

Appendix A

Statistical Analysis

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Appendix A – Statistical Analysis

Background

The statistical tests performed in this evaluation depended on the size of the data sets and the type of data being evaluated. For all tests, the Null Hypothesis was that the metric-defined standard is met. The Alternative Hypothesis was one-sided and the Type I error level (α level) was set at 5%.¹³⁵ In general, a result of statistical significance implied a “Not Satisfied” result in the test. However, practical considerations meant that in some cases, a result of “Satisfied” was given, even though the statistical test showed a technical departure from the standard. On the other hand, a non-significant statistical result implies no need for re-testing, but there were cases where re-testing was performed for other, non-statistical considerations.

If Verizon VA met or exceeded the standard according to the test data, the analysis did not determine or report the significance level, but in those cases it can be assumed to be above the 0.5000 level. Where statistical testing was necessary, the significance level is reported.

Below is a discussion of the statistical tests used for the two types of metrics (metrics that test averages and metrics that test proportions).

Tests on Averages

Two types of comparisons were performed with respect to averages. In the first type, an average is compared to a fixed benchmark (benchmark tests). In the second type, an average is compared to a retail average (parity tests). Prior to the statistical testing, basic assumptions were checked to ensure no extraordinary outliers or abnormalities exist that would affect the comparison. Assuming no data problems, a one-sample t-test was performed for benchmark tests and a two-sample t-test was performed for parity tests.

For parity tests, KPMG Consulting performed a permutation test if the test data set or the retail data set contained fewer than 200 items. A permutation test is preferable to the standard t-test for smaller sample sizes because it carries no assumptions about the underlying probability distribution of the data. However, once the number of observations in both data sets exceeds 200, the permutation test becomes computationally difficult. In addition, the t-test results and permutation test results are almost exactly equivalent once the number of observations for both data sets is greater than 200, assuming other test assumptions are met. The cut-off of 200 was used for the permutation test because KPMG Consulting determined that the permutation test was more appropriate, and in-house computational capabilities allowed for a permutation test with samples of approximately 200 or fewer.

¹³⁵ The Alternative Hypothesis is that Verizon VA is failing to meet the standard. The Type I error rate of 5% limits the rate of erroneous failures to 5%. In other words, if Verizon VA is meeting the standard, the statistical test will only give a result of failure 5% of the time.

Tests on Proportions

A Binomial test was used for all comparisons with only one proportion. This test allows for an exact computation of the significance level when comparing one proportion to an absolute standard. Alternative tests only approximate this level. For comparisons involving two proportions, a Hypergeometric test was used when the higher of the counts was fewer than 10,000. This test allows for an exact computation of the p-value when comparing two proportions. If the higher of the counts was greater than 10,000, a Binomial (with the percentage of the higher count considered fixed) test was used.

Limitations

The statistical analysis has a number of limitations. Since KPMG Consulting is primarily using data collected during the test period, it cannot be determined, in any definitive way, whether test period conditions are different than conditions outside the test period. This limitation includes some differences out of Verizon VA's control, such as seasonality, as well as some differences that may be within the control of Verizon VA, such as level of service provided. For purposes of these comparisons, it is assumed that these differences do not exist. Verizon VA has been relied upon to provide accurate test period data.

Appendix B

Test Cross Reference Master Test Plan to the Final Report

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Appendix B – Test Cross Reference Master Test Plan to the Final Report

Master Test Plan		Final Report	
Test Number	Test Name	Section Number	Section Name
PMR1	Metrics Standards and Definitions Documentation Verification and Validation	VIII, A	Performance Metrics Domain Results and Analysis
PMR2	Data Collection and Storage Verification and Validation Review	VIII, B	Performance Metrics Domain Results and Analysis
PMR3	Metrics Calculation and Reporting Verification and Validation Review	VIII, C	Performance Metrics Domain Results and Analysis
PMR4	Metrics Data Filtering and Integrity Verification and Validation Review	VIII, D	Performance Metrics Domain Results and Analysis
PMR5	Metrics Change Management Verification and Validation Review	VIII, E	Performance Metrics Domain Results and Analysis
PPR1	Change Management Practices Verification and Validation Review	III, A	Relationship Management and Infrastructure Domain Results and Analysis
PPR2	Account Establishment & Management Verification and Validation Review	III, B	Relationship Management and Infrastructure Domain Results and Analysis
PPR3	System Administration Help Desk Functional Review	III, C	Relationship Management and Infrastructure Domain Results and Analysis
PPR4	CLEC Training Verification and Validation Review	III, D	Relationship Management and Infrastructure Domain Results and Analysis
PPR5	Interface Development Verification and Validation Review	III, E	Relationship Management and Infrastructure Domain Results and Analysis

Master Test Plan		Final Report	
Test Number	Test Name	Section Number	Section Name
PPR6	Forecasting Verification and Validation Review	III, F	Relationship Management and Infrastructure Domain Results and Analysis
PPR7	Network Design Request, Collocation, and Interconnection Planning Verification and Validation	V, A	Provisioning Domain Results and Analysis
PPR8	POP Manual Order Processing Evaluation	IV, A	Pre-Order/Order Domain Results and Analysis
PPR9	POP Work Center Support Evaluation	IV, B	Pre-Order/Order Domain Results and Analysis
PPR10	Provisioning Process Parity Evaluation	V, B	Provisioning Domain Results and Analysis
PPR11	Provisioning Coordination Process Evaluation	V, C	Provisioning Domain Results and Analysis
PPR12	Billing Work Center/Help Desk Support Evaluation	VII, A	Billing Domain Results and Analysis
PPR13	Daily Usage Production and Distribution Process Evaluation	VII, B	Billing Domain Results and Analysis
PPR14	Bill Production and Distribution Process Evaluation	VII, C	Billing Domain Results and Analysis
PPR15	End-to-End M&R Process Evaluation	VI, A	Maintenance and Repair Domain Results and Analysis
PPR16	M&R Work Center Support Evaluation	VI, B	Maintenance and Repair Domain Results and Analysis
PPR17	M&R Coordination Process Evaluation	VI, C	Maintenance and Repair Domain Results and Analysis

Master Test Plan		Final Report	
Test Number	Test Name	Section Number	Section Name
PPR18	Network Surveillance Support Evaluation	VI, D	Maintenance and Repair Domain Results and Analysis
TVV1	POP Functional Evaluation	IV, C	Pre-Order/Order Domain Results and Analysis
TVV2	POP Volume Performance Tests	IV, D	Pre-Order/Order Domain Results and Analysis
TVV3	Order “Flow Through” Evaluation	IV, E	Pre-Order/Order Domain Results and Analysis
TVV4	Provisioning Verification and Validation	V, D	Provisioning Domain Results and Analysis
TVV5	M&R RETAS Functional Evaluation	VI, E	Maintenance and Repair Domain Results and Analysis
TVV6	M&R RETAS Performance Evaluation	VI, F	Maintenance and Repair Domain Results and Analysis
TVV7	End-to-End Trouble Report Processing	VI, G	Maintenance and Repair Domain Results and Analysis
TVV8	Billing Functional Usage Evaluation	VII, D	Billing Domain Results and Analysis Section
TVV9	Functional Carrier Bill Evaluation	VII, E	Billing Domain Results and Analysis Section

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Appendix C

Glossary

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Appendix C – Glossary

Term	Definition
Access Carrier Name Abbreviation (ACNA)	A three to four character code used to identify a telecommunications carrier.
Access Service Request (ASR)	Form used to order high capacity lines and trunks, special access services, and IOF such as dedicated trunk ports.
Alternate Exchange Carrier Name (AECN)	A unique identifier for a CLEC. Bellcore only recognized this term as Exchange Carrier Code (ECC).
Automatic Call Distributor (ACD)	Used in the work centers to distribute calls to agents dedicated to handling customer inquiries.
Bill Cycle	The date on which billing for a group of customers is processed. In wholesale billing, all end-users belonging to the same bill cycle are aggregated onto a single CLEC bill. Assignments of cycle and period are made by Verizon VA. Bill cycles enable even distribution to a large number of customers so as to allow efficient use of computing resources and to mitigate risks associated with computer failures.
Bill Cycle Balancing	The procedure by which the charges associated with the inputs of a billing cycle are reconciled with the charges of the outputs of the billing cycle.
Bill Data Tape (BDT)	Format in which end-user account bills are transmitted to the CLEC/Reseller.
Bill Period	The period of time covered by a customer bill. Each end-user has one bill per bill period. Assignments of cycle and period are made by Verizon.
Billing and Collections Operations Center (B&COC)	Handles billing inquiries, dispute resolution, processing billing adjustments, resends of paper bills, and collection of bills in arrears. This center serves Resellers, UNE, and UNE-P CLECs.
Billing Completion Message (BCM)	Message supplied by Verizon to a CLEC following the completion of downstream billing system updates.
Billing Domain	Tests that examine carrier bills against expected results generated by the billing domain. The expected results are created in a controlled environment with desired service order activity and also the creation of call usage on the bills by executing tests in the field. The various components of the actual bill are then compared to what the billing domain would expect to see on the bill as a result of the activity that has transpired. A comparison of actual bills versus the expected results drives the test.
Billing Telephone Number (BTN)	The number to which charges from a given telephone service is billed.

Term	Definition
Black Box	Internal processes within Verizon VA's systems that are considered out of scope for the purposes of this test plan. Correct functioning of 'black box' systems can be inferred from input and output interface files.
Carrier Access Billing System (CABS)	Billing system designed to bill transport usage and facilities charges to CLECs who lease unbundled services, such as loops, or physical equipment belonging to a CLEC housed at a Verizon CO.
Carrier Account Team Center (CATC)	Verifies the accuracy of a design automatically developed in the TIRKS system.
Carrier-to-Carrier Guidelines	A set of standards mandated by state regulators defining the service levels an ILEC is required to provide a CLEC and the methods of measuring those service levels.
Casual Usage	Usage dialed through a calling card or 10XXXXXX.
Central Office (CO)	Facility where subscribers' lines connect to switching equipment.
Change Management	The process by which changes are introduced at Verizon. Important steps include: (i) advance notification that a change will occur; (ii) consideration of CLEC input when making changes; and (iii) smooth roll-out of the change.
Circuit Provisioning Center (CPC)	The CPC assigns the various components of circuits and distributes the TIRKS document.
CLEC Handbook	User documentation for CLECs that describes, in three volumes, how to establish a CLEC, the technical specifications for interacting with Verizon VA, and the business rules CLECs should follow in order to purchase unbundled network elements.
CLEC Live Data	Production data delivered through interfaces that are already operational for real CLEC customers.
CLEC Test Environment (CTE)	The test environment where active and new entrant CLECs test their systems against Verizon VA software releases in advance of connecting to the production environment.
Connect/Network Data Mover (NDM)	An electronic method of delivering data files. Available for both mainframes and PCs.
Customer Record Information System (CRIS)	System used in the customer billing process.
Customer Repair Service Center (CRSC)	Now called Verizon Repair Resolution Center (VRRRC) where trouble call reports from Verizon VA retail customers are received and processed.

Term	Definition
Customer Service Center (CSC)	The Dispatch Resource Centers (DRC), formerly the Customer Service Centers (CSC), are organized as wholesale and retail centers and are responsible for dispatching on installation and maintenance for special services and unbundled loops for CLECs.
Customer Service Record (CSR)	Provides details of a customer's account, including services, features, and fixed monthly charges.
Daily Usage File (DUF)	A daily download of usage data from the switch that is delivered to Verizon's message processing system and subsequently sent to the CLEC.
Direct Inward Dialing (DID) number block	A block of numbers reserved for a Centrex/PBX. DID allows internal dialing by entering only extensions.
Document review	Compilation and review of books, manuals, and other publications related to the process and system under study.
Electronic Data Interchange (EDI)	A process for exchanging information that is subject to industry standards.
Electronic Interface Format (EIF)	A standardized file format needed to communicate with the Direct Carrier Administration System (DCAS).
Error Service Order Interface (ESOI)	The system Verizon's Facility Assigners use to notify the negotiator (retail sales person) that there is an error on the order that the negotiator must correct before the order can continue through the provisioning process.
Error/Rejection Notification	Notification generated by Verizon systems or representatives to inform a CLEC that an order contains an error or is incomplete.
Evaluation Measures	Discrete set of measures to be applied to specific test components.
Exchange Message Interface (EMI)	A guideline published by the Ordering and Billing Forum (OBF), an industry wide billing group, that shows the format in which usage data is passed to the CLEC.
expressTRAK	A database used for CSR inquires, local service ordering, and customer service billing.
Field Identifier (FID)	Refers to fields of information used in the service order.
Firm Order Confirmation (FOC)	A response (i.e., LSRLR for EDI and LSC for GUI) from the Verizon SOP that acknowledges the successful receipt of an order from a CLEC.
Flow-Through	An order placed by a CLEC customer service representative that can be provisioned correctly without manual intervention by a Verizon VA service representative.
Graphical User Interface (GUI)	A web-based interface that allows users to access programs and enter data.

Term	Definition
Hot Cut	A term used to describe the work done at the main distribution frame during the transfer of an ILEC-owned line to a CLEC-owned line.
Inspection	Physical reviews of process activities and products, including site visits, walk-through, read-throughs, or work center observations.
Local Access and Transport Area (LATA)	A geographic area established by law within which an ILEC may provide telecommunications services.
Local Service Confirmation (LSC)	A FOC to an order submitted via GUI that comes from the Verizon VA SOP that acknowledges a successful receipt of an order from a CLEC.
Local Service Request (LSR)	Form sent from a CLEC to an ILEC initiating an end-user requested change to local telephone service.
Local Service Request Local Response (LSRLR)	A FOC to an order submitted via EDI returned to the CLEC by Verizon that identifies the date by which the order will be provisioned.
Logging	Monitoring activities and collecting information by logging process events and products as they happen. Logging can be mechanized or manual.
Loop Facility Assignment and Control System (LFACS)	A provisioning process system used by Verizon VA to assign the loop, cable, and pair for orders.
Loop Maintenance Operations System (LMOS)	A maintenance management and repair delivery system used by Verizon VA for M&R activities related to POTS services.
Main Distribution Frame (MDF)	The primary point at which outside plant facilities terminate within a Wire Center for interconnection to other telecommunications facilities within the Wire Center.
Maintenance and Repair (M&R) Domain	Tests related to the systems, processes, and other operational elements associated with Verizon's trouble administration.
Master Test Plan (MTP)	Identifies the overall framework and structure of the OSS test.
Mechanized Loop Test (MLT)	A loop test used by Verizon VA to initially test a POTS loop during trouble shooting.
Memory Administration Recent Change History (MARCH) system	A provisioning process system used by the Translation Administrators in the MLAC to apply translations to switches.

Term	Definition
Metrics Domain	Tests conducted to verify that the metrics reported by Verizon are based on the Carrier-to-Carrier Guidelines approved by the Commonwealth of Virginia State Corporation Commission; verify that the OSS and other systems used by Verizon produce consistently reliable metrics data; validate the accuracy and completeness of the metrics reported by Verizon in the Carrier-to-Carrier reports; verify that the data used to calculate the metrics have not been altered inappropriately; and verify that changes to policies and procedures relating to metric calculation or reporting are documented and that the Commonwealth of Virginia State Corporation Commission and the CLEC community are notified of such changes.
National Dispatch Resource Center (NDRC)	Manages dispatches related to provisioning requested services.
Network Administration Center (NAC)	The NAC performs telephone number administration, some line assignments, and monitors performance of switches. Formerly called Switching Administration or SWAD.
Network Design Request (NDR)	A comprehensive planning process by which the scope of a network project is established, along with the preliminary timeframe in providing service to a CLEC. This is required for any new facilities-based CLEC.
Network Operations Center (NOC)	The NOC executes complex translations, provisions trunks, and performs software provisioning. The center is also responsible for switch surveillance, traffic control/analysis, receipt/screening of trouble tickets for the maintenance groups, and performs software input conditioning of switches for installation.
Network Operations Records Database (NORD)	NORD contains M&R service data, which is used in metric calculations.
Network Services Assurance Center (NSAC)	Responsible for overseeing, monitoring, and maintaining the Verizon VA network.
Non-Flow-Through	An order placed by a CLEC customer service representative that can be provisioned correctly only with manual intervention by a Verizon VA service representative.
Operating Company Number (OCN)	A four-character code to identify any service provider.
Operational Analysis	Operational analysis focuses on the form, structure, and content of the business process under study. This method is used to evaluate day-to-day operations and operational management practices.
Operations Support Systems (OSS)	Systems used to perform pre-ordering, ordering, provisioning, maintenance and repair, and billing.

Term	Definition
Order Management Domain	Tests related to CLEC's acquisition of customer information, placing orders, and ensuring correct and timely provision and notification of order status.
Parity Criteria Type	Criteria that require two measurements to be developed and compared, such as whether external response time is at least as good as internal response time.
Performance and Capacity	Methods used to evaluate the performance and capacity of selected elements within the four domains. Relates to tests to determine if Verizon VA's OSS can handle quantities of orders matching a reasonable forecasted demand.
Port	Point of access into a network.
Primary InterExchange Carrier (PIC)	The long distance company to which traffic is automatically routed when an end user dials 1+ in equal access areas.
Provisioning	The act of supplying telecommunications service or UNEs.
Provisioning Analyst Workstation System (PAWS)	PAWS is used to manage and assign work in the MLAC, DBT, and NAC.
Provisioning Completion Message (PCM)	Informs a CLEC that activities relating to a specific service request are completed.
Provisioning Domain	Tests related to the review of the systems, processes, and other operational elements associated with Verizon VA's provisioning activities used for wholesale markets. The tests examined functionality, compliance with measurement agreements, and comparable systems supporting Verizon VA retail operations.
P-Value	The frequency that the test result would be observed, given the benchmark. When the p-value is low, it means either that Verizon is not meeting the benchmark or that the result was an anomaly. To guard against the latter, which is referred to as Type I error, the p-value is set to 5% for all KPMG Consulting's quantitative tests.
Qualitative Criteria Type	These criteria set a threshold for performance where a range of quality values is possible, such as level of customer satisfaction.
Quality Assurance (QA)	Process by which a CLEC demonstrates its ability to adequately format orders as part of the process of entering a new market.
Recent Change Memory Administration Center (RCMAC)	The RCMAC handles fallout from Verizon VA's provisioning systems to program the switches.
Recognized Standards Criteria Source	This includes widely recognized standards and guidelines promulgated by sanctioned industry and governmental organizations and other bodies.

Term	Definition
Regional CLEC Coordination Center (RCCC)	The RCCC coordinates provisioning of hot cuts, DS1, DS3, and EEL service for CLEC orders.
Relationship Management and Infrastructure Domain	Tests relating to activities, processes, and documents that are focused on the establishment and maintenance of the CLEC/ILEC relationship.
Repair Trouble Administration System (RETAS)	A trouble administration system accessed via a Web GUI that serves as a front-end.
Report Review	Reviews and analysis of historical data, reports, metrics, and other information in order to assess the effectiveness of a particular system or business function. This includes performance measurement reports and other management reports.
Request Manager (RM)	System allows Verizon’s wholesale customers to perform online functions associated with ordering and provisioning.
Resale Handbook	User documentation for a Reseller that describes, in three volumes, how to establish a reseller, the technical specifications for interacting with Verizon, and the business rules resellers must follow in order to resell Verizon products and services on an unbundled basis.
Reseller Identification Code (RSID)	RSID applies to the Reseller equivalent of an OCN and is used to populate certain fields on orders and pre-orders.
SCC	State Corporation Commission. A state regulatory agency responsible for telecommunications companies.
Service Delivery Method (SDM)	Verizon offers three methods for delivering services to its wholesale customers. These methods are UNE, UNE-P, and Resale.
Service Order Analysis and Control System (SOAC)	System that controls the flow of orders through the provisioning process.
Service Order Database (SORD)	Contains information on all orders processed by Verizon. Data is extracted from SORD to calculate provisioning metrics.
Service Order Processor (SOP)	Provisioning process system used for order entry.
Special Services	Group responsible for provisioning and maintenance of special services.
Supplements (SUP)	A change to an order taken after the original order was submitted, but before the order is executed. Order execution should include all supplements.
Switch/Frame Operations Management System (SWITCH/FOMS)	SWITCH maintains the inventory of inside plant equipment. FOMS is used in the provisioning process to dispatch COTs for inside plant wiring.

Term	Definition
System Readiness Test (SRT)	A controlled, open submission of pre-order and order transactions to Verizon's production environment. The purpose of this test was to demonstrate to all test participants that Verizon's backend systems were ready for the main transaction tests.
Telecom Industry Services Operations Center (TISOC)	This is the single point of contact for processing wholesale service requests. The TISOC was renamed National Market Center (NMC) in May 2001.
Test Bed	A set of fictitious customers that are designed to assist with testing. The test bed consists of working, virtual, and physical lines and provisioned products, although the owning customer is fictitious. The test bed is used to test all Verizon VA system functions.
Test Domain	A specific testing area with defined targets, measures, scenarios, evaluation methods, and test processes. In the Verizon Virginia, Inc. OSS Evaluation Project, the test domains are Relationship Management and Infrastructure; Order Management; Provisioning; Maintenance and Repair; Billing; and Metrics.
Test Scenario Coverage Matrices/Traceability Matrices	A list of products or processes that are involved with each scenario. Describes how testing elements are traced from the compliance requirements through the test process.
Test Scenario to Metrics Analysis Index Cross Reference	For each scenario, a list of metrics that are examined during the test.
Test Scenarios	Scenarios describe realistic situations in which CLEC's purchase wholesale services and network elements from Verizon VA for resale to the CLEC's end-user customer on a retail basis.
Test Transaction Generator (TTG)	This system was created to support the testing effort. The TTG simulates CLEC behaviors by sending transactions through Verizon VA's OSS. The TTG records the success or failure of each transaction and creates reports.
Unbundled Access	Ability of other LECs to access and use Verizon VA network components to fill in gaps where these providers' networks do not have their own facilities.
Unbundled Loop	A transmission channel between an end-user location and LEC CO that is not a part of, or connected to, other LEC services.
Unbundled Network Elements (UNE)	One of seven network elements defined by the Telecommunications Act of 1996.

Term	Definition
Unbundled Network Elements-Platform (UNE-P)	This consists of a loop and access to the ILEC Switch sold in combination to a CLEC. UNE-P service provides all network elements necessary for providing service to the customer without requiring the CLEC to combine the elements themselves through collocation.
Uniform Service Order Code (USOC)	A 3-5 character alphanumeric code that represents a product or service and is used for ordering and billing of features.
Verification and Validation	Methods used in the evaluation of activities and processes not amenable to data-driven testing, but which require verification and validation.
Verizon Repair Resolution Center (VRRC)	Receive and process trouble call reports from Verizon VA retail customers.
Wholesale Customer Care Center (WCCC)	The organization responsible for resolving wholesale technical issues.
Wired and Office Tested (WOT) date	The date by which the translation must be loaded to the switch.
Workforce Administration/Control (WFA/C) system	The principal provisioning and maintenance and repair management and tracking system used by Verizon VA coordination centers to deliver and maintain telecommunications services.
Workforce Administration/Dispatch In (WFA/DI) system	The principal provisioning and maintenance and repair management and tracking system used by Verizon VA to dispatch COTs to the field for inside wiring.
Workforce Administration/Dispatch Out (WFA/DO) system	The principal provisioning and maintenance and repair management and tracking system used by Verizon VA to dispatch COTs to the field for outside plant work.

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Appendix D

Acronym Dictionary

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Appendix D – Acronym Dictionary

Acronym	Definition
64kb	64 kilobits
AA	Assignment Administrator
AARDWOLF	Automated Administration of RMAs and Demand Work for Outside Loop Facilities
ABEND	Abnormal Ending
ABI	Archive Billing System
ACD	Automatic Call Distributor
ACK	Functional Acknowledgement
ADI	Conversational TN Selection Inquiry
ADR	Address Validation Inquiry
ADSL	Asymmetric Digital Subscriber Line
ADUF	Access Daily Usage File
AFU	Automatic Feature Update
AHT	Average Handling Time
AIN	Advanced Intelligent Network
AM	Account Manager
APC	Assignment Provisioning Center
ARS	Application Recovery Statement
ASOG	Access Service Ordering Guide
ASOP	Access Service Order Processor
ASR	Access Service Request
B&COC	Billing and Collections Operations Center
BAIRS	BA ISCS Rep System
BARS	Billing Archive Retrieval Systems
BAUI	Bell Atlantic Usage Interface
BCM	Billing Completion Message
BDT	Bill Data Tape
BI	Billing
BMR	Billing Metrics Repository
BPS	Bill Production Support
BRI	Basic Rate ISDN
BSC	Business Service Center
BTN	Billing Telephone Number
CABS	Carrier Access Billing System
CANCL	Notice of Cancellation
CATC (Maintenance and Repair)	Carrier Account Team Center

Acronym	Definition
CATC (Provisioning)	Carrier Access Transport Center
CBS/CNE	Custom Business Services/ Customer Network Engineering
CCI (Maintenance and Repair)	Customer Care Index
CCI (Metrics)	Change Control Identification
CCIC	Customer Care Inquiry Center
CCM	Change Control Manager
CCOE	Cageless Collocation – Open Physical Environment
CCR	Change Control Record
CD	Completion Date
CIC	Carrier Identification Code
CID	Conceptual Initiative Definition
CIRT	Customer Inquiry Response Team
CLEC	Competitive Local Exchange Carrier
CLLI	Common Language Location Identifier
CLPC	CLEC Loop Provisioning Center
CMDS	Centralized Message Distribution Process
CO	Central Office
COT	Central Office Technician
CP	Circuit Provisioned
CPC	Circuit Provisioning Center
CPC-UNE	Circuit Provisioning Center - Unbundled Network Elements
CPE	Customer Provided Equipment
CPH	Case Progress History
CPNI	Customer Proprietary Network Information
CPU	Central Processing Unit
CR	Change Request
CRD	Customer Requirement Definition
CRIS	Customer Record Information System
CRMG	Centralized Resource Management Group
CRO	Complete Related Order
CRSC	Customer Repair Service Center
CSC	Customer Service Center
CSG	Carrier Services Gateway
CSR	Customer Service Record
CSR (parsed)	Parsed Customer Service Record
CTE	CLEC Test Environment
CTR1	Center 1

Acronym	Definition
CTR2	Center 2
CTX/DID	Centrex/Direct Inward Dialing
D	Disconnect
DASD	Direct Access Storage Device
DD	Due Date
DD-1	One Day Before the Due Date
DD-3	Three Days Before the Due Date
DD-4	Four Days Before the Due Date
DDA	Due Date Availability
DDS	Digital Data System
DI	Dispatch In
DID	Direct Inward Dialing
DL	Directory Listing
DLC	Digital Loop Carrier
DLR	Directory Listing Inquiry
DO	Dispatch Out
DOD	Direct Outward Dialing
DR	Disaster Recovery Process
DRC	Dispatch Resource Center
DS0	Digital Signal – 0
DS1	Digital Signal – 1
DS3	Digital Signal – 3
DSL	Digital Subscriber Line
DTP	Detailed Test Plan
DUF	Daily Usage File
DVA	Design, Verify, and Assign
E	Verizon East
EA	Engineering Assistant
EBAC	Electronic Billing Accuracy Control
ECD	Expected Completion Date
ED	Evidentiary Database
ED_RDS	Evidentiary Database Requirements Detail Specification
EDI	Electronic Data Interchange
EEL	Enhanced Extended Loop
EIF	Electronic Interface Format
EMI	Exchange Message Interface
ERR	Error Message

Acronym	Definition
ESOI	Error Service Order Input
EWO	Engineering Work Order
EXACT	Exchange Access Control & Tracking System
F/OK	Found OK
FACS	Facility Assignment and Control System
FCC	Federal Communications Commission
FCD	Frame Continuity Date
FCIF	Formset Common Interchange Format
FDT	Frame Due Time
FE	Facilities and Equipment
FID	Field Identifier
FMC	Facilities Management Center
FMS	Force Management System
FOC	Firm Order Confirmation
FOMS	Frame Operations Management System
FPD	Fails Pre-Design
FRDBMS	Fault Resistant Database Management Systems
GE	General
GRID	Grid
GUI	Graphical User Interface
IDLC	Integrated Digital Loop Carrier
IFAS	Intelligent Field Access System
ILEC	Incumbent Local Exchange Carrier
IMPCON	Implementation Contact
Inter-LATA	Inter-Local Access and Transport Area
Intra-LATA	Intra-Local Access and Transport Area
IOF	Inter-Office Facilities
ISDN	Integrated Services Digital Network
ISLC	Integrated Subscriber Loop Carrier
ISR	Installation Status Inquiry
ISUP	Integrated Services Digital Network User Part
IXC	Inter-Exchange Carrier
JAD	Joint Application Development
JEOP	Jeopardy Notification
JEP	Jeopardy
LAM	Loop Assignment Make-Up
LAN	Local Area Network

Acronym	Definition
LCC	Local Collocation Coordinator
LEC	Local Exchange Carrier
LFACS	Loop Facility Assignment and Control System
LFR	Loop Facility Record
LMU	Loop Make-up Inquiry
LMOS	Loop Maintenance Operations System
LNP	Local Number Portability
LPI	Location Porting Inquiry
LQB	Loop Qualification Inquiry
LSC	Local Service Confirmation
LSR	Local Service Request
LSR DDD	Desired Due Date Request
LSRLR	Local Service Request Local Response
LSRM	Local Service Request Manager
LXR	xDSL Loop Qualification Inquiry
M&P	Methods and Procedures
M&R	Maintenance and Repair
MA	Maintenance Administrator
MARCH	Memory Administration Recent Change History
MCC	Major Customer Center
MCO	Maintenance Control Office
MDVW	Maryland, District of Columbia, Virginia, and West Virginia
MLT	Mechanized Loop Test
MOP	Method of Procedures
MOU	Minutes of Use
MPS	Message Processing System
MR	Maintenance and Repair
MSAG	Master Street Address Guidelines
MSC	Maintenance Service Charge
MTAS	Mechanized Trouble Analysis System
MTP	Commonwealth of Virginia State Corporation Commission, Bell Atlantic OSS Evaluation Project – Master Test Plan
MTS	Mechanized Translations System
N	New Connect
NAC	Network Administration Center
NAMS	Network Analysis and Measurement System
NCC	Network Control Center
NDM	Network Data Mover

Acronym	Definition
NDR	Network Design Request
NDRC	National Dispatch Resource Center
NDS	Network Data System
NEBS	Network Equipment Building System
NENA	National Emergency Number Association
NFM	Network Fault Management
NID	Network Interface Device
NMA	Network Monitoring and Analysis
NMC	National Market Center
NOC	Network Operations Center
NOCIL	Network Operations Center Information Letter
NORD	Network Operations Records Database
NP	Network Performance
NPAC	Number Portability Administration Center
NSAC	Network Services Assurance Center
NSC	Network Service Coordinator
NSDB	Network and Services Database
NST	Network Service Team
NT	Windows NT (Windows New Technology)
NTC	Network Test Center
NTDCA	Network Traffic Data Collection & Analysis
NTM	Network Traffic Management
NTP (Maintenance and Repair)	Network Traffic Patterns
NTP (Provisioning)	Network Transport Provisioning Center
OC&C	Other Charges & Credits
OC12	Optical Cable 12 (same capacity as 12 DS-3s)
OC3	Optical Cable 3 (same capacity as 3 DS-3s)
OCO	Overall Control Office
OD	Operator Services and Databases
OE	Office Equipment
OHC	Override Handle Code
OMM	Ordering Metrics Manager
OOS	Out of Service
OQS	Open Query Systems
OR	Ordering
OS/DA	Operator Service/Directory Assistance
OSPE	Outside Plant Engineering

Acronym	Definition
OSS	Operations Support Systems
OSSCN	Operations Support Systems Circuit Notes
OSSLLOG	Operations Support Systems Log
OSSLST	Operations Support Systems List
PAC	Pending Auto Completion
PAWS	Provisioning Analyst Workstation System
PBX	Private Branch Exchange
PC	Pending Completion
PCC	Premium Care Center
PCD	Post Completion Discrepancy
PCM	Provisioning Completion Message
PIC	Primary InterExchange Carrier
PO	Pre-Ordering
PON	Purchase Order Number
POP	Pre-Order, Order, and Provisioning
POTS	Plain Old Telephone Service
PR	Provisioning
PRI	Primary Rate ISDN
PS/ALI	Private Switch/Automatic Location Identifier
PSA	Product and Service Availability Inquiry
PSD	Product Specification Document
PSTN	Public Switched Telephone Network
PTD	Plant Test Date
QA	Quality Assurance
QBC	Quality Billing Center
RB	Request Broker
RCCC	Regional CLEC Coordination Center
RCMAC	Recent Change Memory Administration Center
RCMC	Regional CLEC Maintenance Center
RDRC	Retail Dispatch Resource Center
RDS	Requirements Detail Specification
RETAS	Repair Trouble Administration System
RID	Record Issue Date
RM	Request Manager
RMA	Request for Manual Assistance
RMT	Resource Management Team
RRSC	Regional Resold Services Center

Acronym	Definition
RRSO	Reuse Related Order
RSC	Repair Service Clerk
RSC (Provisioning)	Residential Service Center
RUF	Reuse Facilities
RVW	Review
S	Verizon South
SAR	System Archive Retrieval
SCOPE	Secured Collocation Open Physical Environment
SCP	Service Control Point
SDE	Service Delivery Engineer
SES	Software Engineering Services
SLC	Subscriber Loop Carrier
SME	Subject Matter Expert
SOA	Service Order Activation
SOAC	Service Order Analysis and Control System
SOACS	Service Order Administration Control System
SOC	Service Order Completion
SOID	Service Order ID
SOP	Service Order Processor
SOR	Service Order Information Inquiry
SORD	Service Order Database
SPOC	Single Point of Contact
SR	Service Representative
SR#	Service Request Number
SS7	Signaling System 7
SSC	Special Services Center
SSP	Service Switching Point
ST	Switch Translations
STM	Signaling Traffic Management
STP	Signal Transfer Point
SUP	Supplemental Order Request
TC	Telecommunications Companies
TCAP	Transaction Capabilities Application Part
TCM (Maintenance and Repair)	Trunk Capacity Management
TCM (Metrics)	TIRKS Communication Module
TDMS	Traffic Data Management System
TED	Training Education Development

Acronym	Definition
TEMS	Transport Element Manager
TFAS	TIRKS Field Assist System
TIDE	Traffic Information Distributor and Editor
TIM	TNM Integration Module
TIRKS	Trunk Integrated Record Keeping System
TIS	Telecom Industry
TISOC	Telecom Industry Services Operations Center
TK	Trunk
TMS	Tape Management System
TN	Telephone Number
TNA	Telephone Number Availability and Reservation
TNDS	Total Network Data System
TNM	Total Network Manager
TOS	Type Of Service
TR	Trouble Report
TR1	Conversational TN Reservation Inquiry
TR3	Reservation Maintenance Inquiry
TR5	Reservation Maintenance Modification Inquiry
TSM	Total Surveillance Management
TTG	Test Transaction Generator
TTS	Trouble Ticket System
TXNU	POTS Circuit
UACL	Unable to Assign a Complete Loop
UNE	Unbundled Network Elements
UNE-P	Unbundled Network Elements-Platform
UNE-Port	Unbundled Network Elements-Switch
USOC	Uniform Service Order Code
USOC (Order Management)	Universal Service Order Code
VCCC	Verizon Collocation Customer Care
VER	Verification
Verizon VA	Verizon Virginia
VIPS	Verizon Information Processing Services
VRRC	Verizon Repair Resolution Center
WA	Work Authorization
WCC	Win-back Control Center
WCCC	Wholesale Customer Care Center
WCSC	Wholesale Customer Service Center

Acronym	Definition
WDRC	Wholesale Dispatch Resource Center
WFA	Workforce Administration
WFA/C	Workforce Administration/Control
WFA/DI	Workforce Administration/Dispatch In
WFA/DO	Workforce Administration/Dispatch Out
WMD	Wholesale Metrics Development
WNS	Wholesale Network Services
WOT	Wired and Office Tested
WPA	Wholesale Performance Assurance
WPM	Wholesale Performance Metrics
WPTS	Wholesale Provisioning Tracking System
WSD	Work Start Date
WTN	Working Telephone Number
xDSL	Digital Subscriber Line

Appendix E

Summary of Changes From Version 1.0

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Appendix E – Summary of Changes from Version 1.0

Section	Test	Page Number	Change	Reason for Change
Global	Various	All	Changed version number and date in headers, footers, and cover page and removed “Draft.”	To reflect updated version.
Appendices	N/A	519	Added Appendix E – Summary of Changes from Version 1.0	To document changes from Version 1.0 to 2.0.
Appendix C	N/A	503	Changed the acronym for Service Order Analysis and Control System from “SOACS” to “SOAC.”	To correct typographical error.
Table of Contents	N/A	xi	Added Appendix E- Summary of Changes from Version 1.0.	To reference Appendix E.
Section I – Document Control	N/A	3 – 4	Updated date columns and added John Knapp and Robert Kenney, Verizon Virginia, to Distribution List.	To document current date and add two recipients.
Section II – Executive Summary	N/A	17	Changed Results Summary from two Not Satisfied to one and added three Not Applicable.	To document final test results and to correct inadvertent omission of the three Not Applicable.
	N/A	17	Removed second sentence in Service Quality which reads, “On several occasions, Verizon resources assigned to handle KPMG Consulting problem escalations were senior Verizon resources.”	To accurately document test activity.
	N/A	19	Removed last sentence in Performance Metrics Reporting which reads, “One (1) was Not Satisfied” and changed total number of satisfied criteria from 122 to 123.	To accurately document final test results.
	N/A	21	Added Appendix E in Document Overview Table.	To provide overview to Appendix E.

Section	Test	Page Number	Change	Reason for Change
Section III – Relationship Management and Infrastructure	PPR2	41	In Comments of Evaluation Criterion PPR2-12, updated date of CLEC Handbook from March 2000 to March 2001.	To correct typographical error.
	PPR5	70	In Comments of Evaluation Criterion PPR5-2-3, corrected a portion of the website address from “wholese” to “wholesale.”	To correct typographical error.
Section IV – Pre-Order/Order	PPR9	116	In Comments of Evaluation Criterion PPR9-6, corrected a portion of the website address from “wcc” to “wccc.”	To correct typographical error.
	TVV1	142	In Comments of Evaluation Criterion TVV1-4-24, added additional language from the Carrier-to-Carrier Guidelines, changed the total number of PCMs from 961 to 953, changed the KPMG Consulting percentage of PCMs received from 96.67% to 96.96%, and changed the p-value language from 0.30 to 0.50.	To include additional language from the Carrier-to-Carrier Guidelines to increase readability. Removed eight (8) PCMs from the analysis as these PCMs were received as a result of a test artifact and were mistakenly included.
	TVV1	143	In Comments of Evaluation Criterion TVV1-4-25, replaced “PCM Completion Date” with “BCM Completion Date” and changed third paragraph.	To correct factual mistake and to increase readability.
	TVV2	144	In Comments of Evaluation Criterion TVV1-5-5, removed the words, “A sample of” from the second paragraph.	To accurately document test activity.
	TVV1	154	In Additional Data, updated Table 1-12 and Figure 1-5.	To accurately reflect the number of PCMs that should have been included in the analysis.

Section	Test	Page Number	Change	Reason for Change
	TVV2	179	In Comments of Evaluation Criterion TVV2-6-10, corrected percentage of ACKs received from 99.90% to 99.88%.	To correct typographical error.
	TVV2	189	In Additional Data, updated Table 2-11 by adding Min and Max to the TNA query type and clarifying note #4.	To provide more information on TNA query type.
Section V – Provisioning	TVV4	270 – 271	In Scenarios, removed Private Line under “Resale and UNE-P service requests that require switch translations” and modified “Resale and UNE-P service requests that require Directory Listings changes” to include UNE-L.	To accurately document test activity.
	TVV4	272	In Data Sources, updated document name Designed Digital Loops – ADSL/HDSL (South), RCO-99-1003 to include “Non-.”	To correct factual mistake.
	TVV4	273	In Evaluation Methods under the second set of bullets, added UNE-L to Directory Listing Verification.	To accurately document test activity.
	TVV4	276	In footnote 61, updated document name Designed Digital Loops – ADSL/HDSL (South), RCO-99-1003 to include “Non-.”	To correct factual mistake.
Section VI – Maintenance and Repair	TVV7	365	In the Comments of Evaluation Criterion TVV7-8, changed the p-value language.	To correct factual mistake.

Section	Test	Page Number	Change	Reason for Change
Section VII – Billing	PPR14	387	In Business Process Description, removed “primary” from second sentence which reads, “Bills are produced by two primary billing systems: the Carrier Access Billing System (CABS) and the expressTrak System.”	To accurately document test activity.
	PPR14	391	In Comments of Evaluation Criterion PPR14-1-4, updated second paragraph.	To ensure only information relevant to criterion is included.
	PPR14	392	In Comments of Evaluation Criterion PPR14-1-6, updated second paragraph.	To ensure only information relevant to criterion is included.
	PPR14	397	In Comments of Evaluation Criterion PPR14-2-3, updated second paragraph.	To ensure only information relevant to criterion is included.
	TVV8	407	In Additional Data, updated the Table 8-4 name from “TVV8 DUF Accuracy Analysis” to “TVV8 DUF Matching Analysis.”	To improve readability.
	TVV9	413	In Comments of Evaluation Criterion TVV9-2-5, changed accuracy percentage of non-recurring charges for UNE Bills from 94.1% to 96.2% and added an additional reason for discrepancies.	To include all products that were tested in the calculation and to provide additional information.
	TVV9	414	In Comments of Evaluation Criterion TVV9-2-18, removed, “upon execution of a retest” and changed “was” to “were.”	To correct factual mistakes.
	PMR2	423, 424, 428, 429	Changed “Pinnacle” to “Pinnacle.”	To correct typographical error.
Section VIII – Performance	PMR3	445	In Data Sources, added January CLEC Aggregate.	To accurately document test activity.

Section	Test	Page Number	Change	Reason for Change
Metrics Domain	PMR3	452	In Result of Evaluation Criterion PMR3-1-F, updated Result to 'Satisfied' from 'Not Satisfied' and updated Comments.	To accurately document final test results.