation was missed, CR #2049, was discussed and agreed upon with the CLECs during the monthly Change Management meeting in August 2001.

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B.   ***Test Results: Account Establishment & Management Verification and Validation Review (PPR2)***

1.0   Description
The Account Establishment & Management Verification and Validation Review (PPR2) evaluated aspects of Verizon policies and practices for establishing and managing account relationships with Competitive Local Exchange Carriers (CLEC) and Resale customers. The objective of this test was to determine the adequacy and completeness of, and compliance with, procedures for developing, publicizing, conducting, and monitoring account establishment and management activities.

2.0   Methodology
This section summarizes the test methodology.

2.1   Business Process Description
The primary points of contact for wholesale customers within Verizon are the Account Management teams. The Account Management teams' responsibilities include the following:

♦   Introducing new customers to Verizon products and services;
♦   Distributing appropriate documentation and contact lists;
♦   Communicating routine notifications;
♦   Scheduling and leading network planning meetings; and
♦   Interfacing with other Verizon units.

A Verizon Account Manager (AM) or Account Management Team is assigned to each customer. AMs maintain the Customer/Verizon relationship through routine and urgent communication and escalation of customer issues. The Account Management Teams maintain and distribute account management documentation.

2.2   Scenarios
Scenarios were not applicable to this test.

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2.3   Test Targets & Measures

The test targets were Verizon's Resale and CLEC Account Management Teams. They included reviews of the following processes and sub-processes:

♦ Establishing an Account Relationship;
  ♦ Staffing Responsibility; and
  ♦ Staffing Coverage.
♦ Maintaining an Account Relationship; and
  ♦ Customer Contact;
  ♦ Escalation; and
  ♦ Routine and Urgent Customer Communications.
♦ Maintaining Account Management Documentation.
  ♦ Document Development and Distribution; and
  ♦ Document Structure.

2.4   Data Sources

The sources of data for this test included interviews and a review of the Verizon Telecom Industry Services (TIS) Account Management Responsibilities Guide (November 2000), the Verizon CLEC Handbook (March 2001), the Verizon Resale Handbook (September 2001), and the Verizon Wholesale Markets website.

The data collection performed for this test centered on interviews, walk-throughs, and reviews of documentation supplied by Verizon at the KPMG Consulting's request.

This test did not rely on data generation or volume testing.

2.5   Evaluation Methods

The Account Establishment & Management Verification and Validation Review consisted of a review and evaluation of Verizon documentation and account management coverage as well as interviews with Verizon's AMs.

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2.6   Analysis Methods

The Account Establishment & Management Verification and Validation Review included a checklist of evaluation criteria developed by KPMG Consulting during the initial phase of the Verizon Virginia, Inc. OSS Evaluation Project. These evaluation criteria provided the framework of norms, standards, and guidelines for the Account Establishment & Management Verification and Validation Review.

The data collected were analyzed employing the evaluation criteria detailed in Section 3.0 below.

3.0   Results

This section identifies the evaluation criteria and test results. The results of this test are presented in the table below.

Table 2-1: PPR2 Evaluation Criteria and Results

Test Reference	Evaluation Criteria	Result	Comments
PPR2-1	Account establishment and management responsibilities and activities are defined and documented.	Satisfied	The account establishment and management responsibilities are defined in an internal Verizon document, the TIS Account Management Guide (November 2000). This guide describes the policies and procedures for carrying out the AM's day-to-day responsibilities and activities. The CLEC Handbook (March 2001, Volume I, Section 6.6) and Resale Handbook (September 2001, Volume I, Section 5.1) outline and document the account management function.
PPR2-2	Account management staff is organized to provide account coverage.	Satisfied	Account management staff is organized to provide account coverage for CLECs. Each CLEC or Reseller is assigned an AM. The assigned AM is the primary point of contact for the CLEC/Reseller. The AM has a designated alternate AM who is made available to the customer if the primary AM is not available for more than a day. The primary AM is responsible for keeping the alternate AM informed of high-level customer issues.

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Test Reference	Evaluation Criteria	Result	Comments
PPR2-3	Instructions for contacting Account Managers are defined and published.	Satisfied	The CLEC Handbook (March 2001, Volume I, Sections 5.1) and Resale Handbook (September 2001, Volume I, Section 5.1) provide the instructions for contacting the Account Management Team. A CLEC/Reseller can contact the AM via telephone, email, cellular phone, fax, and pager. Instructions for contacting the Account Management Team are also provided on the Verizon website in the "Contact Us" section at http://128.11.40.241/east/wholesale/contact/master.htm.
PPR2-4	Procedures for receiving, managing, and resolving customer inquiries are defined.	Satisfied	The procedures for receiving, managing, and resolving customer inquiries are described in the TIS Account Management Responsibilities Guide (November 2000) and the CLEC Handbook (Volume I, Section 6.6.3). One of the primary responsibilities of the AM is to receive and manage customer calls and requests. Each AM is required to maintain a call log, which is used to manage customer inquiries. In order to resolve issues, the Verizon AM presents the customer issues to the appropriate Verizon organizations on behalf of the CLEC.

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Test Reference	Evaluation Criteria	Result	Comments
PPR2-5	Procedures for escalating critical, time-sensitive, and unresolved customer issues are defined.	Satisfied	The escalation procedures are available in the CLEC Handbook (March 2001, Volume I, Section 6.6) and the Resale Handbook (September 2001, Volume I, Section 5.1). A list of Verizon's escalation contacts is provided to the CLEC by the AM to guide the CLEC/Reseller to the appropriate individual depending on the issue. It is the AM's responsibility to track and monitor issue resolution. The AM will escalate issues within the internal organizations as necessary in order to reach a resolution.
PPR2-6	Procedures for making routine, regular communications to customers are defined.	Satisfied	The Account Management Team has procedures for routine and regular communication with wholesale customers. For general issues, industry mailings are distributed via email to customers who are registered on the Verizon industry mailing list. The AM is responsible for keeping the mailing list and customer profiles up-to-date for his/her customers. The industry mailings are posted on the Verizon website at http://128.11.40.241/east/wholesale/resources/master.htm. For CLEC specific issues, the AM can phone or fax the customer to provide updates on pertinent information.
PPR2-7	Account Managers interact with other Verizon units on behalf of the CLECs.	Satisfied	The AMs are responsible for interacting with Verizon's internal business units on behalf of the customer. This role is defined in the TIS Account Management Responsibilities Guide (November 2000). Verizon uses the TIS Account Management Responsibilities Guide as a guideline for procedures on how to manage CLEC relationships and deal with issues internal to Verizon on behalf of the customer.

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Test Reference	Evaluation Criteria	Result	Comments
PPR2-8	Verizon designates and notifies each customer about its alternate Account Managers.	Satisfied	The TIS Account Management Responsibilities Guide (November 2000) describes a formal set of procedures to ensure that the Account Management Team provides coverage. These procedures include designation and customer notification of an alternate AM whenever the primary AM is unavailable.
PPR2-9	Account Manager responsibilities are posted on the Verizon Wholesale Markets website.	Satisfied	The CLEC Handbook (March 2001, Volume I, Section 6.6) and Resale Handbook (September 2001, Volume I, Section 5.1) are available from the Verizon Wholesale Markets website at http://128.11.40.241/east/wholesale/customer_docs/master.htm. These documents define AMs' responsibilities.
PPR2-10	Account Managers are equipped to receive communications by email, phone, and pager.	Satisfied	AMs are supplied with laptop computers with email capabilities, cellular phones, and pagers. The CLEC/Reseller is provided with a list of the AM's email address, telephone number, cellular telephone number, and pager number. The methods and procedures for communicating with AMs are discussed in the Resale Handbook (September 2001, Volume I, Section 5.1) and the CLEC Handbook (March 2001, Volume I, Section 6.6).
PPR2-11	Procedures are formalized to return customer calls on the day in which they are received when the Account Manager is in the office, but in no event later than the next business day.	Satisfied	The CLEC and Resale Handbooks and the internal TIS Account Management Responsibilities Guide (November 2000) describe the requirement for AMs to return calls within one business day.

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Test Reference	Evaluation Criteria	Result	Comments
PPR2-12	Performance measures are used in allocating Account Managers and evaluating when to add Account Managers.	Satisfied	Performance Measures are used in allocating AMs and evaluating when to add AMs. These parameters are defined in the CLEC Handbook (March 2000, Volume I, Section 6.6.2) at http://128.11.40.241/east/wholesale/customer_docs/master.htm. The Account Management Director assigns account responsibility and assesses requests for additional resources based on such factors as the following: ♦ Complexity of the accounts; ♦ CLEC mode (i.e., start-up or experienced); ♦ CLEC product mix and sophistication; ♦ CLEC-provided forecasts; ♦ CLEC-specified initiatives; and ♦ Direct CLEC feedback through normal business interaction. The Account Management Director periodically reviews and evaluates these assignments.
PPR2-13	Responsibilities and procedures for developing, updating, and correcting documentation are defined.	Satisfied	The Account Management Team is responsible for developing, updating, and correcting the content for the account management section of the CLEC and Resale Handbooks. This is done on an "as needed" basis, depending on the significance of the change. The first section of each handbook lists all modifications made since the last issuance.

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Test Reference	Evaluation Criteria	Result	Comments
PPR2-14	Responsibilities and procedures for maintaining distribution lists and distributing documentation are defined.	Satisfied	Responsibilities and procedures for maintaining distribution lists are defined. Distribution and contact lists are managed and maintained by the Account Manager.
PPR2-15	The distribution procedures allow the latest document version to be made available to interested parties in electronic and paper versions as soon as they are complete.	Satisfied	The distribution procedures allow the latest version of documents to be distributed as soon as they are completed. The latest version of each handbook is available on Verizon's website at http://128.11.40.241/east/wholesale/customer_docs/master.htm. In addition, the website includes a log of any changes that were made to the CLEC/Resale Handbooks since their publication, which can be printed from the website.
PPR2-16	Verizon CLEC/Resale Handbooks are organized in a manner that makes information accessible to CLECs.	Satisfied	The Verizon CLEC/Resale Handbooks are organized in a manner that makes information accessible. The handbooks are divided into three volumes as follows: ♦ Volume 1: Getting Started; ♦ Volume 2: Electronic Interface Guide; and ♦ Volume 3: Business Rules. Each volume of the CLEC and Resale Handbooks has a comprehensive table of contents that lists applicable topics and sub-topics. The handbooks can be downloaded from the Verizon website at http://128.11.40.241/east/wholesale/customer_docs/master.htm.

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C.   *Test Results: System Administration Help Desk Functional Review (PPR3)*

1.0   *Description*

The System Administration Help Desk Functional Review (PPR3) evaluated aspects of Verizon's Wholesale Customer Care Center (WCCC) through a process-oriented assessment. The objectives of this test were to determine if the processes for the WCCC were documented, that procedures for measuring and monitoring WCCC performance existed, and that the WCCC had procedures to ensure management oversight.

2.0   *Methodology*

This section summarizes the test methodology.

2.1   *Business Process Description*

The WCCC is the primary point of contact for Competitive Local Exchange Carriers (CLEC) experiencing system access issues (e.g., system availability, system errors) for the Verizon East footprint.[2] The Verizon WCCC records and responds to CLEC questions regarding connectivity and administration of their Verizon interfaces. The WCCC is made up of three units as follows:

1. The WCCC call center located in Newark, New Jersey is the first point of contact for CLECs on questions and concerns relating to system trouble. The primary function of the WCCC Repair Service Clerks (RSC) is to process incoming calls, solicit information about the system trouble, attempt to resolve the trouble, and transfer the trouble to the Support Team or Exception Team if unable to resolve the issue during the customer's initial call.

2. The WCCC Support Team located in Boston, Massachusetts is responsible for resolving issues relating to system errors or billing data errors that the RSCs are unable to resolve during the initial call with the CLEC. The team is made up of managers who are assigned to resolving the issues and working with the CLEC until the trouble is resolved.

3. The WCCC Exceptions Team located in Boston, Massachusetts is responsible for resolving issues surrounding missing Electronic Data Interchange (EDI) notifiers, loop qualification errors, or line loss troubles that the RSCs are unable to resolve during the initial call with the CLEC. The team is made up of managers who are assigned to resolving the issues and working with the CLEC until the trouble is resolved.

The incoming calls to the WCCC call center are routed through an Automatic Call Distributor (ACD). The specific options that the CLEC have available are the following:

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[2] The Verizon East footprint includes the states of Delaware, New Jersey, Pennsylvania, Maryland, Virginia, West Virginia, District of Columbia, Connecticut, Massachusetts, Maine, New Hampshire, New York, Rhode Island, and Vermont.

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1. Systems availability;

2. Exceptions;

3. Billing;

4. System errors; and

5. Other.

Upon selecting an option that best describes the type of trouble that is being reported, the CLEC is routed to the next available RSC during the WCCC hours of operations. The RSC is responsible for resolving the issue until closure or transferring to the WCCC Support Team if unable to reach a resolution on the initial call. During non-business hours, calls are transferred to a voice mail recording requesting the CLEC's contact information and type of trouble experienced. A Manager will return the call within one hour if the trouble relates to transaction processing. For the other types of issues, the WCCC will contact the CLEC on the next business day.

Verizon WCCC procedures require the RSC to record all incoming calls in the WCCC Trouble Ticket Administration Database. The RSC will ask a series of questions to determine the identity of the caller, the contact information, and a description of the trouble. The information obtained is entered into the WCCC Trouble Ticket Administration Database, which generates a unique trouble ticket number for new trouble entered.

The RSC will attempt to reproduce and replicate the error. If the RSC finds a resolution to the trouble, then the solution is given to the CLEC and the trouble ticket is closed. This process is called a front-end closure.   If the RSC cannot resolve the trouble during the initial call, the CLEC is given the unique trouble ticket number and the issue is transferred to the WCCC Support Team.

At anytime after a trouble ticket number has been generated, the CLEC may initiate the escalation process, which is described below in Table 3-1. If the trouble ticket is transferred to the WCCC Support Team for further investigation, the RSC no longer has responsibility for that trouble ticket.

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Table 3-1: WCCC Escalation Processes

Escalation Type	Process
Systems availability	A trouble ticket is escalated to the Call Center Manager, who responds to the CLEC contact within one business day. If no resolution is available, the WCCC Manager is committed to respond within one business day. Failing a resolution from the WCCC Manager, the WCCC Director is held accountable for providing a response to the CLEC within one business day.
Exceptions[3]	A trouble ticket is escalated to a WCCC Exceptions Team Manager, who responds to the CLEC contact within one business day. If no resolution is available, the WCCC Manager is committed to respond within one business day. Failing a resolution from the WCCC Manager, the WCCC Director is held accountable for providing a response to the CLEC within one business day.
Billing[4] and system errors	A trouble ticket is escalated to a WCCC Support Team Manager, who responds to the CLEC contact within one business day. If no resolution is available, the WCCC Manager is committed to respond within one business day. Failing a resolution from the WCCC Manager, the WCCC Director is held accountable for providing a response to the CLEC within one business day.

The WCCC Support Team receives the transferred trouble ticket from the RSC and assigns a Manager, who will take responsibility for the trouble ticket through to closure. The assigned Manager is required to contact the CLEC within one business day. The initial contact by the Manager is used to acknowledge the trouble ticket, inform the CLEC that their trouble is being investigated, and provide contact information for questions. The Manager will update the CLEC with status changes on their trouble.

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[3] The exception trouble is a WCCC term for a missing EDI notifier, a disputed line loss report, or an error executing a loop qualification.

[4] The WCCC handles technical troubles with Daily Usage Files (DUF) and Bill Data Tapes (BDT).

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During the investigation process, the Manager will facilitate activities internally with Verizon subject matter experts (SME) on behalf of the CLEC. The CLEC may request the trouble ticket to be escalated anytime. If the Manager resolves the trouble, the CLEC is contacted with the resolution. The trouble ticket is then closed unless the CLEC is not satisfied with the resolution. If the CLEC is not satisfied with the outcome, the ticket remains open and is investigated further. If the CLEC contact is not available, a voice mail message is left with the resolution, indicating that the trouble ticket will be closed within three business days unless the CLEC contacts the WCCC to state otherwise. After closure, the CLEC can re-open the trouble ticket for further investigation if the CLEC decides that it is not satisfied.

2.2   Scenarios
Scenarios were not applicable to this test.

2.3   Test Targets & Measures
The test target, Verizon's WCCC function, included reviews of the following processes and sub-processes:

- Report trouble and initiate call with the help desk;
- Resolve troubles;
- Close troubles;
- Track and report status of trouble;
- Escalate trouble;
- Ensure security and integrity;
- Process management; and
  - General management practices;
  - Performance measurement process; and
  - Process improvement.
- Capacity management processes and procedures.

2.4   Data Sources
The data collection performed for this test centered on interviews, observations, and reviews of documentation supplied by Verizon at the request of KPMG Consulting. The sources of data and information for this test included the following:

- Interviews with the Verizon Manager of WCCC Operations;
- Reviews of the CLEC Handbook (March 2001, Volume II, Section 5.3) and Resale Handbook (March 2001, Volume II, Section 5.3) available on the Verizon Wholesale Markets website at http://128.11.40.241/east/wholesale/customer_docs/master.htm;
- Observation at the WCCC facilities;

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♦   Review of internal WCCC Trouble Ticket Job Aid (July 9, 2001);

♦   Review of the WCCC functions and services described in the document Verizon East Wholesale Customer Care Center (WCCC Functions and Services) issued July 9, 2001 available at http://128.11.40.241/east/wholesale/customer_docs/master.htm; and

♦   Review of the WCCC Trouble Ticket Administration Database.

This test did not rely on data generation or volume testing.

2.5   Evaluation Methods
To complete the evaluation, the specific test activities included interviews of Verizon WCCC personnel, review of WCCC activities, and observations of WCCC Help Desk representative calls at the WCCC facilities in Newark, New Jersey and Boston, Massachusetts.

2.6   Analysis Methods
The System Administration Help Desk Functional Review included a checklist of evaluation criteria developed by KPMG Consulting during the initial phase of the Verizon Virginia, Inc. OSS Evaluation Project. These evaluation criteria provided the framework of norms, standards, and guidelines for the System Administration Help Desk Functional Review.

The data collected were analyzed employing the evaluation criteria detailed in Section 3.0 below.

3.0   Results
This section identifies the evaluation criteria and test results. The results of this test are presented in the table below.

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Table 3-2: PPR3 Evaluation Criteria and Results

Test Reference	Evaluation Criteria	Result	Comments
PPR3-1	Help Desk responsibilities and activities are defined and documented.	Satisfied	The WCCC responsibilities and activities are defined in the CLEC Handbook (March 2001, Volume II, Section 5.3) the Resale Handbook (September 2001, Volume II, Section 5.3) at http://128.11.40.241/east/wholesale/customer_docs/master.htm and are also defined in the WCCC Functions and Services document at http://128.11.40.241/east/wholesale/customer_docs/master.htm. Updates to these documents are provided to the CLECs through industry mailings and/or change management meetings. The WCCC also has an internal document called the WCCC Trouble Ticket Job Aid, which is used to supplement the documents mentioned above. The WCCC Trouble Ticket Job Aid defines the activities and responsibilities of the RSC and support team managers.
PPR3-2	Customer can readily initiate a trouble.	Satisfied	A CLEC can initiate a trouble by calling the WCCC call center. The WCCC Functions and Services document, July 9, 2001, and the CLEC/Resale Handbooks provide contact information; hours of operations; and processes and procedures for reporting a trouble.
PPR3-3	Customers have access to status of trouble.	Satisfied	Customers can get the status of a reported trouble by contacting the WCCC and referencing the assigned trouble ticket number. The WCCC Functions and Services document describe the contact procedures and dialog between the WCCC and the CLEC.

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Test Reference	Evaluation Criteria	Result	Comments
PPR3-4	Customer escalation procedures are defined and documented.	Satisfied	Customer escalation procedures are defined and documented. After a trouble ticket number is assigned to the trouble, the CLEC may initiate the escalation process. The WCCC Functions and Services document describes the process and procedures for escalations of each type of issue that the WCCC handles. This documentation also defines contact information and expected timeframes for each level of escalation.
PPR3-5	Call intake procedures include logging and acknowledgement.	Satisfied	The WCCC Functions and Services document and the internal WCCC Trouble Ticket Job Aid define procedures used by Verizon for call logging and acknowledgement. The RSC uses a standard template to solicit the required information from the CLEC, which is then entered into the WCCC Trouble Ticket Administration Database. For issues affecting multiple CLECs, a Lead Trouble Ticket number is generated and each subsequent ticket is attached to the Lead Trouble Ticket. The CLECs affected by the same issue are provided with the Lead Trouble Ticket number for tracking purposes.
PPR3-6	Process includes procedures for resolving queries within stated timeframes.	Satisfied	Verizon has procedures for resolving troubles within stated timeframes. The RSC attempts to resolve the CLEC issue during the initial call. If the call cannot be resolved immediately, the issue gets transferred to the WCCC Support Team where the issue is further investigated. The internal WCCC Trouble Ticket Job Aid document defines standard intervals for resolution of system errors based on the severity level of the issue.

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Test Reference	Evaluation Criteria	Result	Comments
PPR3-7	Process includes procedures for closure posting.	Satisfied	Processes and procedures for closing trouble tickets are documented in the WCCC Functions and Services document and supported by the internal WCCC Trouble Ticket Job Aid. The WCCC RSCs and Support Team Managers cannot close trouble tickets until the initiating CLEC and the WCCC come to an agreement on the resolution of the trouble ticket.
PPR3-8	Process includes procedures for status tracking, management reporting, and management intervention.	Satisfied	The WCCC procedures cover status tracking, management reporting, and management intervention. The Verizon Trouble Ticket Administration Database is used to track the status and provide an overview of WCCC trouble tickets. There are procedures for management to intervene on specific trouble tickets that require the attention of the WCCC Manager.
PPR3-9	Process includes procedures for maintaining security and integrity of data.	Satisfied	Safeguards exist to prevent unauthorized access to the Verizon WCCC Trouble Ticket Administration Database and the ACD Phone System. The WCCC personnel are assigned separate logins and passwords for the Verizon WCCC Trouble Ticket Administration Database and the ACD Phone System.

In order for the CLEC to inquire about data relating to a trouble ticket, the WCCC has procedures for confirming the identity of the caller. The CLEC is also required to provide a trouble ticket number before information is released. |

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Test Reference	Evaluation Criteria	Result	Comments
PPR3-10	Process includes procedures for obtaining CLEC feedback.	Satisfied	Verizon's process includes procedures for obtaining CLEC feedback. Verizon holds Monthly Change Management Meetings where a WCCC Manager is available for questions and comments. The WCCC has a standing agenda item for the CLECs to provide feedback on the WCCC processes and procedures, to comment on issues, or to present suggestions for improvement.
PPR3-11	Process performance measures are defined, measured, and reviewed.	Satisfied	The WCCC performance measures are defined in the WCCC Trouble Ticket Job Aid. WCCC Managers measure and review individual trouble tickets and the Trouble Ticket Maintenance Log to evaluate the performance of the WCCC. The Trouble Ticket Maintenance Log provides detailed performance results, including the performance of WCCC RSCs, trouble ticket status, and WCCC open ticket volume.
PPR3-12	Process includes procedure for capacity planning.	Satisfied	The WCCC Director and Manager monitor the historical use of resources in responding to call volumes and will add RSCs and Managers when call volumes increase.

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Test Reference	Evaluation Criteria	Result	Comments
PPR3-13	Process improvement responsibilities are assigned and executed.	Satisfied	The WCCC Manager is the primary person responsible for process improvement. CLECs can provide feedback, suggestions, and present issues relating to the processes and procedures of the WCCC during the monthly change management meetings. The WCCC Manager utilizes this feedback to improve processes and, when necessary, will communicate these changes to Verizon's wholesale customers through dialog and/or presentation at the monthly change management meetings and workshops.

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D.   Test Results: CLEC Training Verification and Validation Review (PPR4)

1.0   Description
The CLEC Training Verification and Validation Review (PPR4) evaluated aspects of the Verizon Wholesale Markets' Training and Education Program (Training Program). The objectives of the test were to determine the existence and functionality of procedures for developing, publicizing, conducting, managing, and monitoring CLEC training, as well as to ensure the CLEC training effort had effective management oversight. To evaluate the Training Program, KPMG Consulting conducted interviews, walk-throughs, database analyses, and documentation reviews.

2.0   Methodology
This section summarizes the test methodology.

2.1   Business Process Description
The Training Program offers courses to the CLECs for Verizon's various products and services. The primary functions of the Training Program group are to develop the courses and curriculum, conduct classes, monitor instructors, and evaluate training effectiveness. Training opportunities, including dates, times, and locations of courses, are publicized on the Verizon website. CLECs may request on-site as well as customized training. A sample of the training courses listed on the Verizon website cover the following areas:

- Basic (Non-Complex) Products and Services for Resale (e.g., Centrex and ISDN services);
- Directory Listings (DL);
- Digital Subscriber Lines (DSL);
- Complex Products and Services for Resale (e.g., Digital Data Services, Digital PBX, and Digital Centrex);
- Repair Trouble Administration Systems (RETAS);
- Unbundled Network Elements (UNE); and
- Unbundled Network Elements (Complex).

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2.2   Scenarios

Scenarios were not applicable to this test.

2.3   Test Targets & Measures

The test target was Verizon's Training Program, which included the following processes and sub-processes:

- Training Program Development;
    - Develop Curriculum; and
    - Publicize Training Opportunities.
- Training Program Quality Assurance; and
    - Attendance/Utilization Tracking;
    - Session Effectiveness Tracking; and
    - Instructor Oversight.
- Training Program Process Management.
    - Performance Measurement Process; and
    - Process Improvement.

2.4   Data Sources

Data collection for this test relied on interviews and reviews of documentation supplied by Verizon at KPMG Consulting's request. Sources of data for this test included interviews with Verizon's Manager for CLEC Training, the Verizon CLEC Handbooks, the Verizon Resale Handbooks, the Verizon Wholesale Markets website, and the Verizon Training Tracking Database.

This test did not rely on data generation or volume testing.

2.5   Evaluation Methods

Evaluation methods employed for the CLEC Training Verification and Validation Review consisted of interviews with the Manager of CLEC Training, reviews of training process data, and reviews and evaluations of documentation provided by Verizon.

2.6   Analysis Methods

The CLEC Training Verification and Validation Review included a checklist of evaluation criteria developed by KPMG Consulting during the initial phase of the Verizon Virginia, Inc. OSS Evaluation Project. These evaluation criteria provided the framework of norms, standards, and guidelines for the CLEC Training Verification and Validation Review.

The data collected were analyzed employing the evaluation criteria detailed in Section 3.0 below.

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3.0   Results

This section identifies the evaluation criteria and test results. The results of this test are presented in the table below.

Table 4-1: PPR4 Evaluation Criteria and Results

Test Reference	Evaluation Criteria	Result	Comments
PPR4-1	Training process responsibilities and activities are defined.	Satisfied	The responsibilities and activities for the CLEC training process are defined in the CLEC Handbook (March 2001, Volume I, Section 8.2) and the Resale Handbook (September 2001, Volume I, Section 7.0). In addition to the Verizon handbooks, the Training Program has a dedicated section on the Verizon website at http://128.11.40.241/east/wholesale/industry_conf_education/master.htm. The Training Program Manager provides management oversight for the Training Program. The training team is responsible for the design and development of the courses, course materials, and agendas.
PPR4-2	Scope and objectives of the training process are defined and documented.	Satisfied	The scope and objectives of the Training Program are defined in several documents that are available to CLECs and Resellers. The objective of the Training Program is to provide a range of hands-on training courses and workshops on Verizon's products and services. The CLEC Handbook (March 2001, Volume I, Section 8.2) and the Resale Handbook (September 2001, Volume I, Section 7.0) provide information about available training for Verizon's products and service offerings, as well as provide information on method of delivery (i.e., hands-on or instructor-led).

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Test Reference	Evaluation Criteria	Result	Comments
PPR4-3	Essential elements of the training process are in place and documented.	Satisfied	The Training Program includes essential elements such as course descriptions, course materials, course evaluations, notification of availability, course registration, cancellation policies, and tools for instructor feedback. These elements are documented on the Verizon website in the section labeled "Training and Education," in the CLEC Handbook (March 2001, Volume I, Section 8.2), and in the Resale Handbook (September 2001, Volume I, Section 7.0) at http://128.11.40.241/east/wholesale/customer_docs/master.htm.
PPR4-4	The training process includes procedures for addressing errors and exceptions.	Satisfied	Verizon instructors have informal procedures for updating and correcting errors found in the training course curriculum. Through the class surveys, errors and exceptions may be raised to the Training Program Manager and instructors. If the error or exception was not addressed in the training class, the instructor will contact the students listed in the training database to update them on current information and materials.

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Test Reference	Evaluation Criteria	Result	Comments
PPR4-5	Process includes procedures for responding to feedback about training quality.	Satisfied	Verizon has procedures in place for managing feedback from CLECs about training quality. Surveys are handed out to students at the end of training courses. Each survey is entered into the Verizon Training Tracking Database, which is used for tracking feedback on the quality of the Training Program. The Training Program Manager and instructors review the evaluation surveys, on which suggestions on changes and improvements for future classes are made by the students. Prior to each training session, the Training Program courses are updated where necessary. The Training Program Manager randomly attends training sessions and reviews customer surveys to monitor the effectiveness of the Training Program.

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Test Reference	Evaluation Criteria	Result	Comments
PPR4-6	Scope of training services covers customer requirements.	Satisfied	Classes and workshops are available to CLECs for Verizon's wholesale products and services. Resale and UNE products and service offerings are the main focus of the classes and workshops. In addition to the standard training classes, CLECs can request customized training to meet their needs. Both standard and custom training classes are offered at Verizon's facilities or as a "Suitcase" offer, where the program instructors will go to the CLEC's facilities to conduct the training. The Training Program website provides instructions on how to contact Verizon to set up such requests at http://128.11.40.241/east/wholesale/industry_conf_education/master.htm. To ensure that the Training Program is effective in meeting the customer's needs, Verizon provides limited post-training support to students for 30 calendar days after the class.
PPR4-7	Process includes procedures for accepting CLEC input regarding training curriculum.	Satisfied	The Training Program group has a process for accepting feedback from CLECs. CLEC input about the Training Program is gathered in a number of ways: ♦ Course surveys distributed at the completion of the workshop; ♦ CLECs' Account Managers (AM); or ♦ Verizon Change Management. The Training Program's website provides Verizon's contact information to CLECs for training inquiries and feedback at http://128.11.40.241/east/wholesale/industry_conf_education/master.htm.

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Test Reference	Evaluation Criteria	Result	Comments
PPR4-8	Training offerings are scalable in response to additional demand (e.g., increased class size, number of instructors).	Satisfied	Verizon training offerings are scalable. The Training Program's instructors can teach multiple courses to accommodate high demand for specific courses. Class size (minimum and maximum) requirements are posted on the Training Program's website at http://128.11.40.241/east/wholesale/industry_conf_education/master.htm.
PPR4-9	Process includes procedures for publishing training schedule.	Satisfied	The training process includes procedures for publishing the training schedule. The Training Program's schedules are listed for each class on the Verizon Wholesale Markets website at http://128.11.40.241/east/wholesale/industry_conf_education/master.htm in the "Training & Education" section. This website is updated regularly to incorporate course availability and reflect cancellations.
PPR4-10	Process includes procedures to track attendance at courses.	Satisfied	The training process includes procedures to track attendance at courses. Students are required to sign in on each day of class. This information is maintained in the Training Tracking Database, which is managed by the Training Program Manager. This database contains students' names, respective companies, as well as number of attending students.

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Test Reference	Evaluation Criteria	Result	Comments
PPR4-11	Training performance standards are defined and measured.	Satisfied	Training Program performance standards are defined and measured. The Training Program utilizes a standard survey form that is presented to the students upon the conclusion of the course. This survey measures the instructor's performance, course curriculum, class materials, and the presentation structure. Students indicate ratings by the following training standards: "Excellent," "Good," "Fair," and "Poor." To determine the overall training performance, these ratings are combined in the Training Tracking Database for each instructor.
PPR4-12	Responsibilities for tracking performance are assigned.	Satisfied	The Training Program Manager is responsible for tracking the performance of the Training Program. Both information in the Training Tracking Database and direct observations of classes are used to track the overall performance of the Training Program team.
PPR4-13	Process includes procedures to survey students on effectiveness of training.	Satisfied	The training process includes procedures to survey students, who are provided with course surveys upon completion of the training class. The students critique topics such as the training curriculum, course content, classroom materials, and instructor presentation. Information is stored in the Training Tracking Database. Based on information collected, the instructor may update and change classes accordingly.

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Test Reference	Evaluation Criteria	Result	Comments
PPR4-14	Process includes procedures to monitor instructor performance.	Satisfied	The Training Program Manager monitors instructor performance through the following: ♦ Reviews of feedback captured in the Training Tracking Database; and ♦ Attendance at training sessions to monitor the instructors' delivery and interaction with wholesale customers.

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E.   Test Results: Interface Development Verification and Validation Review (PPR5)

1.0   Description
The Interface Development Verification and Validation Review (PPR5) evaluated Verizon's interface development procedures. The objectives of the test were to evaluate the processes for developing and publicizing interface specifications; conducting, managing, and monitoring interface development activities; and providing interface development support for Competitive Local Exchange Carriers (CLEC) and Resellers. The test also evaluated Verizon's systems capacity management process, as well as Verizon's procedures for E911 database updates.

2.0   Methodology
This section summarizes the test methodology.

2.1   Business Process Description
CLECs may access Verizon's operations support systems (OSS) for order, pre-order, and other services using either an Electronic Data Interchange (EDI) interface or a Web Graphical User Interface (GUI). CLECs that intend to electronically interface with Verizon work with their Verizon Account Manager (AM) as well as other Verizon teams to set up the electronic interface(s).   The CLEC's choice of interface, GUI or EDI, determines which business process they follow.

When a CLEC chooses to use the Web GUI to conduct transactions, Verizon provides access to training and documentation and supplies necessary security hardware (e.g., SecurID) and passwords. No interface development is required on the part of the CLEC.

In order to use the EDI interface, CLECs have to develop their interface in accordance with Verizon's specifications, test connectivity, and test their ability to send and receive pre-order and order transactions before they can enter the production environment.

2.1.1   New Entrant Testing Process
A CLEC planning to electronically submit order or pre-order transactions to Verizon via EDI for the first time must first undergo the New Entrant Testing Process. This testing process involves the following phases:

♦ Connectivity testing, which involves a ping test between the CLEC and Verizon's systems;
♦ CLEC Test Environment phase (see Section 2.1.3); and
♦ Friendly Production, which involves sending live transactions in the production environment using controlled accounts.

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2.1.2   New Release Testing Process
Verizon has three major CLEC-impacting releases every year. When Verizon releases a new version of the EDI interface, the CLEC is required to undergo the New Release Testing Process, which involves sending test transactions through the CLEC Test Environment (CTE) using the test decks (see Section 2.1.3). Four weeks before the release implementation date, the CTE is made available to CLECs to test their systems against the new Verizon software release prior to connecting to the production environment. This process is intended for existing CLECs currently submitting to and receiving pre-order and order transactions from Verizon through the EDI interface.

Once testing has been successfully completed, a CLEC connects to the Verizon production environment and the CLEC can begin submitting electronic transactions to Verizon using the new software.

2.1.3   Verizon's Interface Development Methodology
Verizon's interface development efforts are triggered by Change Requests (CR). CRs are initiated by the following sources and are classified as such:

♦   Type 1 - Maintenance changes;
♦   Type 2 - Regulatory changes;
♦   Type 3 - Changes in industry guidelines;
♦   Type 4 - Verizon originated changes; and
♦   Type 5 - CLEC originated changes.

The CRs are guided by Verizon's Change Management Procedures, which are documented in the Wholesale Network Services (WNS) OSS Interface Change Management Process (April 2001). This document is available on the Verizon Wholesale Markets website at http://128.11.40.241/east/wholesale/customer_docs/master.htm. Each type of CR has different timelines associated with its implementation. For additional information on CRs and their implementation, refer to the Change Management Practices Verification and Validation Review (PPR1).

Verizon's interface development methodology follows a phased approach as described below.

1. Requirements Definition

Once a CR has been initiated and noted for inclusion in a release, Verizon's internal teams, such as the Business Rules, Applications, and Wholesale IT teams, meet to determine the impact of the new functionality on Verizon's existing systems and documentation. At the end of this phase, a general design document is created with high-level requirements and specifications for the release.

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2. Detailed Design

The individual application development teams (e.g., EDI, Web GUI) are responsible for writing their software code based on the requirements of the general design document. They conduct unit tests and results are documented and reviewed to ensure that the test results meet defined criteria before the code is passed on for system tests.

System tests are conducted to provide assurance that the newly developed code does not adversely impact the existing systems. If the code passes the system tests, it is passed on for integration testing.

3. Integration Testing

Integration testing verifies that the separately-developed components of the software perform as expected when integrated into the existing OSS systems.

Verizon uses a published standard Regression test suite, also called the Quality Baseline Validation Test Deck, which contains a set of standard test scenarios and their expected results. Verizon also uses a Progression Test Deck that consists of test scenarios designed to test the new functionality of a particular software release.

The Regression and the Progression Test Decks (Test Decks) are executed by Verizon in their Wholesale Integration Test Environment and the results are documented. If the test generates the expected results, Verizon moves the software into the CTE, which supports the EDI interface. The Test Decks are also run through the Web GUI interface prior to releasing the production version of the Web GUI to CLECs.

4. CLEC Test Environment

Verizon executes the Test Decks in the CTE, both before the CTE is made available to the CLECs and again at the end of the New Release Testing period. If the software code passes successfully, the software is migrated to the production environment. These results are published on the Verizon Wholesale Markets website.

2.1.4   Documentation
Verizon publishes several documents that support its interface development processes and procedures. These documents are made available to CLECs through the Verizon Change Control Forum.

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2.1.4.1 Pre-Order and Order Business Rules

The Verizon business rules define the procedures for submitting order and pre-order transactions to Verizon. The business rules are updated when there is a major software release and a draft version is released to CLECs 73 days before the release implementation date. This gives CLECs an opportunity to review the document and provide comments to Verizon. CLEC comments are addressed in a workshop held before the final version is released. The final version of the business rules is provided on the Verizon website 45 days prior to the release implementation date. For minor software changes that impact business rules, Verizon sends out flashes and bulletins through the Change Management process to inform CLECs of such changes.

The Verizon Change Management organization is responsible for the distribution of the business rules and technical specification documentation and for issuing flashes and bulletins informing CLECs about scheduled implementation of changes to Verizon's interfaces. The timelines for making the interface specifications documentation available to the CLECs are defined in the WNS OSS Interface Change Management Process (April 2001, Section IX).

2.1.4.2 Pre-Order and Order EDI Guides

The Pre-Order and Order EDI guides provide CLECs with Verizon's specifications for developing an EDI interface as well as submitting transactions and receiving responses from Verizon. They are provided on the Verizon Wholesale Markets website at http://128.11.40.241/east/wholesale/customer_docs/master.htm.

2.1.4.3 CLEC/Resale Handbook

The CLEC/Resale Handbook (September 2001, Volume II – Electronic Interface Guide) provides CLECs with available alternatives for connecting to Verizon's OSS. It also provides details on the New Entrant and New Release Testing processes. The handbooks are available on the Verizon Wholesale Markets website at http://128.11.40.241/east/wholesale/customer_docs/master.htm.

2.1.4.4 Web GUI Guide

The Web GUI Guide provides detailed instructions on how to conduct business with Verizon using the Web GUI. It describes the website structure, web page design, browser requirements, and application conventions as well as instructions on how to obtain passwords and logins. This document is available on the Verizon Wholesale Markets website at http://128.11.40.241/east/wholesale/customer_docs/master.htm.

2.1.4.5 expressTRAK Documentation

Verizon implemented expressTRAK, a new integrated ordering and billing system, in Virginia during the course of this evaluation. The impact of expressTRAK on ordering and submitting transactions to Verizon is described in following documents:

- CLEC expressTRAK Guide, Verizon East (November 2001, Sections II, III, and IV); and
- expressTRAK Ordering Instructional Document (December 2001).

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2.1.5   Capacity Management Processes

Verizon ensures that there is sufficient capacity to handle CLEC transactions for both the EDI and the Web GUI interfaces by monitoring the utilization of the wholesale systems. Verizon has procedures for adding capacity, should the need arise, as well as disaster recovery plans.

2.1.6   E911 Database Updates

Verizon processes E911 database updates with municipalities on behalf of wholesale customers that purchase dial tone service from Verizon. This includes Resellers and CLECs who purchase certain Unbundled Network Elements (UNE). Conversely, CLECs who provide their own dial tone to their end-users are responsible for working directly with the municipalities for E911 database updates.

For Resellers (i.e., CLECs that purchase dial tone from Verizon), the interface for gaining access to E911 database records is the same as the interface through which orders are submitted to Verizon (e.g., EDI, Web GUI).   Verizon then updates these records in the Intrado systems, which are linked to the municipalities.

For CLECs, Verizon provides a GUI interface called the Private Switch/Automatic Location Identifier (PS/ALI), which allows CLECs to access and update the E911 records of their end-users directly with the municipalities. Using the PS/ALI interface, CLECs can also view the Master Street Address Guide (MSAG) for validating their end-users' addresses before submitting the E911 records.

2.2   Scenarios

Scenarios were not applicable to this test.

2.3   Test Targets & Measures

The test target was to evaluate the functions of developing, publicizing, conducting, managing, monitoring interface development activities, and providing interface development support for CLECs. Reviews of the following processes and sub-processes were included in the test targets:

- Development of interfaces including:
    - Interface development methodology;
    - Provision of interface specifications and related documentation; and
    - Configuration management processes and procedures.
- Enabling and testing of interfaces, including availability of test environments and technical support to CLECs;
- Release management procedures;
- Capacity management procedures; and
- E911 database updates.

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2.4   Data Sources

This test relied on documentation provided by Verizon such as the CLEC and Resale Handbooks, Verizon business rules, and other documents issued to CLECs through Change Management. In addition, data gathered from interviews with Verizon Virginia (Verizon VA) personnel were used to support the analysis of the documentation.

This test did not rely on data generation or volume testing.

2.5   Evaluation Methods

The following activities were performed as part of the Interface Development Verification and Validation Review:

♦   Reviews of Interface Development documentation provided by Verizon;
♦   Interviews with Verizon VA personnel;
♦   Meetings with the CLEC community; and
♦   Interviews with internal KPMG Consulting interface development personnel.

2.6   Analysis Methods

The Interface Development Verification and Validation Review test included a checklist of evaluation criteria developed by KPMG Consulting during the initial phase of the Verizon Virginia, Inc. OSS Evaluation Project. These evaluation criteria provided the framework of norms, standards, and guidelines for the Interface Development Verification and Validation Review.

The data collected were analyzed employing the evaluation criteria detailed in Section 3.0 below.

3.0   Results

This section identifies the evaluation criteria and test results. The results of this test are presented in the table below.

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Table 5–1: PPR5 Evaluation Criteria and Results

Test Reference	Evaluation Criteria	Result	Comments
Methodology			
PPR5-1-1	Verizon has a software/ interface development methodology that addresses requirements and specifications, design, development, testing, and implementation.	Satisfied	Verizon has a defined software and interface development methodology that addresses the definition of requirements and specifications, design, development, testing, and implementation of releases. Software or interface development efforts are triggered by CRs. Each CR is assigned a number by Verizon and is used to track the issue through implementation.
PPR5-1-2	Interface development methodology includes a quality assurance process.	Satisfied	Verizon has a quality assurance process with defined control points for each phase of the software development cycle as well as procedures for corrective action when results fall outside of the control points. All changes to the software within a given release undergo a series of defined internal testing procedures. The internal testing procedures for Verizon EDI and Web GUI interfaces are similar. For the Verizon EDI interface, the software is also tested by Verizon in the CTE before it is implemented in the production environment. This CTE Testing process is outlined in the CLEC/Resale Handbook (September 2001, Volume II, Section 4.5).

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Test Reference	Evaluation Criteria	Result	Comments
Interface Specifications			
PPR5-2-1	Responsibilities and procedures for developing and updating interface specification document(s) are defined.	Satisfied	The process for developing and updating interface specifications is a coordinated effort between the Verizon Business Rules team, Verizon software development teams, Verizon Change Management organization, and CLECs through collaborative meetings organized by the Verizon Change Control Forum. The Business Rules team is responsible for developing and updating the Verizon Business Rules and the EDI Guides. The Business Rules are validated against industry standards, as well as Verizon's technical specifications, before publication. The timeline for the development and updates to the interface specification documentation is driven by Verizon's Change Management procedures, which are documented in the WNS OSS Interface Change Management Process (April 2001).
PPR5-2-2	Interface specifications, which define applicable business rules, data formats and definitions, and transmission protocols are made available to customers.	Satisfied	The interface specifications for the EDI and Web GUI interfaces are made available to customers. Business rules, data formats, and definitions are outlined in the following: ♦ Verizon Pre-Order and Order Business Rules; ♦ Verizon Pre-Order and Order EDI Guides; ♦ Verizon Combined Pre-Order and Order Documentation; ♦ Electronic Data Interchange X12 Standards; ♦ Verizon Local Services Common Web-GUI User Guide, Part I and Part II; and ♦ CLEC/Resale Handbook, Volume II. These documents are available on the Verizon Wholesale Markets website at http://128.11.40.241/east/business_rules/business_rules.htm.

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Test Reference	Evaluation Criteria	Result	Comments
PPR5-2-3	On-call customer support for interface specifications is provided.	Satisfied	Verizon provides on-call customer support for interface specifications to CLECs, which includes support during Connectivity Testing, CTE Testing, and support in the production environment. Verizon's Connectivity Management Team is responsible for working with CLECs to successfully establish connectivity to Verizon. Once connectivity is established, the CTE Testing Team provides support to CLECs for inquiries on interface specifications and business rules issues throughout CTE Testing. Information on how the CTE Testing Team provides support is provided in the CLEC/Resale Handbook (September 2001, Volume II, Section 4.5). The Wholesale Customer Care Center (WCCC) provides on-call support to CLECs who have completed testing and have been certified for the production environment. Details on the function of the WCCC are on the Verizon Wholeseale Customer website at http://128.11.40.241/east/wholese/customer_docs/pdfs/wccc_external.pdf.
PPR5-2-4	Procedures for updating interface specifications are integrated with formal Change Management procedures.	Satisfied	Verizon's procedures for updating interface specifications are defined in Verizon's Change Management Procedures. The procedures for updating and notifying CLECs of interface specification changes are driven by the type of CR. The WNS OSS Interface Change Management Process document (April 2001, Section IX) provides the details on notification timelines.

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Test Reference	Evaluation Criteria	Result	Comments
Carrier-to-Carrier Testing			
PPR5-3-1	Verizon has a methodology for conducting carrier-to-carrier testing with customers seeking to interconnect.	Satisfied	Verizon has a documented methodology in place for conducting carrier-to-carrier testing with existing and new customers seeking to interconnect through an electronic interface.
			When Verizon implements a new release or when a CLEC wishes to use the EDI interface with Verizon for the first time, CLECs are required to undergo testing before implementation in the production environment.
			Details on Verizon's methodology for the New Entrant and New Release Testing Process are provided in the CLEC/ Resale Handbook (September 2001, Volume II, Section 4.5) and include information on the test environment's functionality and limitations, entrance and exit criterion for the different phases of testing, and Verizon and CLEC responsibilities.
			The New Entrant CLEC Testing Package (October 2001) documents the steps that Verizon recommends that CLECs follow in order to conduct business with Verizon.
PPR5-3-2	Functioning test environments are made available to customers for all supported interfaces.	Satisfied	Verizon provides CLECs with a functional EDI test environment. The software is tested using Verizon's internal quality assurance testing process before it is released in the CTE.
			Once the software has been migrated into CTE, Verizon executes the Regression Test Deck against its software and publishes these results. The Test Deck Execution Process (November 28, 2001), an internal Verizon document, describes Verizon's quality assurance process for creating both the Regression and Progression Test Decks.
			Verizon provides information on the test environment to wholesale customers through several channels, including the Verizon Change Management electronic mail distribution list, industry mailings, and through the CLEC/Resale Handbook (September 2001, Volume II, Sections 1.5, 2.5, and 4.5).

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Test Reference	Evaluation Criteria	Result	Comments
PPR5-3-3	On-call customer support for interface testing is provided.	Satisfied	The Verizon CLEC Testing Group provides support to CLECs during the New Entrant and the New Release Testing periods. Verizon's customer support procedures for interface testing are documented in the CLEC/Resale Handbook (September 2001, Volume II, Section 4.5). This documentation includes contact information, response times from Verizon, hierarchies of support, communication channels between Verizon and CLECs, and escalation procedures. Support is provided by the assigned test coordinator who is available during normal business hours. During the interface test period, Verizon assigned a Test Coordinator to KPMG Consulting in its role as a pseudo-CLEC. This Test Coordinator provided on-call support to KPMG Consulting during testing. The CLEC/Resale Handbook (September 2001, Volume II, Section 4.5) provides a description of the Test Coordinator's role. During New Release Testing, open weekly conference calls are held to discuss testing issues.
PPR5-3-4	Carriers are provided with documented specifications for active test environments.	Satisfied	The CLEC/Resale Handbook (September 2001, Volume II, Section 4.5) contains a description of the CTE, including its functionality and limitations. The CLEC expressTRAK Guide (November 2001) and the expressTRAK Ordering Instructional Document (December 2001) provide instructions on testing orders to be processed by the expressTRAK system. Verizon provides carriers with a documented standard Quality Baseline Validation Test Deck (Regression) and Progression Test Deck, as applicable. Verizon Change Management is responsible for distributing Test Deck documentation to the CLECs via email. The Test Decks are also posted on the Verizon Wholesale Markets website at http://128.11.40.241/east/wholesale/customer_docs/master.htm. The CLEC/Resale Handbook (September 2001, Volume II, Section 4.5) details the timeline Verizon follows for making Test Decks available to CLECs.

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Test Reference	Evaluation Criteria	Result	Comments
PPR5-3-5	Active test environments are subject to version control and carriers are notified before changes are made.	Satisfied	Verizon has version control and notification policies to track releases of the CTE. Verizon supports one version of the CTE at a time. The CLEC/Resale Handbook (September 2001, Volume II, Section 4.5.2) documents this policy. During New Release testing, Verizon conducts status calls on open issues with all CLECs every Tuesday and Friday. Verizon Change Management informs CLECs of all fixes that are implemented during this period. The CTE Support Team has responsibilities for version control of the Test Deck documentation before it is published to CLECs. Through the Change Management Practices Verification and Validation Review (PPR1) test, KPMG Consulting verified that procedures are in place to inform CLECs of changes being made to the CTE.
PPR5-3-6	Procedures are defined and responsibility is assigned to log software "bugs," errors, and omissions in specifications and other issues discovered during carrier-to-carrier testing.	Satisfied	Procedures for logging errors and omissions during carrier-to-carrier testing are described in the CLEC/Resale Handbook (September 2001, Volume II, Section 4.5). The Verizon Test Coordinator serves as the primary point of contact for CLECs conducting carrier-to-carrier-testing and involves other Verizon personnel as required. The Verizon CLEC Testing Group follows documented Methods and Procedures (M&P) in supporting CLECs during interface testing. They use a Trouble Ticket Database to record and track errors, defects, and other CTE-related issues.
			Interface Support
PPR5-4-1	On-call technical support is provided for production interfaces.	Satisfied	The Wholesale Customer Care Center (WCCC) has primary responsibility for providing on-call technical support to CLECs for the production environment. The WCCC is available 24 hours a day, seven days a week. Contact information is provided on the Verizon Wholesale Markets website. More information about the WCCC is available in the test results of the System Administration Help Desk Functional Review (PPR3). The CLEC/Resale Handbook (September 2001, Volume II, Section 5.3) provides details on the on-call technical resources available to CLECs for the production applications.

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Test Reference	Evaluation Criteria	Result	Comments
PPR5-4-2	Procedures are defined and responsibility is assigned for logging software "bugs," errors, and omissions in specifications and other issues discovered during production use of interfaces.	Satisfied	Verizon has defined procedures for logging software "bugs," errors, and omissions in specifications discovered during a CLEC's use of an interface in the production environment. The WCCC is responsible for logging issues reported by CLECs and for tracking their respective fixes. The WCCC assigns trouble tickets for investigation and coordinates resolution with the appropriate application teams. These procedures are described in the document, Verizon East Wholesale Customer Care Center (July 2001), which is available on the Verizon Wholesale Customer website at http://128.11.40.241/east/wholesale/customer_docs/master.htm. System availability problems and identified "bugs" leading to software fixes are handled using Verizon's Change Management procedures. These procedures also include guidelines for notifying CLECs of system outages during production and Verizon's proposed fixes. These procedures are documented in the WNS OSS Interface Change Management Process document. More information about Verizon's procedures for logging software "bugs," errors, and omissions and assigning responsibility for their resolution is available in the System Administration Help Desk Functional Review (PPR3).
Release Management			
PPR5-5-1	Regular communication forums (e.g., meetings, newsletters, workshops) are held for CLEC interface developers.	Satisfied	Verizon sponsors regular communication forums (e.g., meetings, industry letters, workshops) for CLEC interface developers. Every quarter, Verizon provides CLECs with a forecast of planned release upgrades and retirement of its various OSS. This forecast includes a high-level description of the planned release. Verizon conducts monthly Industry Change Management meetings, monthly Prioritization Working Group meetings, and CLEC workshops. The WNS OSS Interface Change Management Process document (April 2001, Sections V, VI, and VII) provides details about the scope and objectives of these meetings.

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Test Reference	Evaluation Criteria	Result	Comments
PPR5-5-2	Business rules and software change logs exist, are updated, and are shared with customers.	Satisfied	Verizon tracks changes and updates made to the business rules and software. Verizon uses a document management application for the creation and modification of business rules. For publicly available interface specifications documentation, such as the business rules, Verizon publishes a change log of modifications made to these documents. When the Verizon Business Rules and technical specifications are scheduled to be updated as a result of a new release, draft versions are published 73 days before the release implementation date. A workshop is held with CLECs to review CLEC comments and concerns on the draft business rules and a final version is published on the Verizon Wholesale Markets website 45 days prior to the release implementation date. The WNS OSS Interface Change Management Process document (April 2001, Section IX) provides details about the notification timelines and distribution of appropriate documentation for the scheduled implementation of Change Requests to Verizon's OSS interfaces.
PPR5-5-3	Verizon has defined and documented internal acceptance testing procedures that are used before software is released.	Satisfied	Verizon conducts unit, system, and integration testing in the Verizon internal test environments before software is released to their customers. The same process is followed for the EDI and Web GUI interfaces. Once tested, the EDI code is then moved into the CTE. Verizon executes the Regression and the Progression Test Decks in the CTE, both before the CTE is made available to the CLECs and again at the end of the New Release Testing period. These tests are executed prior to the code's migration into the production environment and the results are published. Within one week of this migration, Verizon will run the Regression Test Deck in the production environment to ensure that results similar to those seen in the CTE are achieved. Details on the Regression and Progression Test Decks and publication of the results are documented in the CLEC Handbook (September 2001, Volume II, Section 4.5).

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Test Reference	Evaluation Criteria	Result	Comments
PPR5-5-4	Methods and procedures are defined for ensuring that errors found during all phases of testing are corrected and changes incorporated into software code.	Satisfied	During internal testing, errors may be found through the execution of acceptance tests. The individual programmer is responsible for logging and fixing the errors. Verizon uses a peer review process for correcting errors during all phases of testing. For the EDI and Web GUI interface development processes, Verizon uses an internal database to track all errors and their respective fixes before migrating code into the CTE. When CLECs are testing in CTE, Verizon uses a trouble logging and reporting system to record errors and track CLEC issues through to their resolution.
PPR5-5-5	New releases undergo testing prior to migration to a CLEC test environment.	Satisfied	Prior to the release of software into the CTE, the software undergoes unit, system, and integration testing, including the execution of the Regression and Progression Test Decks. Verizon has interim milestones for all phases of internal testing before code is migrated into the CTE.
Capacity Management			
PPR5-6-1	There are defined business scenarios, conditions, or transaction volumes that trigger the addition of capacity, load re-balancing, or system tuning.	Satisfied	Verizon has defined control points that trigger the addition of capacity, load re-balancing, or system tuning of its wholesale systems. Verizon has defined business scenarios and conditions (e.g., memory utilization and transaction volumes) for each server that runs wholesale applications. Details of Verizon's capacity utilization metrics, as well as tools used by Verizon to monitor the same, are documented in the internal Verizon document, Methods & Procedures for Program/1 on distributed Capacity Metrics and Management. Planning for additional capacity for the wholesale systems is handled by the Wholesale IT Infrastructure Team in conjunction with the Verizon Information Processing Services organization (VIPS).

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Test Reference	Evaluation Criteria	Result	Comments
PPR5-6-2	Resources and procedures are in place to adjust for changes in demand for services.	Satisfied	Verizon has procedures in place to facilitate adjustment to changes in demand for services. These procedures include the following: ♦ Collecting key system performance data (CPU utilization, memory utilization, and transactions count) for each server on an ongoing basis; ♦ Extracting, collating, and analyzing the performance data; and ♦ Developing action plans to address performance issues that arise out of this analysis. Verizon's internal document, Methods & Procedures for Program/1 on Distributed Capacity Metrics and Management, provides details on Verizon's resources and procedures for adjusting to changes in demand.
PPR5-6-3	Contingency plans for production interfaces exist to mitigate the impact of unexpected changes in business and transaction volume.	Satisfied	Verizon has contingency plans for its production interfaces. The two relevant Verizon data centers (located in Freehold, New Jersey and Fairland, Maryland) are functional duplicates, each having the capability to manage the entire transaction load if the other fails. Verizon has a Disaster Recovery (DR) Plan to ensure continuity of business unit operations. An integral part of the DR Plan is the Application Recovery Statement (ARS), which captures the requirements of the application teams (e.g., customer base, number of applications supported, business drivers, data center locations, recovery zones). The Wholesale IT Infrastructure team is responsible for the contents of the ARS for the wholesale systems and sets the desired recovery time and other disaster recovery requirements for their applications. The DR Plan for the wholesale applications is reviewed twice each year and executed once a year.

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Test Reference	Evaluation Criteria	Result	Comments
			E911 Database Updates
PPR5-7-1	Specifications for gaining access to E911 database records are defined and available to CLECs.	Satisfied	Verizon has defined specifications for CLECs to gain access to the E911 database records. For CLECs, the specifications of the PS/ALI interface are described in the Verizon Regional E911 PS/ALI Guide and the CLERK Interface Guide (January 2001), which are available on the Verizon Wholesale Markets website at http://128.11.40.241/east/wholesale/customer_docs/master.htm.

For CLEC customers, Verizon supports the National Emergency Number Association (NENA) industry specifications. Verizon will also support CLEC-customized record formats. Details about the NENA specifications and the file transfer protocol are available in the Verizon Regional E911 PS/ALI Guide.

CLECs can also get the necessary documentation on the process and specifications for accessing E911 database records from their Verizon AM. |
| PPR5-7-2 | Responsibilities for maintaining E911 database records are defined. | Satisfied | Verizon has defined responsibilities for maintaining E911 database records.

The Verizon E911 database systems are third-party systems provided by Intrado, Inc. (formerly SCC). The Verizon E911 Operations Group is responsible for monitoring all inputs to and outputs from the E911 database systems.

For Reseller customers, Verizon is responsible for processing customer information updates, including validating correctness of data by comparing it to the address information found in the MSAG.

CLECs are responsible for submitting, updating, and validating the address records for their end-users in the E911 database systems. Details of responsibilities of CLECs and Verizon for maintaining the E911 database records are documented in the E911 Activation Process (October 2001). This document is available on the Verizon Wholesale Markets website at http://128.11.40.241/east/wholesale/customer_docs/master.htm. |

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Test Reference	Evaluation Criteria	Result	Comments
PPR5-7-3	Procedures for updating E911 records are defined, documented, and available to CLECs.	Satisfied	The procedures for updating E911 records are defined and include transmitting data files, checking status of transmitted files, interpreting error code responses, and interpreting systems-generated files. These procedures are available in the Verizon Regional E911 PS/ALI Guide. The CLERK Interface Guide (January 2001) explains how CLECs can view and update their customer records online as well as view corresponding MSAG records. Both of the above documents are available on the Verizon Wholesale Markets website at http://128.11.40.241/east/wholesale/customer_docs/master.htm.
PPR5-7-4	Documentation is available to CLECs to develop the interface tool to perform E911 database updates.	Satisfied	The Verizon Regional E911 PS/ALI Guide provides information on how to use the PS/ALI interface for submitting E911 records. There is no development necessary for CLECs who choose to use the PS/ALI interface. Verizon supports the NENA specifications. More details about the NENA specifications can be obtained by accessing www.nena9-1-1.org.

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F.   Test Results: Forecasting Verification and Validation Review (PPR6)

1.0   Description
The Forecasting Verification and Validation Review (PPR6) was designed to verify and evaluate the Verizon Competitive Local Exchange Carrier (CLEC) local demand forecasting process. The objectives of the test were to determine the existence and functionality of procedures for developing, publicizing, conducting, and monitoring forecasting efforts and to ensure the overall forecasting effort had effective management oversight.

2.0   Methodology
This section summarizes the test methodology.

2.1   Business Process Description
Verizon uses the CLEC Local Demand Forecasting Process (Forecasting Process) to gather information from CLECs to anticipate future needs in several areas, including interconnection trunks, collocation, Unbundled Network Elements (UNE), and Resale products. Forecasts are used by Verizon to properly size and allocate network resources, facilitate infrastructure planning, anticipate capacity requirements for the operations support systems (OSS), as well as staff the National Market Centers (NMC).

Forecasts are scheduled on a semi-annual basis. CLECs submit forecasts for the current year and a projected forecast for the next two years. The Forecasting Process is initiated when the CLEC contact is sent a standard industry letter requesting demand forecasts be submitted within six weeks. The industry letter includes detailed instructions and web links needed to download the forecast forms, as well as related instructions for completing them.

Once Verizon receives the CLEC demand forecasts, they are sent to the Wholesale Forecasting Team who then distributes the forecasts to the Planning and Operations organization. The Wholesale Forecasting Team initiates the process of developing the semi-annual aggregated demand forecast report. This development process includes activities such as aggregating the forecast information, analyzing historical and current customer data, and assessing market trends using internal and external sources such as third-party research information.

2.2   Scenarios
Scenarios were not applicable to this test.

2.3   Test Targets & Measures
This test examines Verizon's CLEC Forecasting Process and procedures, including forecast development, publication, and confirmation.

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2.4   Data Sources

The sources of data for this test included:

♦   The Verizon CLEC Handbook, Volume I March 2001;
♦   The Verizon Resale Handbook, Volume I September 2001;
♦   Internal Verizon documentation; and
♦   Interviews with Verizon VA personnel.

This test did not rely on data generation or volume testing.

2.5   Evaluation Methods
The Forecasting Verification and Validation Review consisted of reviews and evaluations of Verizon documentation, interviews with Verizon staff members, and verification of the existence of Verizon forecasting materials.

2.6   Analysis Methods
The Forecasting Verification and Validation Review included a checklist of evaluation criteria developed by KPMG Consulting during the initial phase of the Verizon Virginia, Inc. OSS Evaluation Project. These evaluation criteria provided the framework of norms, standards, and guidelines for the Forecasting Verification and Validation Review.

The data collected were analyzed employing the evaluation criteria detailed in Section 3.0 below.

3.0   Results
This section identifies the evaluation criteria and test results. The results of this test are presented in the table below.

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Table 6-1: PPR6 Evaluation Criteria and Results

Test Reference	Evaluation Criteria	Result	Comments
PPR6-1	Forecasting Process responsibilities and activities are defined.	Satisfied	Verizon's responsibilities in the Forecasting Process are defined in the CLEC Handbook (March 2001, Volume I, Section 8.3) and the Resale Handbook (September 2001, Volume I, Section 8.4) at http://www22.verizon.com/wholesale/ LSP/bridge/0,2631,4-Lib,FF.html#handbook. Additionally, Verizon's responsibilities are also defined on the Verizon website in Verizon East Resources Overview at http://128.11.40.241/east/wholesale/res ources/master.htm. The Wholesale Forecasting Team is responsible for soliciting, gathering, analyzing, and aggregating demand forecasts. The Methods and Procedures for the Wholesale Forecasting Team are documented in an internal document, The Verizon East Wholesale Forecasting Process (February 2001). CLEC responsibilities for forecasting are defined in the Interconnection Agreements as well as in the CLEC Handbook (March 2001, Volume I, Section 8.3) and the Resale Handbook (September 2001, Volume I, Section 8.4).

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Test Reference	Evaluation Criteria	Result	Comments
PPR6-2	Scope and objectives of the Forecasting Process are defined and documented.	Satisfied	The scope and objectives of the Forecasting Process are defined in Verizon's CLEC Handbook (March 2001, Volume I, Section 8.3) and Resale Handbook (September 2001, Volume I, Section 8.4), as well as on the Verizon website at http://128.11.40.241/east/wholesale/resources/master.htm. CLECs submit forecast data for interconnection trunks, collocation, UNE, and Resale products on a semi-annual basis. The forecast data is used to facilitate planning of network resources to meet CLEC demand.
PPR6-3	The Forecasting Process is documented and in place.	Satisfied	The Forecasting Process is documented in Verizon's CLEC Handbook (March 2001, Volume I, Section 8.3) and the Resale Handbook (September 2001, Volume I, Section 8.4). Each of these handbooks provides information on the Forecasting Process, including links to the forecast forms, templates, and instructions for CLECs and Resellers.

The Verizon East Wholesale Forecasting Process (February 2001) describes the guidelines and step-by-step procedures for the development of demand forecasts, including instructions, timelines, verification/modification, and aggregation of forecast data. |

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Test Reference	Evaluation Criteria	Result	Comments
PPR6-4	The Forecasting Process includes procedures for addressing errors and exceptions.	Satisfied	Verizon has established procedures to address errors and exceptions in CLEC and Resale forecast data. These procedures are outlined in The Verizon East Wholesale Forecasting Process (February 2001). The Verizon Account Manager (AM) is the main point of contact for CLEC issues, including errors and exceptions related to forecasting. The AM acts as the liaison between the CLEC or Reseller and the Wholesale Forecasting Team, to address errors and exceptions in forecast data.
PPR6-5	Forms and templates are provided to facilitate data collection from CLECs and Resellers.	Satisfied	The Verizon Wholesale website at http://128.11.40.241/east/wholesale/resources/master.htm, the CLEC Handbook (March 2001, Volume I, Section 8.3), and the Resale Handbook (September 2001, Volume I, Section 8.4) provide the necessary forecasting guidelines with website links to instructions and templates to facilitate data collection from CLECs and Resellers. The industry letters are distributed by Verizon to CLECs and Resellers to solicit carrier-specific forecast data and provide due dates for the forecast cycle. The industry letters can also be found on the Verizon Wholesale website at http://128.11.40.241/east/wholesale/resources/clec where forms and templates are provided.

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Test Reference	Evaluation Criteria	Result	Comments
PPR6-6	Data provided by each CLEC is confirmed and verified.	Satisfied	The Verizon East Wholesale Forecasting Process (February 2001) document outlines the process and procedures for the verification and confirmation of the CLEC forecast data. Verizon confirmed that the forecast data is reviewed by the Wholesale Forecasting Team. As stated in The Verizon East Wholesale Forecasting Process document (February 2001), the Verizon AMs perform a high-level review of the forecast data for formatting discrepancies before the Wholesale Forecasting Team verifies the data for completeness. If there are any issues, the AM for that CLEC will be contacted.

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Test Reference	Evaluation Criteria	Result	Comments
PPR6-7	The Forecasting Process includes requirements for forecast revision.	Satisfied	The Forecasting Process occurs on a semi-annual basis. During that cycle, CLECs are asked to provide forecast data of the current year and the next two subsequent years. After the forecasts are received, The Wholesale Forecasting Team reviews them for apparent or perceived errors in the forecasts. If errors in the forecast are discovered, the CLEC's AM is contacted. Verizon maintains a log of CLEC submissions, including who sent the forecasts, any problems, and when they were sent back to the AM for resolution. As outlined in the Verizon East Wholesale Forecasting Process document (February 2001), Verizon also reviews its processes and procedures during the forecasting cycle. The Wholesale Forecasting Team attends a semi-annual kick-off meeting at the beginning of the forecasting cycle to review the Forecasting Process. Improvements are made to the Forecasting Process and the forecasting tools (e.g., templates and forms). Any updates to the forecasting tools are implemented in the current forecasting cycle, while any process specific improvements are implemented in the next forecasting cycle.

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Test Reference	Evaluation Criteria	Result	Comments
PPR6-8	Procedures are in place to ensure that confidentiality regarding proprietary CLEC information is maintained.	Satisfied	Verizon has policies and procedures in place to maintain CLEC confidentiality of the forecast data. Verizon personnel who handle confidential CLEC information are required to sign a Code of Conduct statement and the Customer Proprietary Network Information (CPNI) form. The CPNI form is used to control and track access to CLEC data. These documents prohibit Verizon employees from sharing confidential CLEC information with unauthorized external and internal parties, including Verizon retail operations. The distribution of proprietary CLEC information is strictly controlled. The Wholesale Forecasting Team maintains the list of individuals to whom this info is distributed. The CLEC Handbook (March 2001, Volume I, Section 8.3) and the Resale Handbook (September 2001, Volume I, Section 8.4) provide specific information on Verizon's policies on protecting confidential CLEC information.

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