

VII. Billing Domain Results and Analysis Section

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A. Test Results: Billing Work Center/Help Desk Support Evaluation (PPR12)

1.0 Description

The Billing Work Center/Help Desk Support Evaluation (PPR12) was an operational analysis of the Work Center/Help Desk processes developed by Verizon Virginia (Verizon VA) to provide support to Resellers and Competitive Local Exchange Carriers (CLEC) with Daily Usage Files (DUF) and billing related claims, questions, problems, and issues. Basic functionality, performance, escalation procedures, and security were evaluated.

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

Two billing help desks support Resellers and CLECs with billing-related issues: the Billing and Collections Operations Center (B&COC) and the Wholesale Customer Care Center (WCCC).

The B&COC's responsibilities include handling of billing inquiries, dispute resolution, processing of billing adjustments, resends of paper bills, and collection of bills in arrears. This center serves wholesale customers.

The WCCC is responsible for resolving technical and transmission issues concerning electronic billing media and DUF, resends and recreates of electronic bills, electronic billing files containing errors, usage and file content questions, software errors, requests for new systems availability, and changes to file transmission methods.

2.2 Scenarios

Scenarios were not applicable to this test.

2.3 *Test Targets & Measures*

The test target was the evaluation of the processes through which Resale, Unbundled Network Elements (UNE), and Unbundled Network Elements-Platform (UNE-P) customers are provided support by Verizon VA for billing related problems, questions, and issues. Processes and sub-processes in the test include the following:

- ◆ Receive help desk calls;
 - ◆ Answer calls;
 - ◆ Interface with users;
 - ◆ Log calls; and
 - ◆ Record severity code.
- ◆ Process help desk calls and resolve user questions, problems, or issues;
 - ◆ Receive claims;
 - ◆ File claims;
 - ◆ Process claims;
 - ◆ Adjust for Issues; and
 - ◆ Dispose of claims.
- ◆ Close help desk calls;
- ◆ Monitor status;
 - ◆ Track status; and
 - ◆ Report status.
- ◆ Escalations;
 - ◆ Identify escalation procedures; and
 - ◆ Evaluate escalation procedures.
- ◆ Capacity management;
- ◆ Provide security and integrity; and
- ◆ Manage the help desk process.
 - ◆ Provide management oversight; and
 - ◆ Train and update customer service representatives.

2.4 *Data Sources*

The sources of data for this test included interviews with Verizon VA personnel, Work Center Manuals, Resale and CLEC Handbooks, Automatic Call Distributor (ACD) monthly reports, criteria for service observations, minutes of Verizon CLEC workshop meetings, and various Verizon VA internal reports. In addition, Verizon VA training curriculum, organization charts, job aids, and methods and procedures (M&P) were reviewed.

Data were gathered from interviews, process walk-through, and documentation reviews.

2.5 *Evaluation Methods*

KPMG Consulting conducted process interviews with Verizon personnel and performed on-site inspections of work center operations. Interviews took place with Verizon Managers, Team Leaders, and subject matter experts (SME) responsible for managing the Centers' processes; tracking and reporting status; and resolving claims, problems, and issues. Processes, operational M&Ps, organizational charts, and supporting documentation were collected for evaluation and analysis.

2.6 *Analysis Methods*

The Billing Work Center/Help Desk Support Evaluation 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 Billing Work Center/Help Desk Support Evaluation.

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

3.0 *Results Summary*

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

Table 12-1: PPR12 Evaluation Criteria and Results

Test Reference	Evaluation Criteria	Result	Comments
Scope and Responsibilities			
PPR12-1-1	The scope and responsibilities of the billing work centers are adequate to address customer inquiries.	Satisfied	The scope and responsibilities of the B&COC and WCCC cover the following: <ul style="list-style-type: none"> ◆ General inquiries; ◆ Resends/recreates of current and prior period bills; ◆ Claims and adjustments; ◆ Collections; ◆ Transmission of bill media; ◆ Software issues; ◆ Bill and DUF content inquires; and ◆ Escalation procedures.
PPR12-1-2	Billing Work Center/Help Desk responsibilities and activities are defined.	Satisfied	Responsibilities and activities of the B&COC and WCCC are defined in the Resale Handbooks (September 2001) and CLEC Handbooks (March 2001). Additionally, CLEC Workshops are held periodically to discuss WCCC and B&COC activities and procedures.

Test Reference	Evaluation Criteria	Result	Comments
PPR12-1-3	Customers can readily initiate a claim or query.	Satisfied	<p>Claims can be referred to the B&COC via one of three points of entry: 1) email, 2) fax, and 3) U.S. mail. Upon receipt, claims are logged into the database with unique claim numbers for tracking and reporting purposes. Procedures call for claims to be acknowledged within 48 hours of receipt.</p> <p>In the WCCC, queries are received via telephone. Once received, a trouble ticket is entered into the trouble management system (Tivoli). The trouble ticket number is then provided to the customer for tracking purposes.</p> <p>For the B&COC, the process to initiate claims can be found in both the CLEC Handbook (March 2001, Volume III, Section 10.4) and Resale Handbook (September 2001, Volume III, Section 5.4).</p> <p>For the WCCC, the process to initiate a trouble ticket can be found on http://128.11.40.241/east/wholesale/customer_docs/pdfs/wccc.pdf.</p>

Test Reference	Evaluation Criteria	Result	Comments
PPR12-1-4	Customers can obtain information on the status of a claim or inquiry.	Satisfied	<p>In the B&COC, customers are provided a unique claim number for each claim. Customers can track their claims by calling the B&COC and providing the claim number. For claims that cannot be resolved within 30 days, customers are called to inform them of the status of the claim.</p> <p>In the WCCC, trouble tickets are used to track the status of customer claims. Customers are called within 24 hours of receipt of the claim to report on its status. A second status call to the customer is placed within 48 hours of the initial issuance of the trouble ticket. Trouble tickets are not closed until confirmation is received from the customer that the matter was resolved.</p> <p>Information on obtaining the status of a claim or inquiry can be found in both the Resale Handbook (September 2001, Volume III, Section 5.4) and CLEC Handbook (March 2001, Volume III, Section 10.4).</p>
PPR12-1-5	Customer escalation procedures are defined.	Satisfied	<p>Escalation procedures for wholesale customers are defined and posted on Verizon’s Wholesale Markets website at http://www.verizon.com/wholesale/.</p> <p>Contact names and telephone numbers are also provided.</p>

Test Reference	Evaluation Criteria	Result	Comments
PPR12-1-6	Process includes consistent call handling procedures.	Satisfied	<p>Consistent call handling procedures are achieved by using ACDs at the B&COC and the WCCC, which distribute calls to agents dedicated to handling billing-related matters.</p> <p>WCCC call agents log calls into a trouble management system. Referrals to other departments are tracked through a Lotus Notes application. Customers are called within 24 hours with a status update.</p>
PPR12-1-7	Process includes procedures for resolving billing inquires and service requests in a timely manner.	Satisfied	<p>Procedures are in place to ensure timely resolution of billing inquires and service requests.</p> <p>At the B&COC, Verizon has 48 hours to acknowledge receipt of the inquiry or service request. Inquires are generally closed within 30 days of receipt. For claims that cannot be resolved within 30 days, customers are called to inform them of the status of the claim.</p> <p>At the WCCC, customers are called within 24 hours of receipt of the claim to report on its status. Trouble tickets are not closed until confirmation is received from the customer that the matter was resolved.</p> <p>For the B&COC, the claims process can be found in the CLEC Handbook (March 2001, Volume III, Section 10.4) and in the Resale Handbook (September 2001, Volume III, Section 5.4)</p> <p>For the WCCC, the process to initiate a trouble ticket can be found on http://128.11.40.241/east/wholesale/customer_docs/pdfs/wccc.pdf.</p>

Test Reference	Evaluation Criteria	Result	Comments
PPR12-1-8	Process includes procedure for closure of claims.	Satisfied	<p>The process for closure of claims at the B&COC is documented in an internal B&COC Operations Manual, on the Verizon Wholesale website, and in the CLEC Handbook (Volume III, Section 10.4) and in the Resale Handbook (Volume III, Section 5.4)</p> <p>Adjustments resulting from claims can take up to two bill cycles following the closure of the investigation to appear on the bill. The process requires that agents verify that credit adjustments are applied to customer bills before closing out claims.</p> <p>The process for closing WCCC trouble tickets can also be found on the Verizon Wholesale Website at http://128.11.40.241/east/wholes/customer_docs/pdfs/wccc.pdf.</p> <p>Additionally, trouble tickets are closed out only after the WCCC contacts the customer via telephone to notify him/her that the issue has been resolved.</p> <p>If the WCCC is unable to reach the customer, a message is left advising the customer that he/she has three business days to respond to Verizon as to whether the ticket should remain open or closed.</p>

Test Reference	Evaluation Criteria	Result	Comments
Process Management			
PPR12-2-1	Process includes procedures for management reporting.	Satisfied	<p>Procedures are in place at each center for management reporting.</p> <p>At the B&COC, Team Leads conduct desk-side observations to assess agent compliance with prescribed methods and procedures. Weekly reviews are conducted by Team Leads to review the status of pending claims, number of new claims received, and number of claims closed. The status of claims is reviewed with the center’s Director and department Vice President on a bi-weekly basis. Management reports include the following:</p> <ul style="list-style-type: none"> ◆ “CLEC Adjustments by date”; and ◆ Pinnacle ACD/MIS Management reports. <p>WCCC performance is monitored daily by the center’s Director. The Dashboard Report tracks performance using six service indicators. Service standards are established, and performance is measured against each service standard. Supervisory personnel are responsible for daily monitoring and tracking of pending and incoming trouble tickets.</p>

Test Reference	Evaluation Criteria	Result	Comments
PPR12-2-2	Process includes procedures for maintaining security and integrity of data access.	Satisfied	<p>Procedures are in place for maintaining the security and integrity of data access at both the B&COC and the WCCC, including the following:</p> <ul style="list-style-type: none"> ◆ Access to customer proprietary data is restricted to authorized personnel. ◆ WCCC and B&COC staffs have special ID codes in addition to company-issued ID passes that allow them entry into the center. ◆ Each center employee signs a Code of Conduct. Electronic documentation is stored on a shared drive that only authorized personnel can access. ◆ Agents have read-only access to legacy systems. ◆ All changes to account information must be authorized by Account Managers (AM).

Test Reference	Evaluation Criteria	Result	Comments
Performance Management			
PPR12-3-1	Process includes procedures for obtaining CLEC feedback on the effectiveness of the billing work center(s).	Satisfied	<p>Procedures for obtaining CLEC feedback on the effectiveness of the billing work center(s) include the following:</p> <ul style="list-style-type: none"> ◆ CLEC Workshops, which are conducted every four to six weeks. CLECs are given an opportunity to provide input to the agenda. ◆ CLEC surveys are conducted to solicit comments on work center performance from the CLECs' perspective.
PPR12-3-2	Process performance measures are defined and measured.	Satisfied	Process performance measures are defined at both the B&COC and WCCC and include reports generated for reviews by supervisors and managers, who receive semi-annual performance evaluations based in part on these results. The Daily Duties and Monthly Duties document, as well as team lead meetings and service representative evaluations, are used to measure the performance of both centers.

Test Reference	Evaluation Criteria	Result	Comments
PPR12-3-3	Business transaction volumes and resource utilization are tracked for use in the workforce capacity planning process.	Satisfied	<p>Workforce capacity planning processes at both the B&COC and the WCCC use the same evaluation tools and methods.</p> <p>ACD technology is used to answer and distribute incoming calls. ACD reports are monitored daily to identify fluctuations in workload. Adjustments to the number of agents available for incoming calls are made as warranted. In the event of unexpected high call volumes, billing-related calls overflow to other groups within the B&COC and the WCCC for handling.</p> <p>Local management in each center does capacity planning. Informal communications and weekly meetings provide the management of the WCCC and the B&COC with information pertaining to any new CLEC activity or new product rollouts that may cause potential increases in volume. Based on this information, assessments are made to determine if increases in staffing and/or systems are required.</p>

Test Reference	Evaluation Criteria	Result	Comments
PPR12-3-4	Training of representatives is defined and documented.	Satisfied	<p>The B&COC and the WCCC have a variety of learning tools available to representatives. On-the-job training, M&P manuals, and online assistance are available through a corporate repository. Both centers have documented training procedures available for representatives.</p> <p>The B&COC has incorporated a formal training class for new hires into its business plan and is included in the B&COC Training Manual.</p> <p>The WCCC also has a formal training document, the WCCC Methods & Procedures Guide, for call handling procedures, preparing claim forms, and handling billing inquires. WCCC personnel also use the WCCC General Training Guidebook to train new employees on procedures involving the handling of incoming billing-related calls.</p>

B. Test Results: Daily Usage Production and Distribution – Process Evaluation (PPR13)

1.0 Description

The Daily Usage Production and Distribution – Process Evaluation (PPR13) was an operational analysis of the processes and related documentation used by Verizon Virginia (Verizon VA) to create and transmit the Daily Usage File (DUF), which contains records of billable messages that belong to Competitive Local Exchange Carriers (CLEC). The objectives of this test were to determine the accuracy, completeness, and timeliness of these processes.

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

The DUF contains records that provide details of calls that originate from and are recorded by Verizon VA switches, as well as records for alternately billed calls¹¹⁵ that originate from other Local Exchange Carriers (LEC). Verizon VA processes usage records through a variety of systems and identifies the CLEC that owns the processed DUF records. Records are translated into Exchange Message Interface (EMI) format and are delivered to CLECs on a daily basis via one of two delivery options:

- ◆ Connect:Direct TCP/IP; and
- ◆ Cartridge Tape.

CLECs may return Verizon VA DUF records that are believed to be in error within 45 days of the message date by notifying the Wholesale Customer Care Center (WCCC) Help Desk. Mechanized returns must be formatted in accordance with the EMI guidelines.

2.2 Scenarios

Scenarios were not applicable to this test.

2.3 Test Targets & Measures

The test targets were the accuracy, completeness, and timeliness of processes used by Verizon VA to produce and distribute DUFs. The test included review of the following processes and sub-processes:

- ◆ DUF production;
- ◆ DUF balancing and reconciliation;
- ◆ DUF routing;

¹¹⁵Alternately billed calls are calls that are billed to a telephone number other than the originating number (e.g., collect, third number billed).

- ◆ DUF transmission;
- ◆ Data transmission and cartridge delivery to CLEC;
- ◆ DUF retention; and
- ◆ DUF retransmission.

2.4 *Data Sources*

The sources of data for this test included interviews with Verizon VA personnel and reviews of the following items:

- ◆ Resale Handbook (September 2001, Volume III, Section 5);
- ◆ CLEC Handbook (March 2001, Volume II, Section 5 and Volume 3, Section 10); and
- ◆ Internal documents provided by Verizon VA.

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

2.5 *Evaluation Methods*

Interviews were conducted with Verizon VA personnel to assess the ability of Verizon VA to produce and distribute DUF. Processes, methods and procedures, and supporting documentation were evaluated to determine whether Verizon VA internal processes were sufficiently complete, accurate, and timely to support CLEC requirements.

2.6 *Analysis Methods*

The Daily Usage Production and Distribution – Process Evaluation 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 Daily Usage Production and Distribution – Process Evaluation.

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 13-1: Evaluation Criteria and Results

Test Reference	Evaluation Criteria	Result	Comments
PPR13-1	DUF production and distribution procedures are defined.	Satisfied	DUF production and distribution procedures are defined in the Resale Handbook (September 2001, Volume III, Section 5) and CLEC Handbook (March 2001, Volume 3, Section 10). DUF is produced and distributed as described in the Resale and CLEC Handbooks. The process includes controls to provide customers with timely and accurate DUF data.
PPR13-2	Scope and objectives of the organizations responsible for DUF production and distribution are defined.	Satisfied	Scope and objectives of the organizations responsible for DUF production and distribution are defined in the Resale Handbook (September 2001, Volume III, Section 5.2.8) and CLEC Handbook (March 2001, Volume 3, Section 10.2.8). Delineation of organizational process responsibilities and activities is defined. The account management organization and the help desk organizations have a clearly defined and distinct set of responsibilities.
PPR13-3	CLECs are provided with contacts for DUF production and distribution issues.	Satisfied	CLECs are provided with contacts for DUF production and distribution issues. Verizon VA WCCC Help Desk roles, including contact numbers and hours of operation, are defined in the CLEC Handbook (March 2001, Volume III, Section 10.2.8) and Resale Handbook (September 2001, Volume 3, Section 5.2.8). More information about the Verizon VA WCCC Help Desk can be found at http://128.11.40.241/east/wholesale/customer_docs/pdfs/wccc.pdf .

Test Reference	Evaluation Criteria	Result	Comments
PPR13-4	DUF balancing and reconciliation procedures are defined.	Satisfied	DUF balancing and reconciliation procedures are defined and implemented within and between process steps of the Verizon VA message processing system through the use of balancing software.
PPR13-5	DUF routing and guiding are controlled.	Satisfied	<p>DUF routing and guiding are controlled in CABS by using the Carrier Identification Code (CIC) and the Common Language Location Identifier (CLLI) code.</p> <p>For expressTRAK, usage is guided by telephone number, utilizing a guide file that is maintained by service order activity.</p> <p>Routing and guiding errors are documented in the Unidentified (Mismatch) Usage Report and the Usage Inventory Report.</p>
PPR13-6	DUF is prepared and delivered according to a defined production schedule.	Satisfied	DUF is prepared and delivered according to a defined production schedule as documented in the CLEC Handbook (March 2001, Volume III, Section 10.2.5) and Resale Handbook (September 2001, Volume 3, Section 5.2.5).
PPR13-7	DUF data delivery options are documented.	Satisfied	<p>DUF data delivery options are documented in the Resale Handbook (September 2001, Volume 3, Section 5.2.6) and CLEC Handbook (March 2001, Volume III, Section 10.2.6).</p> <p>The two delivery options available to CLECs are Connect:Direct TCP/IP and Cartridge Tapes.</p>
PPR13-8	Changes to DUF interface specifications are subject to change management techniques.	Satisfied	Changes to DUF interface specifications are subject to change management techniques as documented in the CLEC Handbook (March 2001, Volume II, Section 5.5) and Resale Handbook (September 2001, Volume II, Section 5.5). Verizon VA change control management consists of representatives from Verizon VA and CLECs.

Test Reference	Evaluation Criteria	Result	Comments
PPR13-9	DUF retention policies are documented.	Satisfied	DUF retention policies are documented in the CLEC Handbook (March 2001, Volume III, Section 10.2.7) and Resale Handbook (September 2001, Volume 3, Section 5.2.7). Verizon VA stores the DUF for 45 days from the day it is created.
PPR13-10	Procedures for CLEC retransmission requests are documented.	Satisfied	Procedures for CLEC retransmission requests are documented in the CLEC Handbook (March 2001, Volume III, Section 10.2.7) and Resale Handbook (September 2001, Volume 3, Section 5.2.7). CLEC requests for retransmission of DUF are handled by the Verizon VA WCCC Help Desk.
PPR13-11	CLECs are provided with a status mechanism for tracking retrieval and retransmission requests.	Satisfied	CLECs are provided with a status mechanism for tracking retrieval and retransmission requests through the Verizon VA WCCC Help Desk as documented in the Resale Handbook (September 2001, Volume III, Section 5.2.7) and CLEC Handbook (March 2001, Volume 3, Section 10.2.7). A retransmission request is assigned a trouble ticket in the Tivoli system for tracking. The CLEC requesting retransmission is provided the trouble ticket number and may obtain an updated status at any time by contacting the help desk.
PPR13-12	Capacity management practices and/or processes related to DUF production and distribution are documented.	Satisfied	Capacity management practices and/or processes related to DUF production and distribution are documented in Verizon's Capacity Management Handbook. Verizon VA focuses on system resources to ensure that the Central Processing Unit (CPU) utilizations are optimal in terms of DUF production. CPU utilizations are reviewed regularly to ensure that the systems are capable of handling significant changes in volume.

C. Test Results: Bill Production and Distribution – Process Evaluation (PPR14)

1.0 Description

The Bill Production and Distribution – Process Evaluation (PPR14) was an operational analysis of the processes employed by Verizon Virginia (Verizon VA) to produce and distribute timely and accurate carrier bills. The objectives of the test were to determine the existence and functionality of procedures used to collect, calculate, and validate customer invoice data and to create and distribute bill media.

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

Verizon VA prepares many types of bills, each of which covers a specific set of products and services. Bills are produced by two primary billing systems: the Carrier Access Billing System (CABS) and the expressTRAK System.

The CABS billing system is used to bill transport usage and facility charges to Competitive Local Exchange Carriers (CLEC) that lease unbundled services such as loops or physical equipment belonging to a CLEC housed at a Verizon VA Central Office (CO).

expressTRAK produces bills for Retail and Resold Services, and Unbundled Network Elements (UNE), including UNE-P. The billing charges include monthly recurring, fractional, usage, and one-time charges. The Quality Billing Center (QBC) has overall responsibility for ensuring the accuracy of Verizon VA expressTRAK billing through Verizon’s bill verification processes and tools.

Verizon VA CLEC bills are structured in a hierarchical manner. At the top of the hierarchy is the Summary Account. Separate Summary Accounts for Resale, UNE, and UNE-P services are maintained. Charges for multiple individual sub-accounts are aggregated under the appropriate Summary Account or, in the case of expressTRAK, Invoice Points.

Bill production and distribution begins with the collection of customer data, including service order activity posted for the current bill cycle and usage data. Charges are calculated, payments and adjustments are applied, and bills are generated according to the format(s) selected by the customer. Bills are then mailed or transmitted to the customer.

2.2 Scenarios

Scenarios were not applicable to this test.

2.3 *Test Targets & Measures*

The test target was the process employed by Verizon VA to support the timely production of complete and accurate wholesale customer bills. The following is a list of the processes and sub-processes that were included in the evaluation:

- ◆ Balance cycle;
 - ◆ Define balancing and reconciliation procedures;
 - ◆ Produce control reports; and
 - ◆ Release cycle.
- ◆ Deliver bill;
- ◆ Maintain bill history; and
 - ◆ Maintain billing information; and
 - ◆ Access billing information.
- ◆ Request resend.

2.4 *Data Sources*

The data sources for this test included interviews with Verizon subject matter experts (SME) and documentation reviews supplied by Verizon VA at KPMG Consulting's request. Interview sessions took place during June and July 2001. The documents reviewed included reports generated by Verizon VA's billing sub-systems, billing system documentation, and change management process documentation.

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

2.5 *Evaluation Methods*

The Bill Production and Distribution – Process Evaluation assessed Verizon VA's ability to produce accurate and complete bills, distribute bills in a timely manner, and archive prior period bills. Bill production processes include cycle balancing, reconciliation, and maintenance of bill history. Bill distribution processes include the retrieval of historical bills and delivery of media.

Information about these processes was obtained through a series of interviews with Verizon VA SMEs, as well as through inspections of relevant documentation.

Processes were evaluated to assess the completeness of the methods and procedures used to facilitate cycle balancing, the compilation and application of service order activity, usage processing, changes to customer profiles, and the application of payments and adjustments. The degree to which processes and procedures supported data accuracy was determined through examination of procedures for table updates, rating, bill print quality, bill delivery, systems changes, and generation of control reports. In addition, processes were assessed to determine whether or not they facilitated the timely delivery of invoices.

2.6 *Analysis Methods*

The Bill Production and Distribution – Process Evaluation 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 Bill Production and Distribution – Process Evaluation.

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

3.0 Results Summary

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

Table 14-1: PPR14 Evaluation Criteria and Results

Test Reference	Evaluation Criteria	Result	Comments
Completeness			
PPR14-1-1	Scope and objectives of the bill cycle balancing services cover balancing requirements.	Satisfied	The scope of bill cycle balancing services covers bill cycle balancing requirements, including the following: <ul style="list-style-type: none"> ◆ Ensuring usage is accounted for and correctly applied; ◆ Ensuring payments and adjustments are applied; ◆ Ensuring account balances are accurately rolled forward; and ◆ Establishing error and detection procedures.
PPR14-1-2	Bill balancing procedures exist to identify and resolve out-of-balance conditions.	Satisfied	Bill balancing procedures to identify and resolve out-of-balance conditions exist and are documented. Individual balancing steps are embedded in the expressTRAK and CABS billing sub-systems. The ABEND reports capture out-of-balance conditions. The ABEND reports are reviewed and there are manual procedures, which are used to investigate and resolve these conditions. The information is then recycled through the affected application.

Test Reference	Evaluation Criteria	Result	Comments
PPR14-1-3	Process includes reasonability checks to catch errors not included in pre-determined balancing procedures.	Satisfied	<p>For expressTRAK, the QBC performs manual and electronic reviews of daily usage, event preprocessing, usage recycles, individual CLEC usage, service order activity, and can, therefore, catch errors that are not identified by system edits.</p> <p>When problems are identified or an ABEND (out-of-balance condition) occurs, the QBC creates a production referral to initiate and track problem resolution.</p> <p>CABS bills are verified against the production logs for usage, service order activity, correct rating, and to ascertain all accounts and pages are included. If acceptable, the bill file is sent to the printing and distribution center.</p> <p>If a problem is encountered during the quality check, the file is referred to the CABS Hotline for correction and re-creation.</p>

Test Reference	Evaluation Criteria	Result	Comments
PPR14-1-4	Process includes procedures to ensure that payments and adjustments are applied.	Satisfied	<p>Procedures for the final reconciliation of payments and adjustments take place at the end of the billing cycle for both expressTRAK bills and CABS billing. Business rules are embedded in the programming code of sub-systems that process payments and adjustments for both CABS and expressTRAK.</p> <p>expressTRAK bills are analyzed at the QBC electronically and manually to ensure that payments and adjustments have been correctly applied. If an out-of-balance occurs, the production support batch escalation process is initiated.</p> <p>Within CABS, procedures are in place to correctly apply payments and adjustments.</p> <p>The Remittance Processing Center (RPC) CASH system collects payment and adjustment information from the Accounts Receivable database and processes the payment information for posting to the customer's bill. Payments that can not be applied to an account are logged in an error report for investigation.</p>

Test Reference	Evaluation Criteria	Result	Comments
PPR14-1-5	Process includes procedures to ensure service order activity is properly captured.	Satisfied	<p>To ensure expressTRAK service order activity is properly captured on the bill, the QBC runs its Service & Equipment tool to validate that service order activity on an account in the accounts database matches the customer's bill.</p> <p>Quality controls are also in place to capture service order activity for CABS billing. The functionality for guiding service order activity to a customer bill is embedded in the CABS system.</p> <p>If a service order is unable to post to an account on an expressTRAK or CABS bill, an ABEND condition will result. The ABEND will trigger manual intervention and a production referral to the Verizon Production Management /Support Group. Once corrected, service orders are re-circulated for processing.</p>

Test Reference	Evaluation Criteria	Result	Comments
PPR14-1-6	Process includes procedures to ensure customer usage is properly captured and guided.	Satisfied	<p>The Electronic Billing Accuracy Control (EBAC) group collects data from the switches. The frequency of data collection depends on the size of the CO. The trigger for collecting usage data from the CO is a time-of-day threshold, which is determined based on the number of records coming into the switch. As a quality assurance measure, the number of records coming into and out of the data collector is balanced. Usage errors are documented and investigated. Reports are produced that identify mismatched and unidentified data.</p> <p>CABS has usage sub-system, which reads the usage files from the EMI-formatted DUF records. The Alternate Exchange Carrier Name (AECN) code is used for guiding the usage to the accounts database. The usage is summarized at the end office level and posted to the appropriate account. Quality checks are provided by the Verizon Access Order Entry group. Usage that is not captured is reported in mismatched and unidentified data reports. The errors on the mismatch reports are investigated and the usage is re-circulated through the system.</p>

Test Reference	Evaluation Criteria	Result	Comments
PPR14-1-7	Process includes procedures to ensure bill history retention requirements are operationally satisfied.	Satisfied	<p>Procedures to ensure bill history retention requirements exist for both expressTRAK and CABS. These procedures include the following:</p> <ul style="list-style-type: none"> ◆ expressTRAK history is maintained on the Billing Archive Retrieval Systems (BARS), located in Fairland, Maryland. The BARS database stores 13 months of bill data. After 13 months, the data are migrated to tape where it is stored for seven years. Additional tapes are created for crisis recovery purposes. ◆ CABS bills are stored in the System Archive Retrieval (SAR) database on the mainframe for six months. During this time, a re-print can be transmitted to the customer via the B&COC. After six months, the bills are sent to the CD-ROM lab in Massapequa, New York for archive.
PPR14-1-8	Process includes procedures to retrieve and transmit historical billing information.	Satisfied	Internal users such as the Wholesale Customer Care Center (WCCC), the Billing and Collections Operations Center (B&COC), and Account Managers (AM) at the WCCC and B&COC generate online resend requests. The requests are batched for nightly processing by the ABI system. The retrieved billing data is then processed according to normal bill delivery procedures or according to special handling instructions associated with the resend request.

Test Reference	Evaluation Criteria	Result	Comments
PPR14-1-9	Bill delivery responsibilities and activities are defined.	Satisfied	<p>Responsibilities for bill delivery are defined and determined by bill medium as follows:</p> <p>expressTRAK:</p> <ul style="list-style-type: none"> ◆ Paper bills are printed and distributed from the Richmond, Virginia data center; ◆ CD-ROM are created and distributed from the Massapequa, New York data center; and ◆ BOS-BDT files are sent from the Richmond, Virginia data center. ◆ NDM files are sent from the Silver Spring, Maryland data center. <p>CABS:</p> <ul style="list-style-type: none"> ◆ Paper bills are printed and distributed from the Monroeville, Pennsylvania data center; ◆ Magnetic tapes are created and distributed from the Monroeville, Pennsylvania data center; and ◆ BOS-BDT and NDM files are sent from the Monroeville, Pennsylvania data center.

Test Reference	Evaluation Criteria	Result	Comments
Accuracy			
PPR14-2-1	The process includes procedures to ensure recurring and non-recurring rates are accurately applied.	Satisfied	<p>Processes and procedures are in place for both expressTRAK and CABS billing to ensure recurring and non-recurring rates are accurately applied.</p> <p>expressTRAK uses the following controls:</p> <ul style="list-style-type: none"> ◆ On bill day, the accounts database and the service and equipment database is read and all service order activity for each account is rated. This functionality is embedded in the expressTRAK bill production system; and ◆ The rating application of the expressTRAK system is used to assign rates and standard phrase codes. This functionality is embedded in the expressTRAK bill production system. <p>Electronic and manual quality assurance tools are used to ensure accuracy of billing. Should an error in rating occur, an ABEND is created and a production referral is sent to the appropriate group.</p> <p>The CABS rating sub-system reads the account database to identify service order information for which non-recurring charges and recurring charges are required. CABS updates the database daily with service order, usage, and supplemental activity. Business rules are embedded in the programming code within the rating sub-system. Controls are in place to recognize and report out-of-balance conditions (ABEND) and a production referral is sent to the appropriate group.</p>

Test Reference	Evaluation Criteria	Result	Comments
PPR14-2-2	Process includes internal change management procedures to prioritize, test, and implement system changes.	Satisfied	<p>Change management procedures are in place that cover system application changes from inception through final implementation into production.</p> <p>Changes to production systems for expressTRAK billing is the responsibility of the Verizon Production Support Management Group. This group receives referrals from the QBC and EBAC groups.</p> <p>The Verizon Information Processing Services (VIPS) group has the responsibility for prioritizing system implementations for expressTRAK bill production and has documented severity code guidelines.</p> <p>CABS system changes are developed and prioritized by the Verizon Access Order Entry and Billing Systems organization. Major releases (e.g., new products, regulatory mandates, tariff changes, and rate changes) are done on a bi-monthly basis, whereas maintenance releases are done on a monthly basis. Rate and other table changes, trouble fixes, and modules can be implemented at any time, if required.</p>

Test Reference	Evaluation Criteria	Result	Comments
PPR14-2-3	Process includes procedures to ensure usage is accurately rated and applied.	Satisfied	<p>For express TRAK, Toll Rating processes are used to rate Resale local and toll messages. Rated records are placed in a Toll Message file. On bill day, the Toll Message file is read and optional call plan discounts are applied. Standard phrase codes and rates are assigned and minutes of use are priced. Once the production file has been created, it is sent to the QBC for review with the Service & Equipment tool, which triggers an ABEND report if usage is not accurately rated. A production referral is then processed.</p> <p>Usage in CABS is rated by aggregating billable rate elements. The Rating subsystem calculates the current charges at account and state levels, applies balances brought forward, and calculates total balances. Quality control measures are in place including ABEND reporting, usage mismatch or unidentified reports are produced and investigated. The usage is then recycled and applied to the appropriate account.</p>
PPR14-2-4	Process includes procedures to ensure customer profile changes such as change of address and bill media preferences are properly captured and applied.	Satisfied	<p>CLECs establish the type of medium they would like to use by completing a CLEC Account Profile form available from their AM. CLECs typically choose a primary and secondary medium type. Should a change of address be required, the CLEC would complete the CLEC Account Profile form with the new address information.</p> <p>Change requests are handled by AMs. Changes are reflected in the billing systems, as well as on control transmittals sent to the media centers.</p> <p>Process and procedures for change requests can be found on the Verizon website at http://128.11.40.241/east/wholesale/resources/master.htm.</p>

Test Reference	Evaluation Criteria	Result	Comments
PPR14-2-5	Process provides for quality checks of printed bills.	Satisfied	<p>The QBC and the various distribution centers conduct the following quality checks of the printed CABS and expressTRAK bills:</p> <ul style="list-style-type: none"> ◆ Print quality checklist identifies visual checks performed on a sampling of bills; ◆ A visual check is performed to ensure that all component account data as identified in the summary bill is present; and ◆ Visual verification is done for image-based (printed bills and electronic) media for both CABS and expressTRAK.

Test Reference	Evaluation Criteria	Result	Comments
PPR14-3-1	Process includes procedures to ensure bills are shipped or transmitted according to the established schedule.	Satisfied	<p>Procedures are in place to ensure that the shipment of all media is done according to established schedules.</p> <p>The Richmond, Virginia print and distribution center for expressTRAK billing has a process to ensure bills are shipped according to the established schedule. Once the bill file has been received, the print center has an internal goal of printing all electronic billing files within one day of receipt. The bill is then produced after additional quality checks and is sent to the customer within two days of receiving the bill print file.</p> <p>Reporting procedures are in place to monitor and grade the production and distribution centers for timeliness and accuracy. Should problems be encountered and billing is subsequently delayed, escalation procedures are in place and documented.</p> <p>The CABS print and distribution center located in Monroeville, Pennsylvania also has documented schedules and reporting procedures in place. Distribution center performance is based on meeting the set schedule and internal timeliness metric. Escalation procedures also exist if bill delivery problems occur.</p>

Test Reference	Evaluation Criteria	Result	Comments
PPR14-3-2	Bill delivery process performance measures are defined and measured.	Satisfied	<p>The metric used to measure bill delivery timeliness is BI-2-01, Timeliness of Carrier Bill.¹¹⁶ The information used to calculate bill delivery timeliness is collected in logs that are organized according to bill period. The log contains the date that bills are printed and the date that bills are released to the post office. Separate logs are kept for expressTRAK and CABS bills.</p> <p>Internal bill delivery performance measures are defined. Verizon production and distribution centers for both expressTRAK and CABS produce reports detailing file delivery, print date, and delivery to the postal system used to monitor and track bill delivery activities.</p>

¹¹⁶ The Virginia Carrier-to-Carrier Guidelines Performance Standards and Reports, dated August 11, 2000, defined bill delivery timeliness in BI-2-01 as “The percentage of expressTRAK paper carrier bills and CABS paper carrier bills sent to the carrier, unless the carrier requests special treatment, within 10 business days of the bill date. The bill date is the end of the billing period for recurring, non-recurring and usage charges.”

D. Test Results: Billing Functional Usage Evaluation (TVV8)

1.0 Description

The Billing Functional Usage Evaluation (TVV8) examined Verizon Virginia's (Verizon VA) ability to capture customer telephone usage and ensure that the resulting records are delivered to Competitive Local Exchange Carriers (CLEC) in a complete, accurate, and timely manner. KPMG Consulting acted as a non-facilities-based CLEC providing Resale and Unbundled Network Elements-Platform (UNE-P) services to business and residential customers. As part of its normal business process, Verizon VA captured information about each instance of network usage generated for KPMG Consulting and delivered the resulting information to KPMG Consulting.

The objectives of the Billing Functional Usage Evaluation test were to determine the completeness, accuracy, and timeliness of daily message processing by Verizon VA. A transaction-based test was conducted to complete this evaluation.

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

On each business day, Verizon VA collects call information from its switches. The switches generate events as calls are processed. Call event information is recorded electronically. Call detail records are transmitted to the Verizon VA data center in Silver Spring, Maryland for message processing. Billable call events and Inter-Exchange Carrier (IXC) access events result in the creation of a Daily Usage File (DUF) or an Access Daily Usage File (ADUF).¹¹⁷ Non-billable DUF records are discarded.¹¹⁸ DUF records are translated into Exchange Message Interface (EMI) format and delivered to the CLEC on a daily basis in the form of cartridge tapes or via electronic transmission.

¹¹⁷ For the purposes of this document, reference to DUF records includes both Daily Usage File records and Access Daily Usage File records.

¹¹⁸ Switches record both inbound and outbound calls. The DUF consists of outbound local usage, intra-LATA toll usage, Verizon operator-handled calls, and IXC originating and terminating access records. Non-billable records generated by the switch include incoming local calls, non-measured outgoing local usage, and operator inquiries that may or may not be charged at the operator's discretion. This list is not exhaustive.

2.2 Scenarios

The scenarios used in this evaluation included Resale and UNE-P products and services offered to business and residential customers in Virginia. Various switch technologies (i.e., Nortel DMS100 and TOPS, Lucent 5ESS), product and service types, and service order types were employed in this transaction-based test. Conversions of account ownership, also known as migrations, from one Local Exchange Carrier (LEC) to another, disconnects, migrations back to Verizon, and feature changes and/or class of service changes were executed during the test calling period. Two types of services were tested: Plain Old Telephone Service (POTS) and Centrex.

Once the scenarios were defined, the orders were scheduled and executed. The migration orders were submitted with a specific due date. Test calls were placed before and after migrations to ensure accurate routing of DUF records.

KPMG Consulting also developed test cases emulating a variety of telephone calls typically made by business and residential customers. The test cases included local, intra-LATA toll, and inter-LATA long distance calls, both direct dialed and operator handled.

Test scripts were created by combining test scenarios with test cases in a variety of permutations. In this manner, the test scripts applied real-world call types against representative customer accounts. Finally, testers executed the test scripts in the field.

2.3 Test Targets & Measures

The Billing Functional Usage Evaluation targets the completeness of the DUF, the accuracy of the data contained in it, and the timeliness of its delivery.

2.4 Data Sources

The sources of data for this test included reviews of documentation supplied by Verizon VA at the request of KPMG Consulting and the following items:

- ◆ Completed test scripts by KPMG Consulting testers;
- ◆ DUF received from Verizon VA;
- ◆ EMI standards manual (V.17, released in April 2000); and
- ◆ Verizon VA Carrier-to-Carrier Guidelines Performance Standards and Reports, dated August 11, 2000.

KPMG Consulting testers placed calls in the Verizon VA calling region. Test calls included a variety of call types that were placed from Central Offices (CO) within the Verizon VA calling region. The call types included long distance calls, third-party billing calls, and collect calls. Table 8-1 identifies the test execution locations.

Table 8-1: TVV8 Test Calling Locations

Central Office	Address
Arlington	2011 Crystal Dr., Arlington, Virginia 22204
Chesapeake	2892 Fireside Rd., Chesapeake, Virginia 23324
Forest	811 New London Rd., Forest, Virginia 24551
Pulaski	46 E Main St., Pulaski, Virginia 24301
Richmond	901 E Bird St., Richmond, Virginia 23219
Richmond	2400 E Cary St., Richmond, Virginia 23219
Midlothian	740 Gardiner Ct., Midlothian, Virginia 23113
Virginia Beach	4529 Columbus St., Virginia Beach, Virginia 23462

2.5 Evaluation Methods

Execution of the Billing Functional Usage Evaluation required Verizon VA to establish a test bed of accounts against which test calls were placed. The test calls consisted of commonly placed incoming and outgoing call types that were generated over multiple switch types. The test included validation of expected usage results based on test calls placed by KPMG Consulting against DUF records received by KPMG Consulting.

Evaluation of the accuracy, completeness, and timeliness of DUF was based on a comparison of call details logged by KPMG Consulting when test calls were placed and DUF records delivered to KPMG Consulting by Verizon VA.

2.6 Analysis Methods

The Billing Functional Usage Evaluation 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 Billing Functional Usage Evaluation.

Tester call logs were examined to determine whether or not a specific call should appear on the DUF. Calls not expected to appear on the DUF were evaluated to ensure that no DUF record was received. For test calls that should have appeared on the DUF, KPMG Consulting examined the DUF data to locate a valid record meeting the specifications of the call as it was recorded in the test call log.

DUF records were further examined for adherence to metric BI-4 – DUF Accuracy.¹¹⁹ This measure captured the accuracy of the DUF records received by KPMG Consulting. DUF records were also verified to ensure that they were received by the appropriate CLEC and to ensure that the records adhered to EMI guidelines. Details of the matched DUF records are presented in Sections 3.2.1 and 3.2.2 below.

The DUF records received were examined to ensure that the file trailer had an accurate count of DUF records transmitted in it.

DUF timeliness, as defined in metric BI-1 – Timeliness of Daily Usage Feed,¹²⁰ was measured by counting the number of business days between the day of the creation of the message and the day the usage information was made available (i.e., the transmission date to the CLEC). The DUF records included in Tables 8-3 through 8-6 below include all files that were received electronically in August 2001.

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

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.

¹¹⁹ Virginia Carrier-to-Carrier Guidelines Performance Standards and Reports, dated August 11, 2000.

¹²⁰ Virginia Carrier-to-Carrier Guidelines Performance Standards and Reports, dated August 11, 2000.

Table 8-2: TVV8 Evaluation Criteria and Results

Test Reference	Evaluation Criteria	Result	Comments
TVV8-1	Expected DUF records are received by the correct owner.	Satisfied	97.9% of the usage for test scripts expected to generate usage was received. Out of 986 test scripts expected to generate usage, 965 test scripts produced DUF records. Detailed information appears in the “Test Call Log and DUF Record Accuracy Analysis” (Section 3.2.1) below.
TVV8-2	Unexpected DUF records were not received.	Satisfied	No unexpected DUF records were received. DUF records were not received for 1,423 test scripts that were not expected to produce a DUF record. Detailed information appears in the “Test Call Log and DUF Record Accuracy Analysis” section (Section 3.2.1) below.
TVV8-3	DUF record packs are complete.	Satisfied	All trailer records contained a correct count of the number of records found within the pack. Detailed information appears in the “DUF Trailer Accuracy and Completeness Analysis” section (Section 3.2.2) below.
TVV8-4	DUF records adhere to EMI guidelines.	Satisfied	All DUF records received from Verizon VA were formatted in accordance with EMI guidelines.
TVV8-5	DUF record fields are accurately populated.	Satisfied	100% of all 1,426 DUF records produced by Verizon VA were accurate and in accordance with EMI guidelines. The standard in metric BI-4 – DUF Accuracy is 95% accuracy. ¹²¹

¹²¹ Virginia Carrier-to-Carrier Guidelines Performance Standards and Reports, dated August 11, 2000.

Test Reference	Evaluation Criteria	Result	Comments
TVV8-6	DUFs are delivered to the CLEC in a timely manner.	Satisfied	<p>100% of the DUF records were received within four business days. The standard in metric BI-1 – Timeliness of Daily Usage Feed¹²² is 95% of DUF records received by the CLEC within four business days.</p> <p>Detailed information appears in the “DUF Timeliness Analysis,” section (Section 3.2.3) below.</p>

¹²² Virginia Carrier-to-Carrier Guidelines Performance Standards and Reports, dated August 11, 2000.

3.2 Additional Data

3.2.1 Test Call Log and DUF Record Accuracy Analysis

The following tables display detailed results from the August 2001 test.

Table 8-3: TVV8 Tester Log Entry Breakdown

Category	Count
Total number of test scripts not expected to produce a DUF record	1,423
Total number of test scripts expected to produce a DUF record	986
Total number of test scripts executed	2,409

Table 8-4: TVV8 DUF Accuracy Analysis

Category	Count	Percentage of Total
Total number of test scripts expected to produce a DUF record that resulted in a matching DUF record	965	98%
Total number of test scripts expected to produce a DUF record that did not result in a matching DUF record	21	2%
Total number of test scripts expected to produce a DUF record	986	100%

3.2.2 DUF Trailer Accuracy and Completeness Analysis

Table 8-5: TVV8 Trailer Accuracy and Completeness Summary

Total number of DUF packs received with at least one billable record	Total number of DUF packs with an accurate record count	Percentage
11	11	100%

All DUF packs received by KPMG Consulting contained an accurate record count in the trailer record.

3.2.3 DUF Timeliness Analysis

Table 8-6 documents DUF record timeliness for all DUF records received.

Table 8-6: TVV8 DUF Timeliness Analysis

Timeliness	Count	Cumulative Percentage
DUF records received within 1 business day from the call date	0	0%
DUF records received within 2 business days from the call date	153	11%
DUF records received within 3 business days from the call date	850	71%
DUF records received within 4 business days from the call date	423	100%
Total number of DUF records received	1,426	100%

E. Test Results: Functional Carrier Bill Evaluation (TVV9)

1.0 Description

The Functional Carrier Bill Evaluation (TVV9) reviewed Verizon Virginia’s (Verizon VA) ability to deliver timely and accurate invoices to Competitive Local Exchange Carriers (CLEC). This evaluation examined the content and timeliness of delivery of carrier bills received by the KPMG Consulting CLEC. This evaluation examined Resale, Unbundled Network Elements (UNE) and Unbundled Network Elements-Platform (UNE-P) accounts to determine if Verizon VA accurately billed usage charges, monthly recurring charges, and non-recurring charges via the bill of record (i.e., paper bill).

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

Verizon VA prepares many types of CLEC bills that are distributed monthly. Each bill type covers a specific set of products and services. Two primary billing systems, the Carrier Access Billing System (CABS) and the expressTRAK system, produce bills. CABS is used to bill transport usage and facility charges to CLECs. expressTRAK produces wholesale bills for Resale, UNE, and UNE-P (non-usage) and services.

Verizon VA’s bills are structured in a hierarchical manner. At the top of the hierarchy is the Master Account. The next tier in the account structure is the Invoice Point. Invoice Points contain detailed charge information for a specific Billing Telephone Number (BTN) and are aggregated under the Master Account.

2.2 Scenarios

The analysis of carrier bill content was dependent on the successful execution of Daily Usage File (DUF) testing and ordering and provisioning scenarios.

Test scenarios used for bill validation purposes included the following activities:

- ◆ Migration/conversion; and
 - ◆ Migrate “as is/as specified” Verizon VA customer to UNE/Resale CLEC;
 - ◆ Migrate “as is/as specified” UNE/Resale CLEC customer to Verizon VA; and
 - ◆ Migrate “as is/as specified” UNE CLEC customer to Resale CLEC.
- ◆ Change to Customer Line (Add/Modify/Delete).
 - ◆ Add features to existing UNE/Resale customers;
 - ◆ Add new lines for UNE/Resale customers;
 - ◆ Change services for existing UNE/Resale customers; and
 - ◆ Disconnect services for UNE/Resale customers.

2.3 Test Targets & Measures

The test targets were the completeness and accuracy of the expressTRAK and CABS systems.

Included in the test target were the following processes and sub-processes:

- ◆ Maintain bill balance;
- ◆ Carry Balance Forward; and

- ◆ Bills and delivery.
 - ◆ Verify recurring charges;
 - ◆ Verify non-recurring charges;
 - ◆ Verify prorated recurring charges;
 - ◆ Verify usage charges;
 - ◆ Verify discounts;
 - ◆ Verify adjustments;
 - ◆ Verify late charges; and
 - ◆ Receive bill copy.

2.4 Data Sources

The data sources for the test included the CLEC Handbook, the Resale Handbook, Exchange Message Interface (EMI) documentation, Virginia State and FCC tariff information, bill samples, call flows, and data provided by CCMI Online Tariff Service.

Verizon VA established test lines/circuits to support the execution of the test scenarios described in the Master Test Plan (MTP). This test bed provided a mix of line types and line activities reflective of the scenarios contained in the MTP. A subset of these test scenarios was the subject of this evaluation. This evaluation did not rely on volume testing. Data included in this evaluation were gathered from multiple sources including Local Service Requests (LSR), Provisioning Completion Messages (PCM), Billing Completion Messages (BCM), Customer Service Records (CSR), DUFs, and the Verizon VA carrier bills delivered. These data were analyzed to create expected results.

2.5 Evaluation Methods

Verizon VA's documentation was reviewed to gather information related to bill structure, content, and Resale, UNE, and UNE-P bill elements for each of the relevant bill types. Using this information, KPMG Consulting constructed a Detailed Test Plan (DTP) and bill validation procedures.

Expected results from test order activity were developed by extracting data from LSRs, Local Service Confirmations (LSC), PCMs, BCMS, CSRs, tariff information, and DUF records. Expected results for usage charges were developed using data from DUF records, created as a result of test calls made during the course of the Billing Functional Usage Evaluation (TVV8). Expected results were defined for each test case based on the policies, business rules, and rate structure specified in Verizon VA documentation and procedures. Expected results were compared to billing invoices produced by Verizon VA to verify that charges were appropriately and accurately billed.

Validation procedures included an examination of recurring and non-recurring charges, pro-ration calculations, service establishment and disconnection dates, adjustments, late payment charges, and unpaid balances. KPMG Consulting also examined bills that contained usage charges for billable messages to verify the accuracy of the usage billing components, rates, and quantities. Bill validation was conducted over multiple bill periods (June 2001 to December 2001). Charges were examined for Resale, UNE, and UNE-P billing.

Bill formats were reviewed to verify that required elements (e.g., pro-rations, Other Charges & Credits (OC&C), recurring charges, and usage charges) appeared on the appropriate bill. The expressTRAK bills were examined for matches with criteria related to bill format.

Timeliness of carrier bill delivery, as defined by metric BI-2-01 – Timeliness of Carrier Bill, was measured during this evaluation. According to the metric, timeliness is measured by counting the number of business days from the bill date to the date the paper bill was sent and dividing them by the total number of the carrier bills distributed. Because KPMG Consulting did not observe the actual mailing of bills by Verizon VA, the timeliness of carrier bill delivery was based on the dates the bills were received. Results are listed for paper bills that were the subject of the Functional Carrier Bill Evaluation received during the months of June, July, August, and September 2001 for Resale, UNE, and UNE-P bills.

Table 9-1 below describes the bill types and formats selected for evaluation. KPMG Consulting selected a subset of Resale, UNE, and UNE-P product and service offerings for evaluation based on the requirements documented in the MTP, Appendix A: Test Scenarios.

Table 9-1: Functional Carrier Bill Cycle Evaluation - Bills Reviewed

Bill Format Type	Description of Bills	Bill Media Format Options
expressTRAK Resale	Bills for Resale Services	Hard Copy
expressTRAK UNE, expressTRAK UNE-P	Billing for the following elements: Loops; Line Ports; DID – Direct Inward Dialing; and Directory Listing.	Hard Copy
CABS UNE	Billing for the following elements: Transport; and Facilities.	Hard Copy

2.6 Analysis Methods

The Functional Carrier Bill Evaluation 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 Functional Carrier Bill Evaluation.

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 9-2: TVV9 Evaluation Criteria and Results

Test Reference	Evaluation Criteria	Result	Comments
Invoices contain complete information			
TVV9-1-1	Major bill sections appear on paper bills per Verizon documentation.	Satisfied	175 Resale, UNE, and UNE-P bills were examined and all major bill sections appeared on Master Account bills as expected.
TVV9-1-2	The appropriate Invoice Points appear under the correct Master Account on paper bills.	Satisfied	The appropriate Invoice Points appeared under the correct Master Account on the 175 Resale, UNE, and UNE-P bills examined.
TVV9-1-3	The appropriate data appear in each of the major bill sections on paper bills.	Satisfied	100% of the data contained within the major bill sections was accurate.
Invoices contain accurate rates and charges			
TVV9-2-1	Recurring rates on Resale invoices are consistent with applicable tariffs and/or contract rates.	Satisfied	99.8% of the total charges associated with the individual recurring charges examined on the 74 Resale bills from June 2001 to September 2001 were accurately billed.
TVV9-2-2	Recurring rates on UNE invoices are consistent with applicable tariffs and/or contract rates.	Satisfied	100% of the total charges associated with the individual recurring charges examined on the 41 UNE bills from July 2001 through December 2001 were accurately billed.
TVV9-2-3	Recurring rates on UNE-P invoices are consistent with applicable tariffs and/or contract rates.	Satisfied	100% of the total charges associated with the individual recurring charges examined on the 60 UNE-P bills from June 2001 through September 2001 were accurately billed.
TVV9-2-4	Non-recurring rates on Resale invoices are consistent with applicable tariffs and/or contract rates.	Satisfied	100% of the non-recurring charges for the Resale bills included in this evaluation were accurately billed.

Test Reference	Evaluation Criteria	Result	Comments
TVV9-2-5	Non-recurring rates on UNE invoices are consistent with applicable tariffs and/or contract rates.	Satisfied	94.1% of the non-recurring charges for UNE bills included in this evaluation were accurately billed. The discrepancy is the result of incorrect billing of a one-time order processing charge.
TVV9-2-6	Non-recurring rates on UNE-P invoices are consistent with applicable tariffs and/or contract rates.	Satisfied	98.0% ¹²³ of the non-recurring charges for UNE-P bills included in this evaluation were accurately billed.
TVV9-2-7	Totals reflect accurate sums on Resale invoices.	Satisfied	100% of all sums matched on the 74 Resale invoices examined.
TVV9-2-8	Totals reflect accurate sums on UNE invoices.	Satisfied	100% of all sums matched on the 41 UNE invoices examined.
TVV9-2-9	Totals reflect accurate sums on UNE-P invoices.	Satisfied	100% of all sums matched on the 60 UNE-P invoices examined.
TVV9-2-10	Cross-totals are correct on Resale invoices.	Satisfied	100% of cross-totals were carried over without error to the appropriate Master Account on Resale invoices.
TVV9-2-11	Cross-totals are correct on UNE invoices.	Satisfied	100% of cross-totals were carried over without error to the appropriate Master Account on UNE invoices.
TVV9-2-12	Cross-totals are correct on UNE-P invoices.	Satisfied	100% of cross-totals were carried over without error to the appropriate Master Account on UNE-P invoices.
TVV9-2-13	Pro-ration calculations on Resale invoices correspond with tariff and/or published definitions.	Satisfied	99.5% ¹²⁴ of Resale pro-ration calculations were accurately calculated and billed in accordance with tariffs and/or published definitions.

¹²³ The 2% discrepancy is accounted for by one instance of an incorrectly rated service order disconnect charge.

¹²⁴ The remaining .5% discrepancy consisted of one instance of incorrect billing of Residential Local Use Package Limited Measure Rate.

Test Reference	Evaluation Criteria	Result	Comments
TVV9-2-14	Pro-ration calculations on UNE invoices correspond with tariff and/or published definitions.	Satisfied	100% of UNE pro-ration calculations were accurately calculated and billed in accordance with tariffs and/or published definitions.
TVV9-2-15	Pro-ration calculations on UNE-P invoices correspond with tariff and/or published definitions.	Satisfied	100% of UNE-P pro-ration calculations were accurately calculated and billed in accordance with tariffs and/or published definitions.
TVV9-2-16	Unbundled Minutes of Use (MOU) usage charges are billed in accordance with Verizon business rules, tariffs, and/or contractual terms.	Satisfied	100% of Unbundled Minutes of Use (MOU) usage on the UNE-P bills examined was accurately billed.
TVV9-2-17	Unbundled transport usage charges are billed in accordance with Verizon business rules, tariffs, and/or contractual terms.	Satisfied	100% of 689 unbundled transport charges on the UNE-P bills was accurately billed.
TVV9-2-18	Unbundled Operator Surcharges and special usage-related charges are billed in accordance with Verizon business rules, tariffs, and/or contractual terms.	Satisfied	100% of Unbundled Operator Surcharges and special usage-related charges on the UNE-P bills was accurately billed upon execution of a retest.
TVV9-2-19	Resale usage is billed in accordance with Verizon business rules, tariffs, and/or contractual terms.	Satisfied	100% of Resale usage was billed in accordance with Verizon business rules, tariffs, and/or contractual terms.
TVV9-2-20	Resale Operator Surcharges and special usage-related charges are billed in accordance with Verizon business rules, tariffs and/or contractual terms.	Satisfied	100% of Resale Operator Surcharges and special usage-related charges were billed in accordance with Verizon business rules, tariffs, and/or contractual terms.
TVV9-2-21	Calling plan allowances are applied correctly to Resale usage.	Satisfied	100% of calling plan allowances were accurately applied to Resale usage.

Test Reference	Evaluation Criteria	Result	Comments
Timeliness of invoice charges and bill delivery			
TVV9-3-1	Invoices reflect timely service order activity.	Satisfied	100% of service order activity appeared within two billing cycles as required by metrics BI-7-01, % Completeness of Fractional Recurring Charges – Including Order Activity Post Completion Discrepancy Delayed Charges, and BI-7-02, % Completeness of Fractional Recurring Charges – Excluding Order Activity Post Completion Discrepancy Delayed Charges. ¹²⁵
TVV9-3-2	Invoices reflect timely call event activity.	Satisfied	100% Resale and UNE-P call event activity was reflected within two billing cycles as per Verizon business rules.
TVV9-3-3	Paper bills are delivered in a time frame consistent with bill production schedules defined in Verizon VA documentation.	Satisfied	100% of the Resale, UNE, and UNE-P paper bills were received within the 10-business day standard as defined by metric BI-2-01, Timeliness of Carrier Bill. ¹²⁶

¹²⁵ The Virginia Carrier-to-Carrier Guidelines Performance Standards and Reports, dated August 11, 2000, defined Completeness of Fractional Recurring Charges as shown on the expressTrak bill. The measure is derived by dividing the fractional recurring charges shown on the bill that accrued in the last two billing cycles by the total fractional recurring charges shown on the bill.

¹²⁶ The Virginia Carrier-to-Carrier Guidelines Performance Standards and Reports, dated August 11, 2000, defined the percentage of expressTRAK paper carrier bills and CABS paper carrier bills sent to the carrier, unless the carrier requests special treatment, within 10 business days of the bill date. The bill date is the end of the billing period for recurring, non-recurring, and usage charges.